## **UEE30211 Certificate III in Computer Systems Equipment**

### **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Update	Group A	HLTFA311A Apply first aid	10
2	Add		Edit Name to reflect correct Unit title UEENEED104A Use engineering applications software on personal computers	40

4	Update	Elective	HLTAID003 - Provide first aid	10
4	Edit		Correct title of UEENEEK142A - Apply environmentally and sustainable procedures in the energy sector	20

#### **Description**

#### **Scope**

This qualification provides competencies to select, install, set up, test, fault find, repair and maintain computer equipment for data storage, personal computer and networks, measurement/analysis and control.

### **Pathways Information**

Not applicable.

#### **Licensing/Regulatory Information**

Not applicable.

## **Entry Requirements**

Not applicable.

#### **Employability Skills Summary**

#### **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 500 points in accordance with the Elective Competency Standard Units table below.

<b>Core Competenc</b>	Weighting		
All Core competer	All Core competency standard units to be achieved		
UEENEEC014B	Participate in computer equipment work and	60	
	competency development activities		
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	
UEENEED143A	Install and configure a client computer operating system and software	40	
UEENEED146A	Set up and configure basic local area network (LAN)	80	
UEENEEE101A	Apply Occupational Health and Safety regulations, codes and practices in the workplace	20	
UEENEEE102A	Fabricate, assemble and dismantle utilities industry components	40	
UEENEEE103A	Solve problems in ELV single path circuits	40	
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20	
UEENEEK142A	Apply environmentally and sustainable procedures in the energy sector	20	
Total points in core 560			

Elective Competency Standard Units				
Complete Elective units to achieve a total of weighting of 500 points from the following				
groups:				
Group	Minimum points	Maximum points		

A	Imported and Common Elective Units	0	150
11	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 3. If units have		
	not being assigned a weighting by the relevant EE-Oz		
	Industry Technical Advisory Committee, their		
	weighting will be 10 points.		
В	Qualification Elective Units	350	500
	You may select all your elective units from this Group		

Group A – Import You may complete	Weighting Points	
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
UEENEED101A	Use computer applications relevant to a workplace	20
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20
HLTAID003	Provide first aid	10
	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 3. 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 150 points

Group B – Qualif	ication Elective Units	Weighting
Complete units to a	Points	
You may select all	your elective units from this Group	
UEENEEA101A	UEENEEA101A Assemble electronic components	
UEENEEA102A	Select electronic components for assembly	20
UEENEEA104A	Modify electronic sub assemblies	40
UEENEEA106A	Use lead-free soldering techniques	40
UEENEED129A	Develop web pages for engineering applications	40
UEENEED130A	Select, install, configure and test multimedia components	40
UEENEED153A	Set up, configure and test biometric devices	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
UEENEEE119A	Solve problems in multiple path extra low voltage (ELV) a.c. circuits	40
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
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

UEENEEH101A	Repair basic computer equipment faults by	40
	replacement of modules/sub-assemblies	
UEENEEH102A	Repairs basic electronic apparatus faults by	40
	replacement of components	
UEENEEH103A	Repair routine business equipment faults	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
UEENEEH115A	Develop software solutions for microcontroller	60
	based systems	
UEENEEH139A	Troubleshoot basic amplifier circuits	40
UEENEEH150A	Assemble and set up basic security systems	80
UEENEEH151A	Install large security systems	100
UEENEEH152A	Enter instructions and test wired and wireless	40
	security systems	
UEENEEH166A	Troubleshoot microcontroller based hardware	40
	systems	
UEENEEH169A	Solve problems in basic electronic circuits	100
UEENEEI116A	Assemble, enter and verify operating instructions in	20
	microprocessor equipped devices	

#### **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.

#### **END OF QUALIFICATION**

## **Custom Content Section**

#### **UEE30311 Certificate III in Custom Electronics Installations**

### **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Update	Group A	HLTFA311A Apply first aid	10

4	Edit	Elective	Correct weighting points of UEENEED146A - Set up	40
	Lan	Licetive	and configure basic local area network (LAN)	

5	Update	Elective	HLTAID003 - Provide first aid	10
5	Edit	Core	Correct title of UEENEEK142A - Apply environmentally and sustainable procedures in the energy sector	20
5	Edit	Elective	Correct title of UEENEEH117A - Carry out repairs of predictable faults in video and audio replay/recording apparatus	120
5	Edit	Elective	Correct title of UEENEEH174A - Troubleshoot audio - video recording equipment	120

## **Description**

#### **Scope**

This qualification provides competencies to select, install, set up and test surround sound, home theatre and integration aspects for 'intelligent houses'. It covers the scope of CEDIA certification level 2

#### **Pathways Information**

Not applicable.

## **Licensing/Regulatory Information**

## **Entry Requirements**

Not applicable.

## **Employability Skills Summary**

#### **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 460 points in accordance with the Elective Competency Standard Units table below.

<b>Core Competency Standard Units</b>			
All Core competer	Points		
UEENEEE101A	Apply Occupational Health and Safety regulations,	20	
	codes and practices in the workplace	40	
UEENEEE102A	Fabricate, assemble and dismantle utilities industry components	40	
UEENEEE103A	Solve problems in ELV single path circuits	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	
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20	
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	
UEENEEH114A	Troubleshoot resonance circuits in an electronic apparatus	80	
UEENEEK142A	UEENEEK142A Apply environmentally and sustainable procedures in the energy sector		
Total points in co	ore	600	

#### **Elective Competency Standard Units**

Complete Elective units to achieve a total of weighting of 460 points from the following groups:

Gre	oup	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 3. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	150
В	Qualification Elective Units You may select all your elective units from this Group	310	460

Group A – Imported and Common Elective Units You may complete units to a maximum weighting of 180		
Maintain documentation	20	
Source and purchase material/parts for installation or service jobs	20	
Provide quotations for installation or service jobs	20	
Deliver a service to customers	20	
Use computer applications relevant to a workplace	20	
Comply with scheduled and preventative maintenance program processes	20	
Provide basic instruction in the use of electrotechnology apparatus	20	
Provide first aid	10	
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 3. 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	Up to 150 points	
	units to a maximum weighting of 180  Maintain documentation  Source and purchase material/parts for installation or service jobs  Provide quotations for installation or service jobs  Deliver a service to customers  Use computer applications relevant to a workplace  Comply with scheduled and preventative maintenance program processes  Provide basic instruction in the use of electrotechnology apparatus  Provide first aid  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 3. 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	

Group B – Qualifi	ication Elective Units	Weighting
Complete units to a	Points	
You may select all	your elective units from this Group	
UEENEEA101A	Assemble electronic components	40
UEENEEA106A	Use lead-free soldering techniques	40
UEENEED102A	Assemble, set-up and test computing devices	80
UEENEED112A	Support computer hardware and software for engineering applications	120
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
UEENEEE121A	Plan an integrated cabling installation system	40
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
UEENEEH101A	Repair basic computer equipment faults by replacement of modules/sub-assemblies	40
UEENEEH103A	Repair routine business equipment faults	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
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
UEENEEH124A	Repair predictable faults in audio components	40

UEENEEH127A	Set up and adjust commercial radio frequency (RF)	60
	transmission and reception systems	
UEENEEH128A	Install and test microwave antennae and waveguides	60
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
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
UEENEEI116A	Assemble, enter and verify operating instructions in microprocessor equipped devices	20
UETTDRIS43A	Perform low voltage field switching operation to a given schedule	80
UETTDRIS44A	Perform HV field switching operation to a given schedule	80
UETTDRIS47A	Sample, test, filter and reinstate insulating oil	40
UETTDRIS67A	Solve problems in energy supply network equipment	80
UETTDRIS68A	Solve problems in energy supply network protection equipment and systems	40
UETTDRSB39A	Perform power system substation switching operation to a given schedule	50

#### **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.

#### **END OF QUALIFICATION**

#### **Custom Content Section**

## **UEE30411 Certificate III in Data and Voice Communications**

# **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Edit		Edit Name to reflect correct Unit title	40
			UEENEED104A Use engineering applications	
			software on personal computers	
2	Update	Group A	HLTCPR211A Perform CPR	10
2	Update	Group A	HLTFA311A Apply first aid	10

4	Edit	Elective	Correct weighting points of UEENEED146A - Set up	40
	Lan	Ziccive	and configure basic local area network (LAN)	

5	Update	Elective	HLTAID001 - Provide cardiopulmonary resuscitation	10
5	Update	Elective	HLTAID003 - Provide first aid	10
5	Edit	Core	Correct title of UEENEEE101A - Apply Occupational Health and Safety regulations, codes and practices in the workplace	20
5	Edit	Core	Correct title of UEENEEE102A - Fabricate, assemble and dismantle utilities industry components	40
5	Edit	Core	Correct title of UEENEEE108A - Lay wiring/cabling and terminate accessories for extra-low voltage (ELV) circuits	40
5	Edit	Core	Correct title of UEENEEK142A - Apply environmentally and sustainable procedures in the energy sector	20
5	Edit	Elective	Correct title of UEENEED101A - Use computer applications relevant to a workplace	20
5	Edit	Elective	Correct title of UEENEED102A - Assemble, set-up and test computing devices	80
5	Edit	Elective	Correct title of UEENEEE121A - Plan an integrated cabling installation system	40

### **Description**

#### Scope

This qualification provides competencies to select, install, set up, test, fault find, repair and maintain telecommunications and high performance data services in buildings and premises. It includes ACMA requirements for Open Cabler Registration.

#### **Pathways Information**

Not applicable.

### **Licensing/Regulatory Information**

Not applicable.

### **Entry Requirements**

Not applicable.

#### **Employability Skills Summary**

#### **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 320 points in accordance with the Elective Competency Standard Units table below.

<b>Core Competenc</b>	y Standard Units	Weighting	
All Core compete	All Core competency standard units to be achieved		
UEENEEC016B	Participate in voice and data communications work	60	
CLEIVELCOTOB	and competency development activities		
UEENEEE101A	Apply Occupational Health and Safety regulations,	20	
	codes and practices in the workplace		
UEENEEE102A	Fabricate, assemble and dismantle utilities industry	40	
	components		
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	
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	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	
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	
UEENEEH114A	Troubleshoot resonance circuits in an electronic apparatus	80	

Core Competency Standard Units All Core competency standard units to be achieved		Weighting Points
UEENEEK142A	Apply environmentally and sustainable procedures in the energy sector	20
Total points in co	740	

## **Elective Competency Standard Units**

Complete Elective units to achieve a total of weighting of 320 points from the following groups:

Gro	Group		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 3. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	100
В	Qualification Elective Units You may select all your elective units from this Group	220	320

Group A – Importe	Weighting		
You may complete u	You may complete units to a maximum weighting of 100		
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	
UEENEED101A	Use computer applications relevant to a workplace	20	
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20	
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20	
CPCCOHS1001A	Work safely in the construction industry	10	
HLTAID001	Provide cardiopulmonary resuscitation	10	

HLTAID003	Provide first aid	10
	Imported units from other training packages	
	and/or state accredited courses can be added to	Up to 100
	this group, but they must be selected from	points
	qualifications where the unit is first packaged at	
	AQF level 3. 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	

Group B – Qualific	Weighting	
Complete units to a	Points	
You may select all y	your elective units from this Group	
UEENEED102A	Assemble, set-up and test computing devices	80
UEENEED104A	Use engineering applications software on personal computers	40
UEENEED146A	Set up and configure basic local area network (LAN)	40
UEENEEE121A	Plan an integrated cabling installation system	40
UEENEEF107A	Set up and configure the wireless capabilities of communications and data storage devices	40
UEENEEF108A	UEENEEF108A Select and arrange equipment for wireless communication networks	
UEENEEF112A	Install aerial telecommunication cables	40
UEENEEF113A	Install underground communication cables	40
UEENEEF114A	Set up and configure basic data communication systems	40
UEENEEF115A Assemble and connect telecommunication frames and cabinets		60
UEENEEI140A	Plan the electrical installation of integrated systems	20
UEENEEI141A	Develop electrical integrated systems	20

#### **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.

END OF QUALIFICATION

#### **Custom Content Section**

# **UEE30611 Certificate III in Electrical Machine Repair**

# **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Update	Group A	HLTCPR211A Perform CPR	10
2	Update	Group A	HLTFA311A Apply first aid	10
2	Edit		Edit Name to reflect correct Unit title UEENEED104A Use engineering applications software on personal computers	40

			III TAIDOO1 Dusside conditional money	
4	Update	Elective	HLTAID001 - Provide cardiopulmonary	10
			resuscitation	
4	Update	Elective	HLTAID003 - Provide first aid	10
			Correct title of UEENEEE101A - Apply	
4	Edit	Core	Occupational Health and Safety regulations, codes	20
			and practices in the workplace	
_	Edit	Como	Correct title of UEENEEE102A - Fabricate,	40
4	Ealt	Core	assemble and dismantle utilities industry components	10
	D 414	Carra	Correct title of UEENEEG111A - Carry out basic	40
4	Edit	Core	repairs to electrical components and equipment	140
	D 414	Carra	Correct title of UEENEEG153A - Rewind three	60
4	Edit	Core	phase low voltage induction machines	
			Correct title of UEENEEG164A - Repair and	
4	Edit	Core	maintain mechanical components of electrical	40
-			machines	
			Correct title of UEENEEK142A - Apply	
4	Edit	Core	environmentally and sustainable procedures in the	20
			energy sector	
			Correct title of UEENEEP015A - Disconnect -	
4	Edit	Core	reconnect motors connected to low voltage	60
			installation wiring	
	Edit	Edit Elective Correct title	Correct title of UEENEEG129A - Overhaul and	60
4	Eart	Elective	repair major switchgear and controlgear	
			Correct title of UEENEEG159A - Conduct	
4	Edit	Elective	mechanical tests on electrical machines and	40
-			components	
4	Edit	Elective	Correct title of UEENEED101A - Use computer	20
•				

applications relevant to a wo	orkplace

### **Description**

#### **Scope**

This qualification provides competencies to overhaul and repair motor, transformer and control gear including rewinding

### **Pathways Information**

Not applicable.

## **Licensing/Regulatory Information**

Not applicable.

### **Entry Requirements**

Not applicable.

## **Employability Skills Summary**

#### **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 180 points in accordance with the Elective Competency Standard Units table below.

Core Competency Standard Units					
All Core competen	All Core competency standard units to be achieved				
UEENEEC018B	UEENEEC018B Participate in electrical machine repair work and competency development activities				
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			
UEENEEE137A	20				
UEENEEG006A	80				
voltage machines  UEENEEG101A  Solve problems in electromagnetic devices and related circuits		60			
UEENEEG102A	Solve problems in low voltage a.c. circuits	80			
UEENEEG106A	Terminate cables, cords and accessories for low voltage circuits	40			
UEENEEG111A	Carry out basic repairs to electrical components and equipment	40			
UEENEEG150A	Wind electrical coils	40			
UEENEEG151A	Place and connect electrical coils	40			
UEENEEG153A Rewind three phase low voltage induction machines		60			
UEENEEG157A	Conduct electrical tests on LV electrical machines	40			
UEENEEG164A	Repair and maintain mechanical components of	40			

	electrical machines	
UEENEEK142A	Apply environmentally and sustainable procedures	20
	in the energy sector	
UEENEEP015A	Disconnect - reconnect motors connected to low	60
	voltage installation wiring	
Total points in core	880	

### **Elective Competency Standard Units**

Complete Elective units to achieve a total of weighting of 180 points from the following groups:

Gro	oup	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 3. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	60
В	Qualification Elective Units You may select all your elective units from this Group	120	180

	Group A – Imported and Common Elective Units You may complete units to a maximum weighting of 60  Weighting Points				
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	20				
UEENEED101A	UEENEED101A Use computer applications relevant to a workplace 2				
UEENEEE009B	UEENEEE009B Comply with scheduled and preventative maintenance program processes				
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20			
CPCCOHS1001A	CPCCOHS1001A Work safely in the construction industry 1				

HLTAID001	Provide cardiopulmonary resuscitation	10		
HLTAID003	Provide first aid	10		
	Imported units from other training packages			
	and/or state accredited courses can be added to	Up to 60		
	this group, but they must be selected from	points		
	qualifications where the unit is first packaged at			
	AQF level 3. 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			

Group B – Qualific	Weighting Points			
-	Complete units to a minimum weighting of 120			
You may select all y	your elective units from this Group			
UEENEED104A	Use engineering applications software on	40		
CLEIVEEDIONI	personal computers			
UEENEEG129A	Overhaul and repair major switchgear and	60		
OLLIVLEGI2711	controlgear			
UEENEEG152A	Rewind single phase machines	40		
UEENEEG154A	Rewind LV direct current machines	60		
UEENEEG159A	Conduct mechanical tests on electrical machines	40		
CLEIVEEGIS	and components			
UEENEEI150A	Develop, enter and verify discrete control	60		
CEETTEETTSOTT	programs for programmable controllers			
UEENEEJ151A	Service small electrical appliances and power	60		
	tools			
UEENEEP020A	Locate and rectify faults in low voltage motors	20		
OLLIVLEI 020/A	using set procedures			
UEENEEP024A	Attach cords and plugs to electrical equipment for	20		
OLLINELI UZTA	connection to a single phase 230 Volt supply			
UEENEEP025A	Attach cords, cables and plugs to electrical	20		
CELINELI 02311	equipment for connection to 1000 Va.c. or 1500			
	Vd.c. supply			

#### **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.

END OF QUALIFICATION

#### **Custom Content Section**

# **UEE30711 Certificate III in Switchgear and Controlgear**

# **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Update	Group A	HLTCPR211A Perform CPR	10
2	Update	Group A	HLTFA311A Apply first aid	10
2	Edit		Edit Name to reflect correct Unit title UEENEED104A Use engineering applications software on personal computers	40

4	Undata	Elective	HLTAID001 - Provide cardiopulmonary	10
4	Update	e Elective	resuscitation	
4	Update	Elective	HLTAID003 - Provide first aid	10
			Correct title of UEENEEE101A - Apply	
4	Edit	Core	Occupational Health and Safety regulations, codes	20
			and practices in the workplace	
4	Edit	Core	Correct title of UEENEEE102A - Fabricate,	40
4	Eart	Core	assemble and dismantle utilities industry components	
	Edit	Core	Correct title of UEENEEG111A - Carry out basic	40
4	Eart	Core	repairs to electrical components and equipment	
			Correct title of UEENEEK142A - Apply	
4	Edit	Core	environmentally and sustainable procedures in the	20
			energy sector	
			Correct title of UEENEEP013A - Disconnect -	
4	Edit	Core	reconnect control devices connected to low voltage	60
			installation wiring	
4	Edit	Elective	Correct title of UEENEED101A - Use computer	20
4	Lan	Elective	applications relevant to a workplace	
			Correct title of UEENEEG164A - Repair and	
4	Edit	Elective	maintain mechanical components of electrical	60
			machines	
			Correct title of UEENEEH102A - Repairs basic	40
4	Edit	Elective	electronic apparatus faults by replacement of	40
			components	
4	Edit	Elective	Correct title of UEENEEH111A - Troubleshoot	40
4	Lan	Licetive	single phase input d.c. power supplies	
4	Edit	Elective	Correct title of UEENEEI116A - Assemble, enter	20

			and verify operating instructions in microprocessor	
			equipped devices	
	Edit	Elective	Correct title of UEENEEG129A - Overhaul and	60
4	Luit	Liective	repair major switchgear and controlgear	

## **Description**

#### Scope

This qualification provides competencies to construction, assembly and wiring of switchboards and control panels.

### **Pathways Information**

Not applicable.

### **Licensing/Regulatory Information**

Not applicable.

## **Entry Requirements**

Not applicable.

## **Employability Skills Summary**

#### **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 160 points in accordance with the Elective Competency Standard Units table below.

<b>Core Competenc</b>	y Standard Units	Weighting
All Core competer	Points	
UEENEEA110A	Assemble, mount and connect control gear and switchgear	40
UEENEEA112A	Fabricate and assemble bus bars	40
UEENEEA113A	Mount and wire control panel equipment	40
UEENEEC019B	Participate in switchgear and controlgear work and competency development activities	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
UEENEEG106A	Terminate cables, cords and accessories for low voltage circuits	40
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications	40
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20
UEENEEG006A	Solve problems in single and three phase low voltage machines	80
UEENEEG063A	Arrange circuits, control and protection for general electrical installations	40
UEENEEG101A	Solve problems in electromagnetic devices and related circuits	60
UEENEEG102A	Solve problems in low voltage a.c. circuits	80
UEENEEG109A	Develop and connect electrical control circuits	80
UEENEEG111A	Carry out basic repairs to electrical components and	40

	equipment	
UEENEEK142A	Apply environmentally and sustainable procedures in	20
CEET (EETT) ETT	the energy sector	
UEENEEP013A	Disconnect - reconnect control devices connected to	60
CEET CEET 01311	low voltage installation wiring	
<b>Total points in co</b>	900	

### **Elective Competency Standard Units**

Complete Elective units to achieve a total of weighting of 160 points from the following groups:

Gre	oup	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 3. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	60
В	Qualification Elective Units You may select all your elective units from this Group	100	160

	Group A – Imported and Common Elective Units You may complete units to a maximum weighting of 60  Weighting Points				
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			
UEENEED101A	Use computer applications relevant to a workplace	20			
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20			
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20			
CPCCOHS1001A	Work safely in the construction industry	10			

HLTAID001	Provide cardiopulmonary resuscitation	10
HLTAID003	Provide first aid	10
	Imported units from other training packages	
	and/or state accredited courses can be added to	Up to 60
	this group, but they must be selected from	points
	qualifications where the unit is first packaged at	
	AQF level 3. 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	

Group B - Qualifica	Weighting	
Complete units to a r	Points	
You may select all yo	our elective units from this Group	
UEENEED104A	Use engineering applications software on	40
0221 (225 10 111	personal computers	
UEENEEF115A	Assemble and connect telecommunication frames	60
	and cabinets	
UEENEEG129A	Overhaul and repair major switchgear and	60
	controlgear	
UEENEEG164A	Repair and maintain mechanical components of	40
	electrical machines	
UEENEEH102A	Repairs basic electronic apparatus faults by	40
	replacement of components	
UEENEEH111A	Troubleshoot single phase input d.c. power	40
	supplies	
UEENEEI116A	Assemble, enter and verify operating instructions	20
	in microprocessor equipped devices	
UEENEEI150A	Develop, enter and verify discrete control	60
	programs for programmable controllers	
UEENEEP018A	Locate and rectify faults in low voltage control	20
0221,221,01011	devices using set procedures	

#### **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.

#### **END OF QUALIFICATION**

#### **Custom Content Section**

# **UEE30811 Certificate III in Electrotechnology Electrician**

# **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Update	Group A	HLTCPR211A Perform CPR	10
2	Update	Group A	HLTFA311A Apply first aid	10
2	Edit		Edit Name to reflect correct Unit title	40
2			UEENEED104A Use engineering applications	
			software on personal computers	
2	Add	Group B	UEENEEJ105A Position, assemble and start up	70
_			single head split air conditioning and water heating	
			heat pump systems	
2	Add	Group B	UEENEEJ172A Recover, pressure test, evacuate,	60
2			charge and leak test refrigerants — split systems	
2	Add	Group B	UETTDRIS67A Solve problems in energy	80
2			supply network equipment	
2	Add	Group B	UETTDRIS68A Solve problems in energy	40
2			supply network protection equipment and systems	
2	Add	Group B	UETTDRIS44A Perform HV field switching	60
_			operation to a given schedule	

3	Edit	Croup D	Edit Name to reflect correct Unit title	40
3	Edit	Group B	UEENEEI102A Solve problems in pressure measurement components and systems	
			Edit Name to reflect correct Unit title	
3	Edit	Group B	UEENEEI103A Solve problems in density_level	40
			measurement components and systems	
			Edit Name to reflect correct Unit title	
3	Edit	Group B	UEENEEI104A Solve problems in flow	40
			measurement components and systems	
			Edit Name to reflect correct Unit title	
3	Edit	Group B	UEENEEI105A Solve problems in temperature	40
			measurement components and systems	

4	Update	Elective	HLTAID001 - Provide cardiopulmonary resuscitation	10
4	Update	Elective	HLTAID003 - Provide first aid	10

	D.11.		G ALL CHEENEREIOLA A 1	20
4	Edit	Core	Correct title of UEENEEE101A - Apply	20
			Occupational Health and Safety regulations, codes	
			and practices in the workplace	
4	Edit	Core	Correct title of UEENEEE102A - Fabricate,	40
			assemble and dismantle utilities industry components	
4	Edit	Core	Correct title of UEENEEK142A - Apply	20
-			environmentally and sustainable procedures in the	
			energy sector	
4	Edit	Elective	Correct title of UEENEED101A - Use computer	20
•			applications relevant to a workplace	
4	Edit	Elective	Correct title of UEENEEE121A - Plan an integrated	40
7			cabling installation system	
4	Edit	Elective	Correct title of UEENEEG111A - Carry out basic	60
4			repairs to electrical components and equipment	
4	Edit	Elective	Correct title of UEENEEG113A - Install and	60
4			maintain emergency safety systems	
4	Edit	Elective	Correct title of UEENEEG116A - Diagnose and	60
4			rectify faults in traction lift systems	
4	Edit	Elective	Correct title of UEENEEG119A - Maintain operation	60
4			of electrical marine equipment and systems	
4	Edit	Elective	Correct title of UEENEEG120A - Select and arrange	60
4			equipment for special LV electrical installations	
	Edit	Elective	Correct title of UEENEEG126A - Install and	40
4			maintain field power and distribution systems with a	
			low voltage demand up to 200 A per phase	
	Edit	Elective	Correct title of UEENEEG129A - Overhaul and	60
4	Zuit	Ziccu ve	repair major switchgear and controlgear	
	Edit	Elective	Correct title of UEENEEG153A - Rewind three	60
4	Lan	Elective	phase low voltage induction machines	
	Edit	Elective	Correct title of UEENEEG159A - Conduct	40
4	Luit	Elective	mechanical tests on electrical machines and	40
			components	
	Edit	Elective	Correct title of UEENEEG164A - Repair and	60
4	Luit	Liective	maintain mechanical components of electrical	00
			machines	
	D 114	E14:		40
4	Edit	Elective	Correct title of UEENEEG165A - Maintain and	40
	T 1'.	El	service traction lifts systems and equipment	40
4	Edit	Elective	Correct title of UEENEEG166A - Install and	40
			maintain escalators, moving walks and treadways	20
4	Edit	Elective	Correct title of UEENEEG167A - Align and install	20
			traction lift equipment	

4	Edit	Elective	Correct title of UEENEEH102A - Repairs basic	40
-			electronic apparatus faults by replacement of	
			components	
4	Edit	Elective	Correct title of UEENEEH150A - Assemble and set	80
'			up basic security systems	
4	Edit	Elective	Correct title of UEENEEI101A - Use instrumentation	40
'			drawings, specification, standards and equipment	
			manuals	
4	Edit	Elective	Correct title of UEENEEI103A - Solve problems in	40
•			density/level measurement components and systems	
4	Edit	Elective	Correct title of UEENEEI116A - Assemble, enter	20
'			and verify operating instructions in microprocessor	
			equipped devices	
4	Edit	Elective	Correct title of UEENEEK148A - Install, configure	40
'			and commission LV grid connected photovoltaic	
			power systems	
4	Edit	Elective	Correct title of UEENEEN104A - Test copper rail	20
Ĺ			signalling cables	
4	Edit	Elective	Correct title of UETTDRIS43A - Perform low	50
			voltage field switching operation to a given schedule	

## **Description**

#### **Scope**

This qualification provides competencies to select, install, set up, test, fault find, repair and maintain electrical systems and equipment in building and premises. It includes ERAC requirements for an 'Electrician's licence'.

### **Pathways Information**

Not applicable.

## **Licensing/Regulatory Information**

Not applicable.

### **Entry Requirements**

# **Employability Skills Summary**

#### **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 140 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
UEENEEC020B	Participate in electrical work and competency development activities	60
UEENEEE101A	EENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
UEENEEE102A	Fabricate, assemble and dismantle utilities industry components	40
UEENEEE104A	ENEEE104A Solve problems in d.c. circuits	
UEENEEE105A	Fix and secure electrotechnology equipment	20
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications	40
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20
UEENEEG006A	Solve problems in single and three phase low voltage machines	
UEENEEG033A	Solve problems in single and three phase low voltage electrical apparatus and circuits	60
UEENEEG063A	Arrange circuits, control and protection for general	
UEENEEG101A	Solve problems in electromagnetic devices and related circuits	
UEENEEG102A	NEEG102A Solve problems in low voltage a.c. circuits	
UEENEEG103A	Install low voltage wiring and accessories	20
UEENEEG104A	Install appliances, switchgear and associated accessories for low voltage electrical installations	20
UEENEEG105A	Verify compliance and functionality of low voltage general electrical installations	40
UEENEEG106A	Terminate cables, cords and accessories for low voltage circuits	40

Core Competency Standard Units All Core competency standard units to be achieved		Weighting Points
UEENEEG107A	Select wiring systems and cables for low voltage general electrical installations	60
UEENEEG108A	Trouble-shoot and repair faults in low voltage electrical apparatus and circuits	40
UEENEEG109A	Develop and connect electrical control circuits	80
UEENEEK142A	Apply environmentally and sustainable procedures in the energy sector	20
Total points in core		920

### **Elective Competency Standard Units**

Complete Elective units to achieve a total of weighting of 140 points from the following groups:

Gre	Group		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 3. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.		60
В	Qualification Elective Units You may select all your elective units from this Group	80	140

Group A – Imported and Common Elective Units You may complete units to a maximum weighting of 60		Weighting Points
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
UEENEED101A	Use computer applications relevant to a workplace	20

UEENEEE009B	Comply with scheduled and preventative	20
	maintenance program processes	
UEENEEE020B	Provide basic instruction in the use of	20
	electrotechnology apparatus	
CPCCOHS1001A	Work safely in the construction industry	10
HLTAID001	ILTAID001 Provide cardiopulmonary resuscitation	
HLTAID003	Provide first aid	10
	Imported units from other training packages	
	and/or state accredited courses can be added to	Up to 60
	this group, but they must be selected from	points
	qualifications where the unit is first packaged at	
	AQF level 3. 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	

Group B – Qualific	cation Elective Units	Weighting
Complete units to a	minimum weighting of 80	Points
You may select all y	your elective units from this Group	
UEENEEA110A	Assemble, mount and connect control gear and	40
UBBNEEATIUA	switchgear	
UEENEEA112A	Fabricate and assemble bus bars	40
UEENEEA113A	Mount and wire control panel equipment	40
UEENEED104A	Use engineering applications software on personal computers	40
UEENEEE121A	Plan an integrated cabling installation system	40
UEENEEF102A	Install and maintain cabling for multiple access to telecommunication services	120
UEENEEF104A	Install and modify performance data communication copper cabling	40
UEENEEG110A	Find and repair faults in LV d.c. electrical apparatus and circuits	60
UEENEEG111A	Carry out basic repairs to electrical components and equipment	40
UEENEEG113A	Install and maintain emergency safety systems	60
UEENEEG116A	Diagnose and rectify faults in traction lift systems	80
UEENEEG118A	Maintain operation of electrical mining equipment and systems	60
UEENEEG119A	Maintain operation of electrical marine equipment and systems	60
UEENEEG120A	Select and arrange equipment for special LV electrical installations	60
UEENEEG126A	Install and maintain field power and distribution systems with a low voltage demand up to 200 A per phase	40
UEENEEG129A	Overhaul and repair major switchgear and controlgear	60
UEENEEG150A	Wind electrical coils	40
UEENEEG151A	Place and connect electrical coils	40
UEENEEG152A	Rewind single phase machines	40
UEENEEG153A	Rewind three phase low voltage induction machines	60
UEENEEG154A	Rewind LV direct current machines	60

UEENEEG157A Conduct electrical tests on LV electrical machines		40
UEENEEG159A	UEENEEG159A Conduct mechanical tests on electrical machines and components	
-		40
UEENEEG165A	Maintain and service traction lifts systems and equipment	40
UEENEEG166A	Install and maintain escalators, moving walks and treadways	40
UEENEEG167A	Align and install traction lift equipment	20
UEENEEG171A	Install, set up and commission interval metering	20
UEENEEG181A	Provide advice on effective and energy efficient lighting products	20
UEENEEG182A	Supply effective and efficient lighting products for domestic and small commercial applications	40
UEENEEG183A	Provide advice on the application of energy efficient lighting for ambient and aesthetic effect	20
UEENEEG189A	Install and maintain emergency lighting systems	40
UEENEEH102A Repairs basic electronic apparatus faults by replacement of components		40
UEENEEH111A	Troubleshoot single phase input d.c. power	
UEENEEH150A	Assemble and set up basic security systems	80
UEENEEI140A	Plan the electrical installation of integrated systems	20
UEENEEI141A	Develop electrical integrated systems	20
UEENEEI101A	Use instrumentation drawings, specification, standards and equipment manuals	40
UEENEEI102A	UEENEEI102A Solve problems in pressure measurement components and systems	
UEENEEI103A  Solve problems in density/level measurement components and systems  UEENEEI104A  Solve problems in flow measurement components and systems		40
		40
UEENEEI105A	Solve problems in temperature measurement components and systems	40
UEENEEI116A	Assemble, enter and verify operating instructions in microprocessor equipped devices	20

UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers	60
		20
UEENEEJ102A Prepare and connect refrigerant tubing and fittings		30
LIEUNEE 1102 A	Establish the basic operating conditions of vapour	60
UEENEEJ103A	compression systems	
LIEENIEE 1104A	Establish the basic operating conditions of air	20
UEENEEJ104A	conditioning systems	
	Position, assemble and start up single head split	70
UEENEEJ105A	air conditioning and water heating heat pump	, 0
	systems	
	Recover, pressure test, evacuate, charge and leak	60
UEENEEJ172A	test refrigerants — split systems	
	1 1	20
UEENEEK125A	Solve basic problems in photovoltaic energy	20
	apparatus and systems	10
UEENEEK148A	Install, configure and commission LV grid	40
	connected photovoltaic power systems	
UEENEEM019A	Attend to breakdowns in hazardous areas — coal	20
	mining	
UEENEEM020A	Attend to breakdowns in hazardous areas — gas	20
CLEI (EEIVIO2011	atmospheres	
UEENEEM021A	Attend to breakdowns in hazardous areas — dust	20
OLLIVELWI021A	atmospheres	20
UEENEEM022A	Attend to breakdowns in hazardous areas —	20
UEENEEWIUZZA	pressurisation	20
LIEENIEEN 1022 A	Install explosion-protected equipment and wiring	60
UEENEEM023A	systems — coal mining	00
LIEENIEEN 100 1 1	Install explosion-protected equipment and wiring	60
UEENEEM024A	systems — gas atmospheres	60
	Install explosion-protected equipment and wiring	
UEENEEM025A	systems — dust atmospheres	60
	Install explosion-protected equipment and wiring	
UEENEEM026A		60
	systems — pressurisation	
UEENEEM027A	Maintain equipment in hazardous areas — coal	60
	mining	
UEENEEM028A	Maintain equipment in hazardous areas — gas	60
	atmospheres	
UEENEEM029A	Maintain equipment in hazardous areas — dust	60
	atmospheres	
UEENEEM030A	Maintain equipment in hazardous areas —	60
	pressurisation	1 -

UEENEEM038A	Conduct testing of hazardous areas installations — coal mining	40
UEENEEM039A Conduct testing of hazardous areas installations — gas atmospheres		40
UEENEEM040A	Conduct testing of hazardous areas installations — dust atmospheres	40
UEENEEM041A	Conduct testing of hazardous area installations — pressurisation	40
UEENEEM042A	Conduct visual inspection of hazardous areas installations	40
UEENEEM076A	Use and maintain the integrity of a portable gas detection device	20
UEENEEM077A	Install and maintain the integrity of fixed gas detection equipment	20
UEENEEM080A	Report on the integrity of explosion-protected equipment in a hazardous area	20
UEENEEN102A	Assemble and wire internal electrical rail signalling equipment	30
UEENEEN103A	Install and maintain rail track circuit leads and bonds	30
UEENEEN104A	Test copper rail signalling cables	20
UEENEEN121A	Repair rail signalling power and control cables	40
UETTDRIS43A	Perform low voltage field switching operation to a given schedule	50
UETTDRIS44A	Perform HV field switching operation to a given schedule	50
UETTDRIS47A	Sample, test, filter and reinstate insulating oil	40
UETTDRIS67A	Solve problems in energy supply network equipment	80
UETTDRIS68A	Solve problems in energy supply network protection equipment and systems	40
UETTDRSB23A	Install and maintain substation direct current systems	30
UETTDRSB29A	Maintain capacitor bank equipment for voltage regulation	40
UETTDRSB39A	Perform power system substation switching operation to a given schedule	50
	-	ı

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.

END OF QUALIFICATION

#### **Custom Content Section**

## **UEE30911 Certificate III in Electronics and Communications**

Releas	Action	Core/Elective	Details	Points
e				
2	Add	Group B	UEENEEP012A Disconnect / reconnect composite appliances connected to low voltage installation wiring	60
2	Add	Group B	UEENEEP017A Locate and rectify faults in low voltage composite appliances using set procedures	20
2	Add	Group B	UEENEEI150A Develop, enter and verify discrete control programs for programmable controllers	60
2	Update	Group A	HLTFA311A Apply first aid	10
2	Edit		Edit Name to reflect correct Unit title UEENEED104A Use engineering applications software on personal computers	40
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		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
				l .
3	Remov e	Group B	UEENEEH189A Provide Gate Array solutions for complex electronics systems	60
3	Add	Group B	UEENEEP010A Disconnect / reconnect appliances connected to low voltage installation wiring.	60
4	Edit	Elective	Correct weighting points of UEENEED146A - Set up and configure basic local area network (LAN)	40
5	Update	Elective	HLTAID003 - Provide first aid	10
5	Edit	Core	Correct title of UEENEEK142A - Apply	20

			environmentally and sustainable procedures in the	
			energy sector	
5	Edit	Elective	Correct title of UEENEEH117A - Carry out repairs of predictable faults in video and audio replay/recording apparatus	120
5	Edit	Elective	Correct title of UEENEEH174A - Troubleshoot audio - video recording equipment	120
5	Edit	Elective	Correct title of UEENEEP010A - Disconnect - reconnect appliances connected to low voltage installation wiring	60
5	Edit	Elective	Correct title of UEENEEP025A - Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply	20

### **Description**

#### **Scope**

This qualification provides competencies to select, install, set up, test, fault find, repair and maintain electronic equipment and devices at component/sub-assembly level with options in communications, audio, video and TV, personal computer and networks, security and custom installations

## **Pathways Information**

Not applicable.

### **Licensing/Regulatory Information**

Not applicable.

### **Entry Requirements**

Not applicable.

## **Employability Skills Summary**

### **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 380 points in accordance with the Elective Competency Standard Units table below.

Core Competency Standard Units		
All Core competency standard units to be achieved		
UEENEEC021B	UEENEEC021B Participate in electronics and communications work and competency development activities	
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
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20
UEENEEH102A	Repairs basic electronic apparatus faults by replacement of components	40
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
UEENEEH138A	Fault find and repair complex power supplies	40
UEENEEH139A	Troubleshoot basic amplifier circuits	40
UEENEEH146A	UEENEEH146A Solve fundamental electronic communications system problems	
UEENEEK142A	Apply environmentally and sustainable procedures in the energy sector	20
Total points in co	ore	680

### **Elective Competency Standard Units**

Complete Elective units to achieve a total of weighting of 380 points from the following

gro	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 3. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical	0	180	
В	Advisory Committee, their weighting will be 10 points.  Qualification Elective Units You may select all your elective units from this Group	200	380	

Group A – Import You may complete	Weighting Points	
UEENEEC001B	UEENEEC001B Maintain documentation	
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
UEENEED101A	Use computer applications relevant to a workplace	20
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20
HLTAID003	Provide first aid	10
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	Up to 180

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 3. If units
have not being assigned a weighting by the relevant
EE-Oz Industry Technical Advisory Committee,
their weighting will be 10 points.

points

Note: For further information see Application of the NQC Flexibility Formula, UEE11 Electrotechnology Training Package, Version 1, Volume 1 Qualification Framework

Group B – Qualification Complete units to a minim	mum weighting of 200	Weighting Points
You may select all your of	Assemble electronic components	40
UEENEEA101A	•	
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
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
UEENEEE121A	Plan an integrated cabling installation system	40
UEENEE122A 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
	Install and maintain cabling for multiple access	120
UEENEEF102A	to telecommunication services	120
		40
UEENEEF104A	Install and modify performance data	40
	communication copper cabling	40
UEENEEF105A	Install and modify optical fibre performance	40
	data communication cabling	10
UEENEEF106A	Solve problems in voice and data	40
	communications circuits	
UEENEEF107A	Set up and configure the wireless capabilities of	40
	communications and data storage devices	
UEENEEF108A	Select and arrange equipment for wireless	40
CEET (EET TOOT	communication networks	
UEENEEF109A	Install and connect data and voice	40
OLLIVLLI 107A	communication equipment	
UEENEEF110A	Select and arrange data and voice equipment for	40
UEENEEFIIVA	local area networks	
LICENICEC 111 A	Test, report and rectify faults in data and voice	40
UEENEEF111A	installations	
	Set up and configure basic data communication	40
UEENEEF114A	systems	
	Repair basic computer equipment faults by	40
UEENEEH101A	replacement of modules/sub-assemblies	
	Repair routine business equipment faults	120
UEENEEH103A		120
UEENEEH104A	Set up and test residential video/audio	40
	equipment	
UEENEEH105A	Verify functionality and compliance of custom	40
CEETVEETIT0371	electronic installations	
UEENEEH106A	Assemble and set up fixed video/audio	120
OEENEEIIIOOA	components and systems in buildings and	
	premises	
LICENICELLLO7 A	Repair predictable faults in general electronic	40
UEENEEH107A	apparatus	
LIEENIEELIAOA	Assemble and install reception antennae and	60
UEENEEH108A	signal distribution equipment	
LICENICO A	Set up and test gaming and game equipment	60
UEENEEH109A		
UEENEEH110A	Install commercial video/audio system	120
	components	
UEENEEH115A	Develop software solutions for microcontroller	60

	based systems	
UEENEEH116A	Find and repair microwave amplifier section	40
OEENEEIIIIOA	faults in electronic apparatus	
UEENEEH117A	Carry out repairs of predictable faults in video	120
UEENEEIII1/A	and audio replay/recording apparatus	
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
UEENEEH142A	Solve oscillator 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	
UEENEEH169A	69A Solve problems in basic electronic circuits	
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
UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers	60
UEENEEP010A	Disconnect - reconnect appliances connected to low voltage installation wiring	60
UEENEEP012A	Disconnect / reconnect composite appliances connected to low voltage installation wiring	60
UEENEEP017A	Locate and rectify faults in low voltage composite appliances using set procedures	20
UEENEEP024A	Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply	20
UEENEEP025A	Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply	20

- 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.

#### **END OF QUALIFICATION**

### **Custom Content Section**

# **UEE31011 Certificate III in Fire Protection Control**

Releas	Action	Core/Elective	Details	Points
e				
2	Update	Group A	HLTCPR211A Perform CPR	10
2	Update	Group A	HLTFA311A Apply first aid	10
2	Edit		Edit Name to reflect correct Unit title UEENEED104A Use engineering applications software on personal computers	40
2	Update	Core	CPPFES2043A Prevent ozone depleting substance and synthetic greenhouse gas emissions	10

4	Update	Elective	HLTAID001 - Provide cardiopulmonary resuscitation	10
4	Update	Elective	HLTAID003 - Provide first aid	10
4	Edit	Core	Correct title of UEENEEE101A - Apply Occupational Health and Safety regulations, codes and practices in the workplace	20
4	Edit	Core	Correct title of UEENEEE102A - Fabricate, assemble and dismantle utilities industry components	40
4	Edit	Core	Correct title of UEENEEE108A - Lay wiring/cabling and terminate accessories for extra-low voltage (ELV) circuits	40
4	Edit	Core	Correct title of UEENEEH102A - Repairs basic electronic apparatus faults by replacement of components	40
4	Edit	Core	Correct title of UEENEEH161A - Install fire detection and warning system apparatus	40
4	Edit	Core	Correct title of UEENEEH162A - Verify compliance and functionality of fire protection system installations	60

	Edit	Core	Correct title of UEENEEH163A - Enter and verify	40
4	Eart	Core	programs for fire protection systems	
			Correct title of UEENEEK142A - Apply	
4	Edit	Core	environmentally and sustainable procedures in the	20
			energy sector	

4	Edit	Elective	Correct title of UEENEED101A - Use computer applications relevant to a workplace	20
4	Edit	Elective	Correct title of UEENEEH164A - Commission large fire protection systems	40
4	Edit	Elective	Correct title of UEENEEH165A - Troubleshoot fire protection systems	40
4	Edit	Elective	Correct title of UEENEEI116A - Assemble, enter and verify operating instructions in microprocessor equipped devices	20
4	Edit	Elective	Correct title of UEENEEP013A - Disconnect - reconnect control devices connected to low voltage installation wiring	60

### **Description**

#### **Scope**

This qualification provides competencies to select, install, set up, test, fault find, repair and maintain fire protection systems in multiple, commercial and industrial premises.

### **Pathways Information**

Not applicable.

## **Licensing/Regulatory Information**

Not applicable.

## **Entry Requirements**

Not applicable.

### **Employability Skills Summary**

### **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 370 points in accordance with the Elective Competency Standard Units table below.

Core Competency All Core competer	y Standard Units ncy standard units to be achieved	Weighting Points
UEENEEC022B	Participate in fire protection control work and competency development activities	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
UEENEEE119A	Solve problems in multiple path extra low voltage (ELV) a.c. circuits	40
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20
UEENEEF102A	Install and maintain cabling for multiple access to telecommunication services	120
UEENEEH102A	Repairs basic electronic apparatus faults by replacement of components	40
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
UEENEEK142A	Apply environmentally and sustainable procedures in the energy sector	20
CPPFES2043A	Prevent ozone depleting substance and synthetic greenhouse gas emissions	10

<b>Core Competency Standard Units</b>	Weighting
All Core competency standard units to be achieved	Points
Total points in core	690

## **Elective Competency Standard Units**

Complete Elective units to achieve a total of weighting of 370 points from the following groups:

Gro	oup	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 3. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	170
В	Qualification Elective Units You may select all your elective units from this Group	200	370

	d and Common Elective Units units to a maximum weighting of 170	Weighting Points	
Tou may complete a	Tou may complete aims to a maximum weighting of 170		
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	
UEENEED101A	Use computer applications relevant to a workplace	20	
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20	
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20	
CPCCOHS1001A	Work safely in the construction industry	10	
HLTAID001	Provide cardiopulmonary resuscitation	10	
HLTAID003	Provide first aid	10	

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 3. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.

Up to 170 points

Note: For further information see Application of the NQC Flexibility Formula, UEE11 Electrotechnology Training Package, Version 1, Volume 1 Qualification Framework

Group B – Qualific	Weighting Points	
•	minimum weighting of 200	
You may select all	your elective units from this Group	
UEENEED104A	Use engineering applications software on	40
	personal computers	
UEENEEF104A	Install and modify performance data	40
	communication copper cabling	
UEENEEF105A	Install and modify optical fibre performance data	40
CEEIVEEI 10371	communication cabling	
UEENEEH111A	Troubleshoot single phase input d.c. power	40
OLENEEIIIIA	supplies	
UEENEEH164A	Commission large fire protection systems	40
UEENEEH165A	Troubleshoot fire protection systems	40
UEENEEI116A	Assemble, enter and verify operating instructions	20
OLLIVLEITIOA	in microprocessor equipped devices	
UEENEEI150A	Develop, enter and verify discrete control	60
OLENEE1130A	programs for programmable controllers	
UEENEEM024A	Install explosion-protected equipment and wiring	60
OLENEEWI024A	systems - gas atmospheres	
UEENEEM077A	Install and maintain the integrity of fixed gas	20
OLENEEMO//A	detection equipment	
UEENEEM080A	Report on the integrity of explosion-protected	20
UEENEEMIUOUA	equipment in a hazardous area	
UEENEEP013A	Disconnect - reconnect control devices connected	60
OLENEEPUISA	to low voltage installation wiring	00
LIEUNIEUDO10 A	Locate and rectify faults in low voltage control	20
UEENEEP018A	devices using set procedures	20

- 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.

#### **END OF QUALIFICATION**

#### **Custom Content Section**

# **UEE31111 Certificate III in Gaming Electronics**

Releas	Action	Core/Elective	Details	Points
e				
2	Update	Group A	HLTCPR211A Perform CPR	10
2	Update	Group A	HLTFA311A Apply first aid	10
2	Edit		Edit Name to reflect correct Unit title UEENEED104A Use engineering applications software on personal computers	40

4	Update	Elective	HLTAID001 - Provide cardiopulmonary	10
	Срише	Ziotivo	resuscitation	
4	Update	Elective	HLTAID003 - Provide first aid	10
4	Edit	Core	Correct title of UEENEEE101A - Apply Occupational Health and Safety regulations, codes and practices in the workplace	20
4	Edit	Core	Correct title of UEENEEE102A - Fabricate, assemble and dismantle utilities industry components	40
4	Edit	Core	Correct title of UEENEEH102A - Repairs basic electronic apparatus faults by replacement of components	40
4	Edit	Core	Correct title of UEENEEK142A - Apply environmentally and sustainable procedures in the energy sector	20
4	Edit	Elective	Correct title of UEENEED101A - Use computer applications relevant to a workplace	20
4	Edit	Elective	Correct title of UEENEED102A - Assemble, set-up and test computing devices	80
4	Edit	Elective	Correct title of UEENEEE123A - Solve basic problems electronic and digital equipment and circuits	80
4	Edit	Elective	Correct title of UEENEEE179A - Identify and select components, accessories and materials for energy sector work activities	20

### **Description**

#### Scope

This qualification provides competencies to select, install, set up, test, fault find, repair and maintain gaming machines used in registered clubs and hotels and dedicated games machines used in electronic game venues.

### **Pathways Information**

Not applicable.

### **Licensing/Regulatory Information**

Not applicable.

### **Entry Requirements**

Not applicable.

### **Employability Skills Summary**

### **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 360 points in accordance with the Elective Competency Standard Units table below.

<b>Core Competency</b>	Weighting				
All Core competer	All Core competency standard units to be achieved				
UEENEEC023B	Participate in gaming electronic work and competency development activities	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			
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications	40			
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20			
UEENEEH102A	Repairs basic electronic apparatus faults by replacement of components	40			
UEENEEH109A	Set up and test gaming and game equipment	60			
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			
UEENEEH139A	Troubleshoot basic amplifier circuits	40			
UEENEEK142A	Apply environmentally and sustainable procedures in the energy sector	20			
Total points in co	ore	700			

### **Elective Competency Standard Units**

Complete Elective units to achieve a total of weighting of 360 points from the following groups:

Gre	oup	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 3. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	160
В	Qualification Elective Units You may select all your elective units from this Group	200	360

• •	Group A – Imported and Common Elective Units You may complete units to a maximum weighting of 160  Points				
You may complete u	You may complete units to a maximum weighting of 160				
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			
UEENEED101A	Use computer applications relevant to a workplace	20			
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20			
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20			
HLTAID001	Provide cardiopulmonary resuscitation	10			
HLTAID003	Provide first aid	10			
	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 3. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting	Up to 160 points			

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	

Group B – Qualific	Weighting				
Complete units to a	Complete units to a minimum weighting of 200				
You may select all y	our elective units from this Group				
UEENEED102A	Assemble, set-up and test computing devices	80			
UEENEED104A	Use engineering applications software on personal computers	40			
UEENEED146A	Set up and configure basic local area network (LAN)	80			
UEENEEE105A	Fix and secure electrotechnology equipment	20			
UEENEEE108A	Lay wiring/cabling and terminate accessories for ELV circuits	40			
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			
UEENEEH107A	Repair predictable faults in general electronic apparatus	40			
UEENEEH115A	Develop software solutions for microcontroller based systems	60			
UEENEEH120A	Fault find and repair gaming and games equipment	80			
UEENEEH138A	Fault find and repair complex power supplies	40			

- 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.

#### **END OF QUALIFICATION**

### **Custom Content Section**

# **UEE31211 Certificate III in Instrumentation and Control**

Releas	Action	Core/Elective	Details	Points
e				
2	Update	Group A	HLTCPR211A Perform CPR	10
2	Update	Group A	HLTFA311A Apply first aid	10
2	Edit		Edit Name to reflect correct Unit title UEENEED104A Use engineering applications software on personal computers	40

3	Edit	Core	Edit Name to reflect correct Unit title UEENEEI102A Solve problems in pressure measurement components and systems	40
3	Edit	Core	Edit Name to reflect correct Unit title UEENEEI103A Solve problems in density_level measurement components and systems	40
3	Edit	Core	Edit Name to reflect correct Unit title UEENEEI104A Solve problems in flow measurement components and systems	40
3	Edit	Core	Edit Name to reflect correct Unit title UEENEEI105A Solve problems in temperature measurement components and systems	40
3	Edit	Core	Edit Name to reflect correct Unit title UEENEEI106A Set up and adjust PID control loops	40
3	Edit	Core	Edit Name to reflect correct Unit title UEENEEI110A Set up and adjust advanced PID process control loops	40
3	Edit	Group B	Edit Name to reflect correct Unit title UEENEEI114A Trouble shoot process control systems	60

4	Update	Elective	HLTAID001 - Provide cardiopulmonary resuscitation	10
4	Update	Elective	HLTAID003 - Provide first aid	10
4	Edit	Core	Correct title of UEENEEE101A - Apply Occupational Health and Safety regulations, codes and practices in the workplace	20

_	ع Edit	Core	Correct title of UEENEEE102A - Fabricate,	40
4	Lan		assemble and dismantle utilities industry components	
4 Edit	Core	Correct title of UEENEEE119A - Solve problems in	40	
	Core	multiple path extra low voltage (ELV) a.c. circuits		
			Correct title of UEENEEI101A - Use instrumentation	
4	Edit	Core	drawings, specification, standards and equipment	40
			manuals	
	E 414	C	Correct title of UEENEEI103A - Solve problems in	40
4	Edit	Core	density/level measurement components and systems	
	E 414	Carra	Correct title of UEENEEI107A - Install	20
4	Edit	Core	instrumentation and control cabling and tubing	20
			Correct title of UEENEEI108A - Install	
4	Edit	Core	instrumentation and control apparatus and associated	20
			equipment	
		Core	Correct title of UEENEEK142A - Apply	
4	Edit		environmentally and sustainable procedures in the	20
			energy sector	
			Correct title of UEENEEP013A - Disconnect -	
4	Edit	Core	reconnect control devices connected to low voltage	60
			installation wiring	
	Edit	Elective	Correct title of UEENEED101A - Use computer	20
4	East	Liective	applications relevant to a workplace	
			Correct title of UEENEEH102A - Repairs basic	
4	Edit	Elective	electronic apparatus faults by replacement of	40
			components	
4	Edit	Elective	Correct title of UEENEEI115A - Trouble shooting in	120
4	East	Elective	medical equipment control systems	
4	Edit	Elective	Correct title of UEENEEI117A - Calibrate, adjust	40
4 Edit	Elective	and test measuring instruments		
	•		·	•

# **Description**

#### Scope

This qualification provides competencies to select, install, set up, test, fault find, repair and maintain systems and devices for measurement and recording of physical/chemical phenomenon and related process control.

### **Pathways Information**

# **Licensing/Regulatory Information**

Not applicable.

# **Entry Requirements**

Not applicable.

# **Employability Skills Summary**

### **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 140 points in accordance with the Elective Competency Standard Units table below.

<b>Core Competenc</b>	Weighting	
All Core compete	Points	
UEENEEC024B	Participate in instrumentation and control work and competency development activities	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
UEENEEE119A	Solve problems in multiple path extra low voltage (ELV) a.c. circuits	40
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20
UEENEEI101A	Use instrumentation drawings, specification, standards and equipment manuals	40
UEENEEI102A	Solve problems in pressure measurement components and systems	40
UEENEEI103A	Solve problems in density/level measurement components and systems	40
UEENEEI104A	Solve problems in flow measurement components and systems	40
UEENEEI105A	Solve problems in temperature measurement components and systems	40
UEENEEI106A	Set up and adjust PID control loops	40
UEENEEI107A	Install instrumentation and control cabling and tubing	20
UEENEEI108A	Install instrumentation and control apparatus and	20

<b>Core Competency</b>	Weighting	
All Core competer	Points	
	associated equipment	
UEENEEI110A	Set up and adjust advanced PID process control loops	40
UEENEEI111A	UEENEEI111A Find and rectify faults in process final control elements	
UEENEEI112A Verify compliance and functionality of instrumentation and control installations		40
UEENEEI113A	Setup and configure human-machine interface (HMI) and industrial networks	60
UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers	
UEENEEK142A Apply environmentally and sustainable procedures in the energy sector		20
UEENEEP013A	JEENEEP013A Disconnect - reconnect control devices connected to low voltage installation wiring	
Total points in co	920	

### **Elective Competency Standard Units**

Complete Elective units to achieve a total of weighting of 140 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 3. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	60
В	Qualification Elective Units You may select all your elective units from this Group	80	140

Group A – Imported You may complete ur	Weighting Points	
UEENEEC001B	Maintain documentation	20

UEENEEC002B	Source and purchase material/parts for installation	20
	or service jobs	
UEENEEC003B	JEENEEC003B Provide quotations for installation or service jobs	
UEENEEC010B	UEENEEC010B Deliver a service to customers	
UEENEED101A	Use computer applications relevant to a	20
	workplace	
UEENEEE009B	Comply with scheduled and preventative	20
CEETTEEEOOPB	maintenance program processes	
UEENEEE020B	Provide basic instruction in the use of	20
OLLIVLLE020B	electrotechnology apparatus	
CPCCOHS1001A	Work safely in the construction industry	10
HLTAID001	Provide cardiopulmonary resuscitation	10
HLTAID003	Provide first aid	10
	Imported units from other training packages	
	and/or state accredited courses can be added to	Up to 60
	this group, but they must be selected from	points
	qualifications where the unit is first packaged at	
	AQF level 3. 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	

Group B – Qualifi	cation Elective Units	Weighting
Complete units to a	Points	
You may select all	your elective units from this Group	
UEENEED104A	Use engineering applications software on	40
OLLIVLED 104/1	personal computers	
UEENEEH102A	Repairs basic electronic apparatus faults by	40
CLEIVEEIII 0211	replacement of components	
UEENEEH111A	Troubleshoot single phase input d.c. power	40
CEENEEIIIII	supplies	
UEENEEH112A	Troubleshoot digital sub-systems	80
UEENEEI114A	Trouble shoot process control systems	60
UEENEEI115A	Trouble shooting in medical equipment control	120
OLLIVLEII 13A	systems	
UEENEEI117A	Calibrate, adjust and test measuring instruments	40
UEENEEI118A	Set up weighting measuring and control	20
OEENEEITIOA	instruments	
UEENEEI131A	Set up gas analysis measuring and control	20
OLLIVLEII31A	instruments	
UEENEEI132A	Set up water analysis measuring and control	20
CELIVEEI13211	instruments	
UEENEEI133A	Set up scientific analysis measuring and control	20
0221(22113311	instruments	
UEENEEM019A	Attend to breakdowns in hazardous areas — coal	20
	mining	
UEENEEM020A	Attend to breakdowns in hazardous areas — gas	20
	atmospheres	
UEENEEM021A	Attend to breakdowns in hazardous areas — dust	20
	atmospheres	
UEENEEM022A	Attend to breakdowns in hazardous areas —	20
	pressurisation	
UEENEEM023A	Install explosion-protected equipment and wiring	60
	systems — coal mining	
UEENEEM024A	Install explosion-protected equipment and wiring	60
	systems — gas atmospheres	
UEENEEM025A	Install explosion-protected equipment and wiring	60
	systems — dust atmospheres	
UEENEEM026A	Install explosion-protected equipment and wiring	60
	systems — pressurisation	
UEENEEM027A	Maintain equipment in hazardous areas — coal	60
	mining	

UEENEEM028A Maintain equipment in hazardous areas — gas atmospheres		60
UEENEEM029A Maintain equipment in hazardous areas — dust atmospheres		60
UEENEEM030A	Maintain equipment in hazardous areas — pressurisation	60
UEENEEM076A	Use and maintain the integrity of a portable gas detection device	20
UEENEEM077A	Install and maintain the integrity of fixed gas detection equipment	20
UEENEEM080A Report on the integrity of explosion-protect equipment in a hazardous area		20

- 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.

#### END OF QUALIFICATION

#### **Custom Content Section**

# **UEE31411 Certificate III in Security Equipment**

Releas	Action	Core/Elective	Details	Points
e				
2	Update	Group A	HLTCPR211A Perform CPR	10
2	Update	Group A	HLTFA311A Apply first aid	10

4	Update	Elective	HLTAID001 - Provide cardiopulmonary resuscitation	10
4	Update	Elective	HLTAID003 - Provide first aid	10
4	Edit	Core	Correct title of UEENEEE101A - Apply Occupational Health and Safety regulations, codes and practices in the workplace	20
4	Edit	Core	Correct title of UEENEEE102A - Fabricate, assemble and dismantle utilities industry components	40
4	Edit	Core	Correct title of UEENEEE108A - Lay wiring/cabling and terminate accessories for extra-low voltage (ELV) circuits	40
4	Edit	Core	Correct title of UEENEEH150A - Assemble and set up basic security systems	40
4	Edit	Core	Correct title of UEENEEH151A - Install large security systems	40
4	Edit	Core	Correct title of UEENEEH152A - Enter instructions and test wired and wireless security systems	40
4	Edit	Core	Correct title of UEENEEK142A - Apply environmentally and sustainable procedures in the energy sector	20
4	Edit	Elective	Correct title of UEENEED101A - Use computer applications relevant to a workplace	20
4	Edit	Elective	Correct title of UEENEEH102A - Repairs basic electronic apparatus faults by replacement of components	40
4	Edit	Elective	Correct title of UEENEEH153A - Program and test large security systems	120
4	Edit	Elective	Correct title of UEENEEH154A - Program and commission commercial security systems	60
4	Edit	Elective	Correct title of UEENEEH155A - Program and	60

			commission commercial access control security	
			systems	
			Correct title of UEENEEH156A - Program and	
4	Edit	Elective	commission commercial security closed circuit	60
			television systems	

# **Description**

#### **Scope**

This qualification provides competencies in installation and pre-commissioning set up of wired and wireless security systems in multiple, commercial industrial premises.

## **Pathways Information**

Not applicable.

## **Licensing/Regulatory Information**

Not applicable.

# **Entry Requirements**

Not applicable.

## **Employability Skills Summary**

#### **Completion requirements**

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

<b>Core Competency</b>	Weighting	
All Core competer	Points	
UEENEEC026B	Participate in security equipment work and	60
	competency development activities	
UEENEEE101A	Apply Occupational Health and Safety regulations,	20
	codes and practices in the workplace	
UEENEEE102A	Fabricate, assemble and dismantle utilities industry	40
	components	
UEENEEE104A	Solve problems in d.c. circuits	80
UEENEEE105A	Fix and secure electrotechnology equipment	20
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes	40
OEENEEE10/A	and specifications	
UEENEEE108A	Lay wiring/cabling and terminate accessories for	40
CEENEELIOON	extra-low voltage (ELV) circuits	
UEENEEE137A	Document and apply measures to control OHS risks	20
CEETCEEETS	associated with electrotechnology work	
UEENEEH114A	Troubleshoot resonance circuits in an electronic	80
	apparatus	
UEENEEH150A	Assemble and set up basic security systems	80
UEENEEH151A	Install large security systems	100
UEENEEH152A	Enter instructions and test wired and wireless	40
OLENEEHIJ2A	security systems	
UEENEEK142A	Apply environmentally and sustainable procedures in	20
CEETILEITI-211	the energy sector	
Total points in co	ore	640

Complete Elective units to achieve a total of weighting of 420 points from the following groups:

Gre	Group		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 3. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	170
В	Qualification Elective Units You may select all your elective units from this Group	250	420

Group A – Imported and Common Elective Units				
You may complete u	Points			
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		
UEENEED101A	Use computer applications relevant to a workplace	20		
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20		
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20		
CPCCOHS1001A	Work safely in the construction industry	10		
HLTAID001	Provide cardiopulmonary resuscitation	10		
HLTAID003	Provide first aid	10		
	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 3. If units have not being assigned a weighting by the relevant EE-Oz Industry	Up to 170 points		

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	

•	ation Elective Units	Weighting Points	
Complete units to a	1 omes		
You may select all y	You may select all your elective units from this Group		
UEENEEF102A	Install and maintain cabling for multiple access to	120	
CEETVEET 10211	telecommunication services		
UEENEEH102A	Repairs basic electronic apparatus faults by	40	
CEETTEETTOZI	replacement of components		
UEENEEH103A	Repair routine business equipment faults	120	
UEENEEH104A	Set up and test residential video/audio equipment	40	
UEENEEH118A	Fault find and repair electronic apparatus	40	
UEENEEH153A	Program and test large security systems	120	
UEENEEH154A	Program and commission commercial security	60	
	systems		
UEENEEH155A	Program and commission commercial access	60	
CEETVEETTISSTI	control security systems		
UEENEEH156A	Program and commission commercial security	60	
	closed circuit television systems		
UEENEEH169A	Solve problems in basic electronic circuits	100	

#### **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.

### END OF QUALIFICATION

### **Custom Content Section**

# **UEE31511 Certificate III in Rail - Communications and Networks**

# **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Update	Group A	HLTCPR211A Perform CPR	10
2	Update	Group A	HLTFA311A Apply first aid	10
2	Edit		Edit Name to reflect correct Unit title UEENEED104A Use engineering applications software on personal computers	40

4	Update	Elective	HLTAID001 - Provide cardiopulmonary resuscitation	10
4	Update	Elective	HLTAID003 - Provide first aid	10
4	Edit	Core	Correct title of UEENEEE101A - Apply Occupational Health and Safety regulations, codes and practices in the workplace	20
4	Edit	Core	Correct title of UEENEEE102A - Fabricate, assemble and dismantle utilities industry components	40
4	Edit	Core	Correct title of UEENEEH102A - Repairs basic electronic apparatus faults by replacement of components	20
4	Edit	Core	Correct title of UEENEEK142A - Apply environmentally and sustainable procedures in the energy sector	20
4	Edit	Elective	Correct title of UEENEED101A - Use computer applications relevant to a workplace	20

## **Description**

#### Scope

This qualification provides competencies to select, install, commission, fault find and maintain radio and dedicated telecommunications networks in rail equipment.

### **Pathways Information**

Not applicable.

## **Licensing/Regulatory Information**

Not applicable.

# **Entry Requirements**

Not applicable.

## **Employability Skills Summary**

#### **Completion requirements**

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

<b>Core Competenc</b>	Weighting		
All Core compete	All Core competency standard units to be achieved		
UEENEEC027B	Participate in rail communications and networks work and competency development activities	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	
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications	40	
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20	
UEENEEH102A	Repairs basic electronic apparatus faults by replacement of components	40	
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	
UEENEEH138A	Fault find and repair complex power supplies	40	
UEENEEH139A	Troubleshoot basic amplifier circuits	40	
UEENEEK142A	Apply environmentally and sustainable procedures in the energy sector	20	
Total points in co	ore	680	

Complete Elective units to achieve a total of weighting of 380 points from the following groups:

Gro	oup	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 3. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	170
В	Qualification Elective Units  You may select all your elective units from this Group	210	380

Group A – Importe You may complete u	Weighting Points	
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
UEENEED101A	Use computer applications relevant to a workplace	20
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20
CPCCOHS1001A	Work safely in the construction industry	10
HLTAID001	Provide cardiopulmonary resuscitation	10
HLTAID003	Provide first aid	10
	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 3. If units have not being assigned a weighting by the relevant EE-Oz Industry	Up to 170 points

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	

Group B – Qualifica	Weighting			
Complete units to a r	Points			
You may select all you	our elective units from this Group			
UEENEED104A	UEENEED104A Use engineering applications software on personal computers			
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		
UEENEEF107A Set up and configure the wireless capabilities of communications and data storage devices		40		
<u> </u>		60		
UEENEEF109A Install and connect data and voice communication equipment		40		
UEENEEF110A Select and arrange data and voice equipment for local area networks		40		
UEENEEH115A	Develop software solutions for microcontroller based systems	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.

### **END OF QUALIFICATION**

### **Custom Content Section**

# **UEE32011 Certificate III in Renewable Energy - ELV**

# **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Update	Group A	HLTCPR211A Perform CPR	10
2	Update	Group A	HLTFA311A Apply first aid	10

4	Update	Elective	HLTAID001 - Provide cardiopulmonary resuscitation	10
4	Update	Elective	HLTAID003 - Provide first aid	10
4	Edit	Core	Correct title of UEENEEE101A - Apply Occupational Health and Safety regulations, codes and practices in the workplace	20
4	Edit	Core	Correct title of UEENEEE102A - Fabricate, assemble and dismantle utilities industry components	40
4	Edit	Core	Correct title of UEENEEE108A - Lay wiring/cabling and terminate accessories for extra-low voltage (ELV) circuits	40
4	Edit	Core	Correct title of UEENEEE119A - Solve problems in multiple path extra low voltage (ELV) a.c. circuits	40
4	Edit	Core	Correct title of UEENEEK142A - Apply environmentally and sustainable procedures in the energy sector	20
4	Edit	Core	Correct title of UEENEEK128A - Solve problems in stand-alone renewable energy systems	120
4	Edit	Elective	Correct title of UEENEED101A - Use computer applications relevant to a workplace	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 UEENEEK134A - Install ELV standalone photovoltaic power systems	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 I	Correct title of UEENEEP026A - Conduct in-service safety testing of electrical cord connected equipment	20
<b>T</b>		and cord assemblies	

## **Description**

#### **Scope**

Select, install, set up, test, fault find, repair and maintain renewable energy equipment and systems. It does not include electrical work covered by licensing requirements declared by the Electrical Regulators Advisory Council (ERAC) for an 'Electrician's licence'.

## **Pathways Information**

Not applicable.

### **Licensing/Regulatory Information**

Not applicable.

### **Entry Requirements**

Not applicable.

## **Employability Skills Summary**

#### **Completion requirements**

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

Core Competency All Core competence	Weighting Points	
UEENEEC021B	Participate in electronics and communications work	60
UEENEEE101A	and competency development activities  JEENEEE101A  Apply Occupational Health and Safety regulations, 2	
UEENEEE102A	codes and practices in the workplace  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
UEENEEE119A	Solve problems in multiple noth extra low voltage	
UEENEEE137A	Document and apply measures to control OHS risks	
UEENEEG101A	Solve problems in electromagnetic devices and related circuits	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	
UEENEEK128A	Solve problems in stand alone renewable energy	
UEENEEK142A	Apply environmentally and sustainable procedures in the energy sector	20

UEENEEK 149A	Verify compliance and functionality of a extra low voltage renewable energy installation	40
Total points in core		700

Complete Elective units to achieve a total of weighting of 360 points from the following groups:

Gr	oup	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 3. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	170
В	Qualification Elective Units You may select all your elective units from this Group	190	360

Group A – Importe You may complete u	Weighting Points			
UEENEEC001B	JEENEEC001B Maintain documentation			
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		
UEENEED101A	Use computer applications relevant to a workplace	20		
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20		
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20		
CPCCOHS1001A	Work cafely in the construction industry			
HLTAID001	Provide cardiopulmonary resuscitation	10		
HLTAID003	Provide first aid	10		

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 3. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.

Up to 170 points

Note: For further information see Application of the NQC Flexibility Formula, UEE11 Electrotechnology Training Package, Version 1, Volume 1 Qualification Framework

Group B – Qualifi	cation Elective Units	Weighting
Complete units to a	minimum weighting of 190	Points
You may select all	your elective units from this Group	
UEENEEK101A	Maintain safety and tidiness of remote area power	20
OLLIVLEKIOIA	supply systems	
UEENEEK102A	Work safely with remote area power supply	20
UEENEEK 102A	systems	
UEENEEK103A	Conduct periodic maintenance of remote area	40
UEENEEKIUSA	power supply battery banks	
LIEENIEEV 104 A	Conduct periodic maintenance of remote area	40
UEENEEK104A	power supply generator sets	
HEENEEKIOEA	Conduct periodic maintenance of remote area	40
UEENEEK105A	power supply photo voltaic arrays	
TIEENIEEIZ10ZA	Conduct periodic maintenance of remote area	40
UEENEEK106A	power supply wind generators	
HEENEEK 107 A	Conduct checks in the demand side use of remote	40
UEENEEK107A	area power supplies (RAPS)	
TIPENIE ELIZADO A	Plan periodic maintenance schedules of remote	40
UEENEEK108A	area power supplies (RAPS)	
	Attend to breakdowns in remote area power	20
UEENEEK109A	supplies (RAPS)	
	Maintain and repair remote area power generation	120
UEENEEK116A	facilities	
	Maintain and repair facilities associated with	120
UEENEEK117A	remote area essential service operations	120
	Maintain operation of remote area power	120
UEENEEK120A	generation plant	120
		20
UEENEEK124A	Solve basic problems in micro hydro systems	20
UEENEEK130A	Solve problems in wind energy conversion	60
CLLI (LLIXI 3011	systems rated up to 10 kW	
UEENEEK134A	Install ELV stand-alone photovoltaic power	60
OLLIVLLIX134A	systems	
UEENEEK137A	Install, set up and maintain ELV micro-hydro	20
OLLNEEKI3/A	systems rated up to 6.4 kW	
UEENEEK143A	Install small wind energy conversion systems	20
OLENEEK143A	rated up to 10 kW for ELV stand-alone	
	applications	
HEENEEDO24A	Attach cords and plugs to electrical equipment for	20
UEENEEP024A	connection to a single phase 230 Volt supply	
LICENICEDO25 A	Attach cords, cables and plugs to electrical	20
UEENEEP025A		

	equipment 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

#### **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.

#### **END OF QUALIFICATION**

### **Custom Content Section**

## **UEE32111 Certificate III in Appliance Service**

### **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Update	Group A	HLTCPR211A Perform CPR	10
2	Update	Group A	HLTFA311A Apply first aid	10

4	Update	Elective	HLTAID001 - Provide cardiopulmonary resuscitation	10
4	Update	Elective	HLTAID003 - Provide first aid	10
4	Edit	Core	Correct title of UEENEEJ153A - Find and rectify faults in motors and associated controls in refrigeration and air conditioning systems	50
4	Edit	Core	Correct title of UEENEEK142A - Apply environmentally and sustainable procedures in the energy sector	20

### **Description**

#### Scope

This qualification provides competencies to set-up, service and repair electrical and refrigerated appliances with electives in gas appliances.

**Note:** The Ozone Protection and Synthetic Greenhouse Gas Legislation Amendment Bill 2003 apply to this qualification. Prior to planning the delivery of any training and/or assessment activities all legislative and regulatory requirements shall be identified and included.

### **Pathways Information**

Not applicable.

## **Licensing/Regulatory Information**

# **Entry Requirements**

Not applicable.

# **Employability Skills Summary**

#### **Completion requirements**

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

Core Competency Standard Units					
All Core competer	All Core competency standard units to be achieved				
UEENEEC017B	Participate in appliance servicing work and	60			
	competency development activities				
UEENEEE101A	Apply Occupational Health and Safety regulations,	20			
	codes and practices in the workplace	40			
UEENEEE102A	Fabricate, assemble and dismantle utilities industry components	40			
UEENEEE103A	Solve problems in ELV single path circuits	40			
UEENEEE105A	Fix and secure electrotechnology equipment	20			
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes	40			
	and specifications				
UEENEEE137A	Document and apply measures to control OHS risks	20			
	associated with electrotechnology work				
UEENEEJ102A	Prepare and connect refrigerant tubing and fittings	30			
UEENEEJ151A	Service small electrical appliances and power tools	60			
UEENEEJ153A	Find and rectify faults in motors and associated	50			
	controls in refrigeration and air conditioning systems				
UEENEEJ154A	Find and rectify faults in appliance control systems and devices	60			
UEENEEJ155A	Service refrigeration appliances	60			
UEENEEJ156A	Service clothes washing machines and dryers	40			
UEENEEJ161A	Verify functionality and compliance of appliances	20			
UEENEEJ162A	Recover, pressure test, evacuate, charge and leak test refrigerants - appliances	50			
UEENEEJ194A	Solve problems in low voltage refrigeration circuits	40			
UEENEEJ195A	Establish the basic operating conditions of vapour compression systems - appliances	50			

UEENEEK142A	Apply environmentally and sustainable procedures in	20
	the energy sector	
UEENEEP012A	Disconnect / reconnect composite appliances	60
CEETVEET 01211	connected to low voltage installation wiring	
UEENEEP017A	Locate and rectify faults in low voltage composite	20
CEETVEET 01711	appliances using set procedures	
UEENEEP024A	Attach cords and plugs to electrical equipment for	20
	connection to a single phase 230 Volt supply	
UEENEEP025A	Attach cords, cables and plugs to electrical equipment	20
OLLIVLLI 023A	for connection to 1000 Va.c. or 1500 Vd.c. supply	
Total points in co	Total points in core	

Complete Elective units to achieve a total of weighting of 220 points from the following groups:

Gre	oup	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 3. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	100
В	Qualification Elective Units You may select all your elective units from this Group	120	220

Group A – Importe	Weighting Points	
UEENEEC001B	nits to a maximum weighting of 100  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
UEENEED101A	Use computer applications relevant to a workplace	20
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20
CPCCOHS1001A	Work safely in the construction industry	10
HLTAID001	Provide cardiopulmonary resuscitation	10
HLTAID003	Provide first aid	10
	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 3. 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 100 points

Group B – Qualific	Weighting Points	
You may select all	your elective units from this Group	
UEENEEJ104A	Establish the basic operating conditions of air conditioning systems	20
UEENEEJ118A	Resolve problems in post mix refrigeration systems	20
UEENEEJ157A	Service electrical heating appliances	60
UEENEEJ158A	Service dishwasher machines	40
UEENEEJ159A	Service gas heating appliances	40
UEENEEJ171A	Resolve problems in refrigerated beverage vending cabinets	20
UEENEEJ173A	Service and repair microwave ovens	40
UEENEEJ174A	Apply safety awareness and legal requirements for hydrocarbon refrigerants	10
UEENEEJ175A	Service and repair self contained hydrocarbon air conditioning and refrigeration systems	20
UEENEEJ184A	Apply safety awareness and legal requirements for carbon dioxide refrigerant	10
UEENEEJ188A	Repair and service self contained carbon dioxide refrigeration and heat pump systems	20
UEENEEJ189A	Service room air conditioners	30

#### 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.

#### **END OF QUALIFICATION**

### **Custom Content Section**

# **UEE32211 Certificate III in Air-conditioning and Refrigeration**

# **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Update	Group A	HLTCPR211A Perform CPR	10
2	Update	Group A	HLTFA311A Apply first aid	10

5	Update	Group A	CPCPCM2043A – Carry out WHS requirements	40
5	Update	Group A	CPCPMS3035A – Install and test ducting systems	10

6	Update	Elective	HLTAID001 - Provide cardiopulmonary resuscitation	10
6	Update	Elective	HLTAID003 - Provide first aid	10
6	Edit	Core	Correct title of UEENEEJ153A - Find and rectify faults in motors and associated controls in refrigeration and air conditioning systems	50
6	Edit	Core	Correct title of UEENEEK142A - Apply environmentally and sustainable procedures in the energy sector	20
6	Edit	Elective	Correct title of UEENEEJ196A - Operate Ammonia Refrigeration Plant	40

### **Description**

#### **Scope**

This qualification provides competencies to select components, install, set up, test, fault find, repair and maintain refrigeration systems and equipment that apply to food storage and preservation, air conditioning and air distribution equipment in buildings and premises. It includes regulatory requirements for purchasing and handling refrigerants.

#### Note:

The Ozone Protection and Synthetic Greenhouse Gas Legislation Amendment Bill 2003 apply to this qualification. Prior to planning the delivery of any training and/or assessment activities all legislative and regulatory requirements shall be identified and included.

### **Pathways Information**

Not Applicable

### **Licensing/Regulatory Information**

Not Applicable

### **Entry Requirements**

Not Applicable

### **Employability Skills Summary**

Not Applicable

#### **Completion requirements**

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

Core Competency Standard Units  W			
All Core competend	cy standard units to be achieved	points	
UEENEEC025B	Participate in refrigeration and air conditioning work	60	
CEEI (EEC023B	and competency development activities		
UEENEEE101A	Apply Occupational Health and Safety regulations,	20	
	codes and practices in the workplace		
UEENEEE102A	Fabricate, assemble and dismantle utilities industry	40	
	components		
UEENEEE103A	Solve problems in ELV single path circuits	40	
UEENEEE105A	Fix and secure electrotechnology equipment	20	
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes	40	
CEENEELIOTI	and specifications		
UEENEEE137A	Document and apply measures to control OHS risks	20	
	associated with electrotechnology work		
UEENEEJ102A	Prepare and connect refrigerant tubing and fittings	30	
UEENEEJ103A	Establish the basic operating conditions of vapour	60	
CEETVEESTOST	compression systems		
UEENEEJ104A	Establish the basic operating conditions of air	20	
	conditioning systems		
UEENEEJ106A	Install refrigerant pipe work, flow controls and	60	
	accessories		
UEENEEJ107A	Install air conditioning and refrigeration systems,	80	
	major components and associated equipment	50	
UEENEEJ108A	Recover, pressure test, evacuate, charge and leak test refrigerants	60	
	Verify functionality and compliance of refrigeration	20	
UEENEEJ109A	and air conditioning installations	20	
UEENEEJ110A	Select refrigerant piping, accessories and associated	50	
	controls		
UEENEEJ111A	Diagnose and rectify faults in air conditioning and	40	

<b>Core Competency</b>	Weighting	
All Core competen	All Core competency standard units to be achieved	
	refrigeration systems and components	
UEENEEJ113A	Commission air conditioning and refrigeration	40
CEETVEESTI	systems	
UEENEEJ153A	Find and rectify faults in motors and associated	50
0 3 2 1 1 2 1 1 2 1 1	controls in refrigeration and air conditioning systems	
UEENEEJ170A	Diagnose and rectify faults in air conditioning and	70
0 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	refrigeration control systems	
UEENEEJ194A	Solve problems in low voltage refrigeration circuits	40
UEENEEK142A	Apply environmentally and sustainable procedures	20
CEETVEETT +271	in the energy sector	
UEENEEP012A	Disconnect / reconnect composite appliances	60
	connected to low voltage installation wiring	
UEENEEP017A	Locate and rectify faults in low voltage composite	20
	appliances using set procedures	
UEENEEP024A	Attach cords and plugs to electrical equipment for	20
	connection to a single phase 230 Volt supply	
UEENEEP025A	Attach cords, cables and plugs to electrical	20
	equipment for connection to 1000 Va.c. or 1500	
	Vd.c. supply	
Total points in cor	1000	

Complete Elective units to achieve a total of weighting of 60 points from the following groups:

Gro	oup	Minimum points	Maximum points
A	Imported and Common Elective Units	0	30
A	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 3. If units have not being assigned a		
	weighting by the relevant EE-Oz Industry		
	Technical Advisory Committee, their weighting		
	will be 10 points.		
В	Qualification Elective Units You may select all	30	60
	your elective units from this Group		

Group A – Importo	Weighting Points	
You may complete	units to a maximum weighting of 30	Foints
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
UEENEED101A	Use computer applications relevant to a workplace	20
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20
CPCCOHS1001A	Work safely in the construction industry	10
CPCPCM2043A	Carry out WHS requirements	40
CPCPMS3035A	Install and test ducting systems	10
HLTAID001	Provide cardiopulmonary resuscitation	10
HLTAID003	Provide first aid	10
	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 3. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	Up to 30 points
	Note: For further information see Application of the NQC Flexibility Formula, UEE11 Electrotechnology Training Package, Version 1, Volume 1 Qualification Framework	

Group B – Qualifi	cation Elective Units	Weighting	
Complete units to a	Complete units to a minimum weighting of 30		
You may select all			
UEENEEI150A	Develop, enter and verify discrete control programs	60	
CEENEETISOIT	for programmable controllers		
UEENEEJ114A	Resolve problems in hydronic systems	40	
UEENEEJ115A	Resolve problems in beverage dispensers	40	
UEENEEJ116A	Resolve problems in transport refrigeration systems	20	
UEENEEJ117A	Resolve problems in ultra-low temperature refrigeration systems	20	
UEENEEJ118A	Resolve problems in post mix refrigeration systems	20	
UEENEEJ119A	Resolve problems in ice making systems	20	
UEENEEJ120A	Resolve problems in industrial refrigeration systems	20	
UEENEEJ166A	Resolve problems in dairy refrigeration systems	20	
UEENEEJ167A	Resolve problems in central plant air conditioning systems	40	
UEENEEJ168A	Maintain microbial control of refrigeration and air conditioning systems	20	
UEENEEJ171A	Resolve problems in refrigerated beverage vending cabinets	20	
UEENEEJ174A	Apply safety awareness and legal requirements for hydrocarbon refrigerants	10	
UEENEEJ175A	Service and repair self contained hydrocarbon air conditioning and refrigeration systems	20	
UEENEEJ176A	Install and commission hydrocarbon refrigeration systems, components and associated equipment	20	
UEENEEJ178A	Apply safety awareness and legal requirements for ammonia refrigerant	10	
UEENEEJ179A	Repair and service ammonia refrigeration systems	20	
UEENEEJ180A	Install and commission ammonia refrigeration systems, components and associated equipment	20	
UEENEEJ182A	Repair and service secondary refrigeration systems	20	
UEENEEJ184A	Apply safety awareness and legal requirements for carbon dioxide refrigerant	10	
UEENEEJ185A	Repair and service carbon dioxide refrigeration systems	20	

UEENEEJ186A	Install and commission carbon dioxide refrigeration	20
CEETTEESTOOT	systems, components and associated equipment	
UEENEEJ188A	Repair and service self contained carbon dioxide	20
CELIVELSTOOM	refrigeration and heat pump systems	
UEENEEJ196A	Operate Ammonia Refrigeration Plant	40

#### **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.

### **END OF QUALIFICATION**

# **UEE33011 Certificate III in Electrical Fitting**

# **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Add	Group B	UETTDRIS67A Solve problems in energy	80
2			supply network equipment	
2	Add	Group B	UETTDRIS68A Solve problems in energy	40
2			supply network protection equipment and systems	
2	Add	Group B	UETTDRIS44A Perform HV field switching	60
2			operation to a given schedule	
2	Update	Group A	HLTCPR211A Perform CPR	10
2	Update	Group A	HLTFA311A Apply first aid	10
2	Edit		Edit Name to reflect correct Unit title	40
<i>L</i>			UEENEED104A Use engineering applications	
ı			software on personal computers	

			Edit Name to reflect correct Unit title	
3	Edit	Group B	UEENEEI102A Solve problems in pressure	40
			measurement components and systems	
			Edit Name to reflect correct Unit title	
3	Edit	Group B	UEENEEI103A Solve problems in density_level	40
			measurement components and systems	
			Edit Name to reflect correct Unit title	
3	Edit	Group B	UEENEEI104A Solve problems in flow	40
			measurement components and systems	
			Edit Name to reflect correct Unit title	
3	Edit	Group B	UEENEEI105A Solve problems in temperature	40
			measurement components and systems	

4	Update	Elective	HLTAID001 - Provide cardiopulmonary resuscitation	10
4	Update	Elective	HLTAID003 - Provide first aid	10
4	Edit	Core	Correct title of UEENEEC020B - Participate in electrical work and competency development activities	60
4	Edit	Core	Correct title of UEENEEE 101A - Apply Occupational Health and Safety regulations, codes and practices in	20

			the workplace	
4	Edit	Core	Correct title of UEENEEE102A - Fabricate, assemble and dismantle utilities industry components	40
4	Edit	Core	Correct title of UEENEEG199A - Conduct compliance and functional verification of electrical apparatus and existing circuits	40
4	Edit	Core	Correct title of UEENEEK142A - Apply environmentally and sustainable procedures in the energy sector	20
4	Edit	Elective	Correct title of UEENEEA110A - Assemble, mount and connect control gear and switchgear	40
4	Edit	Elective	Correct title of UEENEEA112A - Fabricate and assemble bus bars	60
4	Edit	Elective	Correct title of UEENEEA113A - Mount and wire control panel equipment	40
4	Edit	Elective	Correct title of UEENEED101A - Use computer applications relevant to a workplace	20
4	Edit	Elective	Correct title of UEENEEG111A - Carry out basic repairs to electrical components and equipment	40
4	Edit	Elective	Correct title of Correct title of UEENEEG110A - Find and repair faults in LV d.c. electrical apparatus and circuits	60
4	Edit	Elective	Correct title of UEENEEG116A - Diagnose and rectify faults in traction lift systems	80
4	Edit	Elective	Correct title of UEENEEG119A - Maintain operation of electrical marine equipment and systems	60
4	Edit	Elective	Correct title of UEENEEG129A - Overhaul and repair major switchgear and controlgear	60
4	Edit	Elective	Correct title of UEENEEG153A - Rewind three phase low voltage induction machines	60
4	Edit	Elective	Correct title of UEENEEG159A - Conduct mechanical tests on electrical machines and components	40
4	Edit	Elective	Correct title of UEENEEG164A - Repair and maintain mechanical components of electrical machines	40
4	Edit	Elective	Correct title of UEENEEG165A - Maintain and service traction lifts systems and equipment	40
4	Edit	Elective	Correct title of UEENEEG166A - Install and maintain escalators, moving walks and treadways	40
4	Edit	Elective	Correct title of UEENEEG167A - Align and install	20

			traction lift equipment	
4	Edit	Elective	Correct title of UEENEEH102A - Repairs basic electronic apparatus faults by replacement of components -	40
4	Edit	Elective	Correct title of UEENEEI101A Use instrumentation drawings, specification, standards and equipment manuals	40
4	Edit	Elective	Correct title of UEENEEI103A - Solve problems in density/level measurement components and systems	40
4	Edit	Elective	Correct title of UEENEEI107A - Install instrumentation and control cabling and tubing	20
4	Edit	Elective	Correct title of UEENEEI108A Install instrumentation and control apparatus and associated equipment	20
4	Edit	Elective	Correct title of UEENEEI116A - Assemble, enter and verify operating instructions in microprocessor equipped devices	20
4	Edit	Elective	Correct title of UEENEEJ153A - Find and rectify faults in motors and associated controls in refrigeration and air conditioning systems	50
4	Edit	Elective	Correct title of UEENEEJ162A - Recover, pressure test, evacuate, charge and leak test refrigerants - appliances	50
4	Edit	Elective	Correct title of UEENEEN104A - Test copper rail signalling cables	
4	Edit	Elective	Correct title of UEENEEP010A - Disconnect - reconnect appliances connected to low voltage installation wiring	60
4	Edit	Elective	Correct title of UEENEEP011A - Disconnect - reconnect neon signs connected to low voltage installation wiring	60
4	Edit	Elective	Correct title of UEENEEP014A - Disconnect – reconnect water heaters connected to low voltage installation wiring	60
4	Edit	Elective	Correct title of UEENEEP021A - Disconnect - reconnect explosion-protected appliances and control devices connected to low voltage installation wiring	60
4	Edit	Elective	Correct title of UEENEEP023A - HV Flexible Cables and Plugs	40
4	Edit	Elective	Correct title of UETTDRIS43A - Perform low voltage field switching operation to a given schedule	50

,	Edit	Elective	Correct title of UETTDRIS44A - Perform HV field	40
4	Edit		switching operation to a given schedule	.0

### **Description**

#### Scope

This qualification provides competencies to manufacture, fit, assemble, erect, operate, test, fault find, alter, repair electrical equipment and includes electrical wiring work only if that work is associated with assembling, maintaining, terminating or altering the wiring between electrical components within a plant or machinery. An electrical fitter is not authorised to install any electrical wiring systems within an electrical installation as prescribed by definitions contained in AS/NZS 3000.

Electrical equipment means any appliance, article, accessory, wire, fitting, cable, conduit or apparatus that generates, uses, conveys or controls (or that is intended to generate, use, convey or control) electricity above extra low voltage.

### **Pathways Information**

Not applicable.

### **Licensing/Regulatory Information**

Not applicable.

### **Entry Requirements**

Not applicable.

### **Employability Skills Summary**

#### **Completion requirements**

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

Core Competency		Weighting
All Core competen	Points	
UEENEEC020B	Participate in electrical work and competency	60
OLLIVLEC020B	development activities	
UEENEEE101A	Apply Occupational Health and Safety regulations,	20
CELIVEELIOIII	codes and practices in the workplace	
UEENEEE102A	Fabricate, assemble and dismantle utilities industry	40
CEETTEETT	components	
UEENEEE104A	Solve problems in d.c. circuits	80
UEENEEE105A	Fix and secure electrotechnology equipment	20
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes	40
CEENEEETOTT	and specifications	
UEENEEE137A	Document and apply measures to control OHS risks	20
CEETVEEETSTIT	associated with electrotechnology work	
UEENEEG006A	Solve problems in single and three phase low voltage	80
0221(2200011	machines	
UEENEEG033A	Solve problems in single and three phase low voltage	60
	electrical apparatus and circuits	
UEENEEG063A	Arrange circuits, control and protection for general	40
	electrical installations	
UEENEEG101A	Solve problems in electromagnetic devices and related circuits	60
UEENEEG102A	Solve problems in low voltage a.c. circuits	80
UEENEEG106A	Terminate cables, cords and accessories for low	40
	voltage circuits	
UEENEEG108A	Trouble-shoot and repair faults in low voltage	40
	electrical apparatus and circuits	
UEENEEG109A	Develop and connect electrical control circuits	80
UEENEEG199A	Conduct compliance and functional verification of	40
	electrical apparatus and existing circuits	

UEENEEK142A	Apply environmentally and sustainable procedures in the energy sector	20
Total points in con	re	820

Complete Elective units to achieve a total of weighting of 240 points from the following groups:

Gro	oup	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 3. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	60
В	Qualification Elective Units You may select all your elective units from this Group	180	240

Group A – Import	Weighting	
You may complete	units to a maximum weighting of 60	Points
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
UEENEED101A	Use basic computer applications relevant to a workplace	20
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20
CPCCOHS1001A	Work safely in the construction industry	10
HLTAID001	Provide cardiopulmonary resuscitation	10
HLTAID003	Provide first aid	10

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 3. 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 60 points

_	ication Elective Units a minimum weighting of 180	Weighting Points
_	your elective units from this Group	lomes
UEENEEA110A	Assemble, mount and connect control gear and switchgear	40
UEENEEA112A	Fabricate and assemble bus bars	60
UEENEEA113A	Mount and wire control panel equipment	40
UEENEED104A	Use engineering applications software on personal computers	40
UEENEEF102A	Install and maintain cabling for multiple access to telecommunication services	120
UEENEEF104A	Install and modify performance data communication copper cabling	40
UEENEEF115A	Assemble and connect telecommunication frames and cabinets	60
UEENEEG110A	Find and repair faults in LV d.c. electrical apparatus and circuits	60
UEENEEG111A	Carry out basic repairs to electrical components and equipment	40
UEENEEG116A	Diagnose and rectify faults in traction lift systems	80
UEENEEG118A	Maintain operation of electrical mining equipment and systems	60
UEENEEG119A	Maintain operation of electrical marine equipment and systems	60
UEENEEG129A	Overhaul and repair major switchgear and controlgear	60
UEENEEG150A	Wind electrical coils	40
UEENEEG151A	Place and connect electrical coils	40
UEENEEG152A	Rewind single phase machines	40
UEENEEG153A	Rewind three phase low voltage induction machines	60
UEENEEG154A	Rewind LV direct current machines	60
UEENEEG157A	Conduct electrical tests on LV electrical machines	40
UEENEEG159A	Conduct mechanical tests on electrical machines and components	40
UEENEEG164A	Repair and maintain mechanical components of electrical machines	40

UEENEEG165A	Maintain and service traction lifts systems and equipment	40
UEENEEG166A	Install and maintain escalators, moving walks and treadways	40
UEENEEG167A	Align and install traction lift equipment	20
UEENEEG181A	Provide advice on effective and energy efficient lighting products	20
UEENEEG182A	Supply effective and efficient lighting products for domestic and small commercial applications	40
UEENEEG183A	Provide advice on the application of energy efficient lighting for ambient and aesthetic effect	20
UEENEEH102A	Repairs basic electronic apparatus faults by replacement of components	40
UEENEEH111A	Troubleshoot single phase input d.c. power supplies	40
UEENEEI101A	Use instrumentation drawings, specification, standards and equipment manuals	40
UEENEEI102A	Solve problems in pressure measurement components and systems	40
UEENEEI103A	Solve problems in density/level measurement components and systems	40
UEENEEI104A	Solve problems in flow measurement components and systems	40
UEENEEI105A	Solve problems in temperature measurement components and systems	40
UEENEEI107A	Install instrumentation and control cabling and tubing	20
UEENEEI108A	Install instrumentation and control apparatus and associated equipment	20
UEENEEI116A	Assemble, enter and verify operating instructions in microprocessor equipped devices	20
UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers	60
UEENEEJ102A	Prepare and connect refrigerant tubing and fittings	30
UEENEEJ103A	Establish the basic operating conditions of vapour compression systems	60
UEENEEJ104A	Establish the basic operating conditions of air conditioning systems	20
UEENEEJ105A	Position, assemble and start up single head split air conditioning and water heating heat pump systems	70

UEENEEJ106A	Install refrigerant pipe work, flow controls and accessories	60
UEENEEJ108A	Recover, pressure test, evacuate, charge and leak test refrigerants	60
UEENEEJ151A	Service small electrical appliances and power tools	60
UEENEEJ153A	Find and rectify faults in motors and associated controls in refrigeration and air conditioning systems	50
UEENEEJ154A	Find and rectify faults in appliance control systems and devices	60
UEENEEJ155A	Service refrigeration appliances	60
UEENEEJ156A	Service clothes washing machines and dryers	40
UEENEEJ157A	Service electrical heating appliances	60
UEENEEJ158A	Service dishwasher machines	40
UEENEEJ159A	Service gas heating appliances	40
UEENEEJ162A	Recover, pressure test, evacuate, charge and leak test refrigerants - appliances	50
UEENEEJ170A	Diagnose and rectify faults in air conditioning and refrigeration control systems	70
UEENEEJ173A	Service and repair microwave ovens	40
UEENEEJ194A	Solve problems in low voltage refrigeration circuits	40
UEENEEJ195A	Establish the basic operating conditions of vapour compression systems - appliances	50
UEENEEM019A	Attend to breakdowns in hazardous areas — coal mining	20
UEENEEM020A	Attend to breakdowns in hazardous areas — gas atmospheres	20
UEENEEM021A	Attend to breakdowns in hazardous areas — dust atmospheres	20
UEENEEM022A	Attend to breakdowns in hazardous areas — pressurisation	20
UEENEEM027A	Maintain equipment in hazardous areas — coal mining	60
UEENEEM028A	Maintain equipment in hazardous areas — gas atmospheres	60
UEENEEM029A	Maintain equipment in hazardous areas — dust atmospheres	60
UEENEEM030A	Maintain equipment in hazardous areas — pressurisation	60

UEENEEM031A	Overhaul and repair of explosion-protected equipment — coal mining	60
UEENEEM032A	Overhaul and repair of explosion-protected equipment — flameproof enclosures	60
UEENEEM033A	Overhaul and repair of explosion-protected equipment — gas atmospheres	60
UEENEEM034A	Overhaul and repair of explosion-protected equipment — dust atmospheres	40
UEENEEM060A	Carry out overhaul and repair of explosion-protected equipment — coal mining	60
UEENEEM061A	Carry out overhaul and repair of explosion-protected equipment — flameproof enclosures	60
UEENEEM062A	Carry out overhaul and repair of explosion-protected equipment — gas atmospheres	60
UEENEEM063A	Carry out overhaul and repair of explosion-protected equipment — dust atmospheres	60
UEENEEM070A	Repair reeling, trailing and flexible cables	60
UEENEEM071A	Test reeling, trailing and flexible cables	60
UEENEEM072A	Inspect and fit plugs/couplers for reeling, trailing and flexible cables	60
UEENEEM073A	Verify compliance of repaired reeling, trailing and flexible cables	60
UEENEEM076A	Use and maintain the integrity of a portable gas detection device	20
UEENEEM077A	Install and maintain the integrity of fixed gas detection equipment	20
UEENEEM080A	Report on the integrity of explosion-protected equipment in a hazardous area	20
UEENEEN102A	Assemble and wire internal electrical rail signalling equipment	30
UEENEEN104A	Test copper rail signalling cables	20
UEENEEN121A	Repair rail signalling power and control cables	40
UEENEEP010A	Disconnect - reconnect appliances connected to low voltage installation wiring	60
UEENEEP011A	Disconnect - reconnect neon signs connected to low voltage installation wiring	60
UEENEEP014A	Disconnect - reconnect water heaters connected to low voltage installation wiring	60
UEENEEP016A	Locate and rectify faults in low voltage appliances using set procedures	20

UEENEEP019A	Locate and rectify faults in low voltage water	20
	heaters using set procedures	
UEENEEP021A	Disconnect - reconnect explosion-protected	60
	appliances and control devices connected to low	
	voltage installation wiring	
UEENEEP022A	Disconnect and reconnect 3.3 kV electric propulsion	60
	components of self-propelled earth moving vehicles	
UEENEEP023A	HV Flexible Cables and Plugs	40
LIETTODIC 42 A	Perform low voltage field switching operation to a	50
UETTDRIS43A	given schedule	
UETTDRIS44A	Perform HV field switching operation to a given schedule	40
UETTDRIS47A	Sample, test, filter and reinstate insulating oil	40
UETTDRIS67A	Solve problems in energy supply network equipment	80
LIETTODIC COA	Solve problems in energy supply network protection	40
UETTDRIS68A	equipment and systems	
LIETTOD CD20 A	Maintain capacitor bank equipment for voltage	40
UETTDRSB29A	regulation	
LIETTOD CD20 A	Perform power system substation switching	50
UETTDRSB39A	operation to a given schedule	

#### **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.

#### END OF QUALIFICATION

#### **Custom Content Section**

# **UEE40111 Certificate IV in Computer Systems**

# **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Add	Group B	UETTDRIS67A Solve problems in energy	80
2			supply network equipment	
2	Add	Group B	UETTDRIS68A Solve problems in energy	40
2			supply network protection equipment and systems	
2	Add	Group B	UETTDRIS44A Perform HV field switching	60
_			operation to a given schedule	
2	Edit		Edit Name to reflect correct Unit title	40
2			UEENEED104A Use engineering applications	
			software on personal computers	

3	Remov	Group D	UEENEED115A - Administer computer networks	80
	e			

4	Remov	Group C	UEENEEH189A Design electronic printed	40
	e		circuit boards	
Δ	Edit	Core	Correct title of UEENEEK145A - Implement and	20
-			monitor energy sector environmental and sustainable	
			policies and procedures	

# **Description**

#### Scope

This qualification provides competencies to select, install, commission, fault find and maintain data processing, communications and control aspects of systems used for monitoring and control of systems for access, surveillance, safety and effective operation of manufacturing, buildings, structures, premises and precincts.

### **Pathways Information**

# **Licensing/Regulatory Information**

Not applicable.

# **Entry Requirements**

Not applicable.

# **Employability Skills Summary**

### **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 680 points in accordance with the Elective Competency Standard Units table below.

Core Competency All Core competence	Weighting Points	
		80
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
UEENEED143A	Install and configure a client computer operating system and software	40
UEENEED146A	Set up and configure basic local area network (LAN)	80
UEENEEE038B	Participate in development and follow a personal competency development plan	20
UEENEEE101A	Apply Occupational Health and Safety regulations, codes and practices in the workplace	20
UEENEEE102A	Fabricate, assemble and dismantle utilities industry components	40
UEENEEE103A	Solve problems in ELV single path circuits	40
UEENEEE117A	Implement and monitor energy sector OHS policies and procedures	20
UEENEEE124A	Compile and produce an energy sector detailed report	60
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20
UEENEEK145A	Implement and monitor energy sector environmental and sustainable policies and procedures	20
Total points in cor	600	

Complete Elective units to achieve a total of weighting of 680 points from the following groups:

Gre	Group		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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be	0	220
В	10 points.  Qualification Elective Units	0	500
C	Qualification Elective Units You may select all your elective units from this Group	180	680

	e units to a maximum weighting of 220	Weighting Points
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
UEENEED101A	Use computer applications relevant to a workplace	20
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20
ICTTEN4210A	Implement and troubleshoot enterprise routers and switches	100
ICTTEN4211A	Design, install and configure an internetwork	100
ICTTEN4212A	Apply advanced routing protocols to network design	80
ICTTEN4213A	Configure and troubleshoot advanced network switching	80
ICTTEN4214A	Install and maintain a wide area network	80
	Imported units from other training packages and/or	Up to 220

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 4. 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

points

Group B – Qualif You may complete	Weighting Points	
UEENEEA101A	Assemble electronic components	40
UEENEEA102A	Select electronic components for assembly	20
UEENEEA104A	Modify electronic sub assemblies	40
UEENEEA106A	Use lead-free soldering techniques	40
UEENEED129A	Develop web pages for engineering applications	40
UEENEED130A	Select, install, configure and test multimedia components	40
UEENEED153A	Set up, configure and test biometric devices	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
UEENEEE119A Solve problems in multiple path extra low voltage (ELV) a.c. circuits		40
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
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

UEENEEH101A	Repair basic computer equipment faults by	40
	replacement of modules/sub-assemblies	
UEENEEH102A	Repairs basic electronic apparatus faults by	40
CEENEETTOZI	replacement of components	
UEENEEH103A	Repair routine business equipment faults	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	80
	apparatus	
UEENEEH115A	Develop software solutions for microcontroller based	60
	systems	
UEENEEH139A	Troubleshoot basic amplifier circuits	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
UEENEEH166A	Troubleshoot microcontroller based hardware systems	40
UEENEEH169A	Solve problems in basic electronic circuits	100
UEENEEI101A	Use instrumentation drawings, specification, standards	40
	and equipment manuals	
UEENEEI116A	Assemble, enter and verify operating instructions in	20
:	microprocessor equipped devices	

Group C - Qualifi	Weighting	
You must complete	units to a minimum weighting of 180	Points
You may select all	your elective units from this Group	
UEENEEC004B	Prepare specifications for the supply of materials and	40
CEETTEECOOTE	equipment for electrotechnology projects	
UEENEEC005B Estimate electrotechnology projects		40
UEENEED103A Evaluate and modify object oriented code programs		40
UEENEED113A	Install and administer Unix based networked	80
	computers	
UEENEED116A Develop computer network services		120
UEENEED117A	Install and configure network systems for	120
internetworking		

UEENEED124A Integrate multiple computer operating systems on a client server local area network		80
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
UEENEEI155A	Develop structured programs to control external devices	40

#### 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.

#### **END OF QUALIFICATION**

#### **Custom Content Section**

# **UEE40211 Certificate IV in Electrical - Data and Voice Communications**

# **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Edit		Edit Name to reflect correct Unit title UEENEED104A Use engineering applications software on personal computers	40
2	Update	Group A	HLTCPR211A Perform CPR	10

		Edit Name to reflect correct Unit title		
3	Edit	Core	UEENEEK145A Implement and monitor energy	20
	Lan	Corc	sector environmental and sustainable policies and	
			procedures	

4	Update	Elective	HLTAID001 - Provide cardiopulmonary	10
4	Opuate	Elective	resuscitation	
4	Edit	Core	Correct title of UEENEEE101A - Apply	20
			Occupational Health and Safety regulations, codes	
			and practices in the workplace	
4	Edit	Core	Correct title of UEENEEE102A - Fabricate,	40
			assemble and dismantle utilities industry components	
4	Edit	Elective	Correct title of UEENEED101A - Use computer	20
'			applications relevant to a workplace	
4	Edit	Elective	Correct title of UEENEED102A - Assemble, set-up	80
			and test computing devices	
4	Edit	Elective	Correct title of UEENEEE009B - Comply with	20
			scheduled and preventative maintenance program	
			processes	
4	Edit	Elective	Correct title of UEENEEE020B - Provide basic	20
			instruction in the use of electrotechnology apparatus	
4	Edit	Elective	Correct title of UEENEEE114A - Supervise and	40
			coordinate energy sector work activities	
4	Edit	Elective	Correct title of UEENEEE192A - Produce detailed	60
			electrotechnology /utilities drawings using computer	
			aided design equipment and software	
4	Edit	Elective	Correct title of UEENEEF105A - Install and modify	40

			optical fibre performance data communication	
			cabling	
4	Edit	Elective	Correct title of UEENEEF106A - Solve problems in	40
			voice and data communications circuits	
4	Edit	Elective	Correct title of UEENEEF107A - Set up and	40
'			configure the wireless capabilities of	
			communications and data storage devices	
4	Edit	Elective	Correct title of UEENEEF108A - Select and arrange	40
'			equipment for wireless communication networks	
4	Edit	Elective	Correct title of UEENEEF109A - Install and connect	40
			data and voice communication equipment	
4	Edit	Elective	Correct title of UEENEEF110A - Select and arrange	40
			data and voice equipment for local area networks	
4	Edit	Elective	Correct title of UEENEEF111A - Test, report and	40
			rectify faults in data and voice installations	
4	Edit	Elective	Correct title of UEENEEF112A - Install aerial	40
			telecommunication cables	

### **Description**

#### Scope

This qualification provides competencies to select, install, commission, fault find and maintain electrical and communications systems and equipment in building and premises. It includes ERAC requirements for an 'Electrician's licence' and ACMA requirements for Open Cabler registration.

# **Pathways Information**

Not applicable.

# **Licensing/Regulatory Information**

Not applicable.

# **Entry Requirements**

# **Employability Skills Summary**

#### **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 160 points in accordance with the Elective Competency Standard Units table below.

Note: UEENEEG105A - Those holding an 'Unrestricted Electricians Licence or equivalent issued in an Australian State or Territory meets the requirements of this unit and its prerequisite requirements.

<b>Core Competency</b>	Weighting	
All Core competer	Points	
UEENEEE038B	UEENEEE038B Participate in development and follow a personal competency development plan	
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
UEENEEE117A	Implement and monitor energy sector OHS policies and procedures	20
UEENEEE124A	Compile and produce an energy sector detailed report	60
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20
UEENEEF102A	Install and maintain cabling for multiple access to telecommunication services	120
UEENEEF104A	Install and modify performance data communication copper cabling	40
UEENEEG006A	Solve problems in single and three phase low voltage machines	80
UEENEEG033A	Solve problems in single and three phase low voltage electrical apparatus and circuits	60
UEENEEG063A	Arrange circuits, control and protection for general electrical installations	40

Core Competency All Core competen	Weighting Points	
UEENEEG101A	UEENEEG101A Solve problems in electromagnetic devices and related circuits	
UEENEEG102A	Solve problems in low voltage a.c. circuits	80
UEENEEG103A	Install low voltage wiring and accessories	20
UEENEEG104A	Install appliances, switchgear and associated accessories for low voltage electrical installations	20
UEENEEG105A Verify compliance and functionality of low voltage general electrical installations		40
UEENEEG106A	Terminate cables, cords and accessories for low voltage circuits	40
UEENEEG107A	Select wiring systems and cables for low voltage general electrical installations	60
UEENEEG108A	Trouble-shoot and repair faults in low voltage electrical apparatus and circuits	40
UEENEEG109A	Develop and connect electrical control circuits	80
UEENEEK145A	Implement and monitor energy sector environmental and sustainable policies and procedures	20
Total points in con	1120	

Complete Elective units to achieve a total of weighting of 160 points from the following groups:

Gr	oup	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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	80
В	<b>Qualification Elective Units</b>	0	80
C	Qualification Elective Units You may select all your elective units from this Group	80	160

Group A – Importe	Weighting	
You may complete u	units to a maximum weighting of 80	Points
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
UEENEED101A	Use computer applications relevant to a workplace	20
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20
CPCCOHS1001A	Work safely in the construction industry	10
HLTAID001	Provide cardiopulmonary resuscitation	10
	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 4. 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	Up to 80 points
	Electrotechnology Training Package, Version 1, Volume 1 Qualification Framework	

Group B – Qualific You may complete	Weighting Points	
UEENEED102A	Assemble, set-up and test computing devices	80
UEENEED104A	Use engineering applications software on personal computers	40
UEENEED146A	Set up and configure basic local area network (LAN)	80
UEENEEE121A	Plan an integrated cabling installation system	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
UEENEEF112A	Install aerial telecommunication cables	40
UEENEEF113A	Install underground communication cables	40
UEENEEF114A	Set up and configure basic data communication systems	40
UEENEEF115A	Assemble and connect telecommunication frames and cabinets	60
UEENEEI140A	Plan the electrical installation of integrated systems	20
UEENEEI141A	Develop electrical integrated systems	20

Group C – Qualifica		Weighting
You must complete u	Points	
You may select all your elective units from this Group		
UEENEEC004B	Prepare specifications for the supply of materials	40
CLLIVELCOOTB	and equipment for electrotechnology projects	

UEENEEC005B	Estimate electrotechnology projects	40
UEENEEC009B	Provide quotations for inspection and compliance audit services	80
UEENEEE114A	Supervise and coordinate energy sector work activities	40
UEENEEE192A	Produce detailed electrotechnology /utilities drawings using computer aided design equipment and software	60
UEENEEI142A	Develop an electrical integrated system interface for access through a touch screen	20
UEENEEI143A	Develop access control of electrical integrated systems using logic-based programming tools	20
UEENEEI144A	Develop interfaces for multiple access methods to monitor, schedule and control an electrical integrated system	20

#### **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.

#### **END OF QUALIFICATION**

# **UEE40311** Certificate IV in Installation Inspection and Audits

### **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Edit		Edit Name to reflect correct Unit title UEENEED104A Use engineering applications software on personal computers	40
2	Update	Group A	HLTCPR211A Perform CPR	10

2	D.334		Edit Name to reflect correct Unit title UEENEEK145A Implement and monitor energy	20
3	Edit	Core	sector environmental and sustainable policies and procedures	20

4	Update	Elective	HLTAID001 - Provide cardiopulmonary	10
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			resuscitation	
4	Edit	Core	Correct title of UEENEEE101A - Apply	20
4			Occupational Health and Safety regulations, codes	
			and practices in the workplace	
4	Edit	Core	Correct title of UEENEEE102A - Fabricate,	40
4			assemble and dismantle utilities industry components	
4	Edit	Elective	Correct title of UEENEED101A - Use computer	20
7			applications relevant to a workplace	
4	Edit	Elective	Correct title of UEENEEG113A - Install and	60
7			maintain emergency safety systems	
4	Edit	Elective	Correct title of UEENEEG116A - Diagnose and	80
7			rectify faults in traction lift systems	
4	Edit	Elective	Correct title of UEENEEG119A - Maintain operation	60
-			of electrical marine equipment and systems	
4	Edit	Elective	Correct title of UEENEEG120A - Select and arrange	60
-			equipment for special LV electrical installations	
4	Edit	Elective	Correct title of UEENEEG125A - Plan electrical	40
-			installations with a low voltage demand up to 400 A	
			per phase	
4	Edit	Elective	Correct title of UEENEEG126A - Install and	40
•			maintain field power and distribution systems with a	
			low voltage demand up to 200 A per phase	
4	Edit	Elective	Correct title of UEENEEG128A - Plan low voltage	40
•			switchboard and control panel layouts	
4	Edit	Elective	Correct title of UEENEEG132A - Carry out low	60
•			voltage electrical field testing and report findings	
4	Edit	Elective	Correct title of UEENEEG168A - Diagnose and	40
•			rectify faults in complex lift systems	
4	Edit	Elective	Correct title of UEENEEG172A - Investigate and	60
•			report on electrical incidents and causes	
4	Edit	Elective	Correct title of UEENEEI101A - Use instrumentation	40
-			drawings, specification, standards and equipment	
			manuals	
4	Edit	Elective	Correct title of UEENEEK148A - Install, configure	40
•			and commission LV grid connected photovoltaic	
			power systems	

### **Description**

#### Scope

This qualification provides competencies in mandatory and contractual inspections of electrical systems and auditing of entities for compliance with electrical safety requirements. It includes ERAC requirements for an 'Electrician's licence'.

#### **Pathways Information**

Not applicable.

### **Licensing/Regulatory Information**

Not applicable.

### **Entry Requirements**

Not applicable.

#### **Employability Skills Summary**

#### **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 220 points in accordance with the Elective Competency Standard Units table below.

Note: UEENEEG105A - Those holding an 'Unrestricted Electricians Licence or equivalent issued in an Australian State or Territory meets the requirements of this unit and its prerequisite requirements.

<b>Core Competency S</b>	Weighting	
All Core competency	y standard units to be achieved	Points
UEENEEE038B	Participate in development and follow a personal	20
CEEI(EEE030B	competency development plan	
UEENEEE101A	Apply Occupational Health and Safety	20
	regulations, codes and practices in the workplace	
UEENEEE102A	Fabricate, assemble and dismantle utilities	40
	industry components	
UEENEEE104A	Solve problems in d.c. circuits	80
UEENEEE105A	Fix and secure electrotechnology equipment	20
UEENEEE107A	Use drawings, diagrams, schedules, standards,	40
	codes and specifications	
UEENEEE117A	Implement and monitor energy sector OHS	20
	policies and procedures	
UEENEEE124A	Compile and produce an energy sector detailed	60
CEEL (EEE12 III	report	
UEENEEE137A	Document and apply measures to control OHS	20
	risks associated with electrotechnology work	
UEENEEG006A	Solve problems in single and three phase low	80
	voltage machines	
UEENEEG033A	Solve problems in single and three phase low	60
	voltage electrical apparatus and circuits	
UEENEEG063A	Arrange circuits, control and protection for	40
	general electrical installations	
UEENEEG101A	Solve problems in electromagnetic devices and	60
	related circuits	
UEENEEG102A	Solve problems in low voltage a.c. circuits	80

UEENEEG103A	Install low voltage wiring and accessories	20
UEENEEG104A	UEENEEG104A Install appliances, switchgear and associated accessories for low voltage electrical installations	
UEENEEG105A	Verify compliance and functionality of low voltage general electrical installations	40
UEENEEG106A	Terminate cables, cords and accessories for low voltage circuits	40
UEENEEG107A	Select wiring systems and cables for low voltage general electrical installations	60
UEENEEG108A	Trouble-shoot and repair faults in low voltage electrical apparatus and circuits	40
UEENEEG109A	Develop and connect electrical control circuits	80
UEENEEG122A	Conduct compliance inspection of single phase LV electrical installations	60
UEENEEG123A	Conduct compliance inspection of LV electrical installations with demand exceeding 100 A per phase	40
UEENEEK145A	Implement and monitor energy sector environmental and sustainable policies and procedures	20
Total points in core		1060

Complete Elective units to achieve a total of weighting of 220 points from the following groups:

Gr	roup	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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	80
В	Qualification Elective Units	0	110
C	Qualification Elective Units You may select all your elective units from this Group	110	220

Group A – Imported	Weighting	
You may complete un	nits to a maximum weighting of 80	Points
UEENEEC001B	Maintain documentation	20
UEENEEC010B	Deliver a service to customers	20
UEENEED101A	Use computer applications relevant to a workplace	20
CPCCOHS1001A	Work safely in the construction industry	10
HLTAID001	Provide cardiopulmonary resuscitation	10
	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 4. 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 80 points

Group B – Qualific	Weighting Points	
You may complete	units to a maximum weighting of 110	Tomes
UEENEED104A	Use engineering applications software on personal computers	40
UEENEEG113A	Install and maintain emergency safety systems	60
UEENEEG116A	Diagnose and rectify faults in traction lift systems	80
UEENEEG118A	Maintain operation of electrical mining equipment and systems	60
UEENEEG119A	Maintain operation of electrical marine equipment and systems	60
UEENEEG120A	Select and arrange equipment for special LV electrical installations	60
UEENEEG126A	Install and maintain field power and distribution systems with a low voltage demand up to 200 A per phase	40
UEENEEG171A	Install, set up and commission interval metering	20
UEENEEI101A	Use instrumentation drawings, specification, standards and equipment manuals	40
UEENEEI140A	Plan the electrical installation of integrated systems	20
UEENEEI141A	Develop electrical integrated systems	20
UEENEEK125A	Solve basic problems in photovoltaic energy apparatus and systems	20
UEENEEK148A	Install, configure and commission LV grid connected photovoltaic power systems	40
UEENEEM038A	Conduct testing of hazardous areas installations — coal mining	40
UEENEEM039A	Conduct testing of hazardous areas installations — gas atmospheres	40
UEENEEM040A	Conduct testing of hazardous areas installations — dust atmospheres	40
UEENEEM041A	Conduct testing of hazardous area installations — pressurisation	40
UEENEEM042A	Conduct visual inspection of hazardous areas installations	40
UEENEEM080A	Report on the integrity of explosion-protected equipment in a hazardous area	20

Group C – Qualification Elective Units	Weighting
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You must complete u	nits to a minimum weighting of 110	Points	
You may select all yo	You may select all your elective units from this Group		
UEENEEG121A	Verify compliance and functionality of special	40	
CEEIVEEGIZIII	LV electrical installations		
UEENEEG124A	Conduct compliance inspection of special LV	60	
CEEIVEEG12 III	electrical installations		
UEENEEG125A	Plan LV electrical installations with a demand up	40	
CEEI (EEG12311	to 400A per phase		
UEENEEG128A	Plan low voltage switchboard and control panel	40	
CEEIVEEGIZOIT	layouts		
UEENEEG132A	Carry out low voltage electrical field testing and	60	
CEEI (EEG13211	report findings		
UEENEEG162A	Set up and place LV electrical apparatus and	40	
CEETVEEGTOZIT	associated circuits into service		
UEENEEG168A	Diagnose and rectify faults in complex lift	40	
CEETVEEGTOOT	systems		
UEENEEG172A	Investigate and report on electrical incidents and	60	
	causes		
UEENEEG175A	Develop compliance policies and plans to	80	
OLLIVLEGI 1311	conduct a electrical contracting business		

#### 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.

**END OF QUALIFICATION** 

#### **Custom Content Section**

# **UEE40411 Certificate IV in Electrical - Instrumentation**

# **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Edit		Edit Name to reflect correct Unit title	40
			UEENEED104A Use engineering applications	
			software on personal computers	
2	Edit		Edit Name to Reflect correct Unit Title	
2			UEENEEI124A Fault find and repair analogue	
			circuits and components in electronic control systems	
2	Update	Group A	HLTCPR211A Perform CPR	10

			Edit Name to reflect correct Unit title	
3	Edit	Group B	UEENEEI102A Solve problems in pressure	40
			measurement components and systems	
			Edit Name to reflect correct Unit title	
3	Edit	Group B	UEENEEI103A Solve problems in density_level	40
			measurement components and systems	
			Edit Name to reflect correct Unit title	
3	Edit	Group B	UEENEEI104A Solve problems in flow	40
			measurement components and systems	
			Edit Name to reflect correct Unit title	
3	Edit	Group B	UEENEEI105A Solve problems in temperature	40
			measurement components and systems	
	Edit	Croup D	Edit Name to reflect correct Unit title	40
3	Euit	Group B	UEENEEI106A Set up and adjust PID control loops	
			Edit Name to reflect correct Unit title	
3	Edit	Group B	UEENEEI110A Set up and adjust advanced PID	40
			process control loops	
			Edit Name to reflect correct Unit title	
	Edit	Group C	UEENEEI151A Develop, enter and verify word and	60
3	Ean	Group C	analogue control programs for programmable logic	
			controllers.	
			Edit Name to reflect correct Unit title	
2	sector environmen	dit Core UF	UEENEEK145A Implement and monitor energy	20
3		sector environmental and sustainable policies and		
			procedures	

		Т		ı
4	Update	Elective	HLTAID001 - Provide cardiopulmonary resuscitation	10
4	Edit	Core	Correct title of UEENEEE101A - Apply	20
4			Occupational Health and Safety regulations, codes	
			and practices in the workplace	
4	Edit	Core	Correct title of UEENEEE102A - Fabricate,	40
4			assemble and dismantle utilities industry components	
4	Edit	Core	Correct title of UEENEEI101A - Use instrumentation	40
4			drawings, specification, standards and equipment	
			manuals	
4	Edit	Core	Correct title of UEENEEI103A - Solve problems in	40
4			density/level measurement components and systems	
	Edit	Elective	Correct title of UEENEED101A - Use computer	20
4			applications relevant to a workplace	
	Edit	Elective	Correct title of UEENEEG119A - Maintain operation	60
4	Zuit	Ziective	of electrical marine equipment and systems	
	Edit	Elective	Correct title of UEENEEH102A - Repairs basic	40
4	Lan	Licetive	electronic apparatus faults by replacement of	10
			components	
	Edit	Elective	Correct title of UEENEEI107A - Install	20
4	Zuit	Ziective	instrumentation and control cabling and tubing	
	Edit	Elective	Correct title of UEENEEI108A - Install	20
4	Lan	Licetive	instrumentation and control apparatus and associated	20
			equipment	
	Edit	Elective	Correct title of UEENEEI116A - Assemble, enter	20
4	Lan	Licetive	and verify operating instructions in microprocessor	20
			equipped devices	
	Edit	Elective	Correct title of UEENEEI119A - Set up industrial	60
4	Lan	Elective	field control devices	00
	Edit	Elective	Correct title of UEENEEI126A - Provide solutions to	80
4	Lan	Liective	pneumatic-hydraulic system operations	80
	Edit	Elective	<u> </u>	60
4	Edit	Liecuve	Correct title of UEENEEI148A - Solve problems in	00
	T.d1:4	Elective	single phase electronic power control circuits	60
4	Edit	Elective	Correct title of UEENEEI149A - Solve problems in	60
			polyphase electronic power control circuits	

#### **Description**

#### Scope

This qualification provides competencies to select, install, commission, fault find and maintain electrical and instrumentation equipment in buildings and premises and instrumentation systems and core instrumentation equipment for process and control. It includes ERAC requirements for an 'Electrician's licence'.

### **Pathways Information**

Not applicable.

### **Licensing/Regulatory Information**

Not applicable.

#### **Entry Requirements**

Not applicable.

### **Employability Skills Summary**

#### **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 120 points in accordance with the Elective Competency Standard Units table below.

Note: UEENEEG105A - Those holding an 'Unrestricted Electricians Licence or equivalent issued in an Australian State or Territory meets the requirements of this unit and its prerequisite requirements.

<b>Core Competency</b>	Standard Units	Weighting
All Core competen	cy standard units to be achieved	Points
UEENEEE038B	Participate in development and follow a personal competency development plan	20
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
UEENEEE117A	Implement and monitor energy sector OHS policies and procedures	20
UEENEEE124A	Compile and produce an energy sector detailed report	60
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20
UEENEEG006A	Solve problems in single and three phase low voltage machines	80
UEENEEG033A	Solve problems in single and three phase low voltage electrical apparatus and circuits	60
UEENEEG063A	Arrange circuits, control and protection for general electrical installations	40
UEENEEG101A	Solve problems in electromagnetic devices and related circuits	60
UEENEEG102A	Solve problems in low voltage a.c. circuits	80
UEENEEG103A	Install low voltage wiring and accessories	20

Total points in co	re	1160
	procedures	
OLENEEK 143A	environmental and sustainable policies and	
UEENEEK145A	Implement and monitor energy sector	20
UEENEEI105A	Solve problems in temperature measurement components and systems	40
UEENEEI104A	and systems	
	Solve problems in flow measurement components	40
UEENEEI103A	Solve problems in density/level measurement components and systems	40
	components and systems	40
UEENEEI102A	Solve problems in pressure measurement	40
UEENEEHUIA	standards and equipment manuals	
UEENEEI101A	Use instrumentation drawings, specification,	40
UEENEEG109A	Develop and connect electrical control circuits	80
UEENEEGIUOA	electrical apparatus and circuits	
UEENEEG108A	Trouble-shoot and repair faults in low voltage	40
UEENEEG107A	general electrical installations	
LIEENEE CLOZA	Select wiring systems and cables for low voltage	60
UEENEEG106A	Terminate cables, cords and accessories for low voltage circuits	40
	general electrical installations	40
UEENEEG105A	Verify compliance and functionality of low voltage	40
	accessories for low voltage electrical installations	
UEENEEG104A	Install appliances, switchgear and associated	20

Complete Elective units to achieve a total of weighting of 120 points from the following groups:

Gı	oup	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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	60

Complete Elective units to achieve a total of weighting of 120 points from the following groups:

Gı	oup	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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	60
В	<b>Qualification Elective Units</b>	0	60
C	Qualification Elective Units You may select all your elective units from this Group	60	120

	ed and Common Elective Units units to a maximum weighting of 60	Weighting Points
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
UEENEED101A	Use computer applications relevant to a workplace	20
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20
CPCCOHS1001A	Work safely in the construction industry	10
HLTAID001	Provide cardiopulmonary resuscitation	10
	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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry	Up to 60 points

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	

Group B – Qualific	cation Elective Units	Weighting Points
You may complete	units to a maximum weighting of 60	Points
UEENEED104A	Use engineering applications software on personal computers	40
UEENEEG118A	Maintain operation of electrical mining	60
UEENEEGIIOA	equipment and systems	
UEENEEG119A	Maintain operation of electrical marine	60
	equipment and systems	40
UEENEEH102A	Repairs basic electronic apparatus faults by replacement of components	40
UEENEEH111A	Troubleshoot single phase input d.c. power supplies	40
UEENEEI106A	Set up and adjust PID control loops	40
UEENEEI107A	Install instrumentation and control cabling and tubing	20
UEENEEI108A	Install instrumentation and control apparatus and associated equipment	20
UEENEEI110A	Set up and adjust advanced PID process control loops	40
UEENEEI111A	Find and rectify faults in process final control elements	40
UEENEEI113A	Setup and configure human-machine interface (HMI) and industrial networks	60
UEENEEI116A	Assemble, enter and verify operating instructions in microprocessor equipped devices	20
UEENEEI140A	Plan the electrical installation of integrated systems	20
UEENEEI141A	Develop electrical integrated systems	20
UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers	60
UEENEEM019A	Attend to breakdowns in hazardous areas — coal mining	20
UEENEEM020A	Attend to breakdowns in hazardous areas — gas atmospheres	20
UEENEEM021A	Attend to breakdowns in hazardous areas — dust atmospheres	20
UEENEEM022A	Attend to breakdowns in hazardous areas — pressurisation	20
UEENEEM023A	Install explosion-protected equipment and wiring systems — coal mining	60

UEENEEM024A	Install explosion-protected equipment and wiring systems — gas atmospheres	60
UEENEEM025A	Install explosion-protected equipment and wiring systems — dust atmospheres	60
UEENEEM026A	Install explosion-protected equipment and wiring systems — pressurisation	60
UEENEEM027A	Maintain equipment in hazardous areas — coal mining	60
UEENEEM028A	Maintain equipment in hazardous areas — gas atmospheres	60
UEENEEM029A	Maintain equipment in hazardous areas — dust atmospheres	60
UEENEEM030A	Maintain equipment in hazardous areas — pressurisation	60
UEENEEM038A	Conduct testing of hazardous areas installations — coal mining	40
UEENEEM039A	Conduct testing of hazardous areas installations — gas atmospheres	40
UEENEEM040A	Conduct testing of hazardous areas installations — dust atmospheres	40
UEENEEM041A	Conduct testing of hazardous area installations  — pressurisation	40
UEENEEM042A	Conduct visual inspection of hazardous areas installations	40
UEENEEM076A	Use and maintain the integrity of a portable gas detection device	20
UEENEEM077A	Install and maintain the integrity of fixed gas detection equipment	20
UEENEEM080A	Report on the integrity of explosion-protected equipment in a hazardous area	20

Group C – Qualifica	Weighting	
You must complete u	Points	
You may select all yo	our elective units from this Group	
UEENEEI119A	Set up industrial field control devices	60
UEENEEI120A	Provide solutions to problems in industrial	60
CEETVEETTEOTT	control systems	
UEENEEI124A	Fault find and repair analogue circuits and	60
	components in electronic control systems	
UEENEEI125A	Provide solutions to fluid circuit operations	60

UEENEEI126A	Provide solutions to pneumatic-hydraulic system operations	80
UEENEEI139A	UEENEEI139A Diagnose and rectify faults in digital controls systems	
UEENEEI148A	Solve problems in single phase electronic power control circuits	60
UEENEEI149A	Solve problems in polyphase electronic power control circuits	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

#### **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.

#### **END OF QUALIFICATION**

### **Custom Content Section**

# **UEE40511** Certificate IV in Electrical - Air-conditioning Split Systems

# **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Edit		Edit Name to reflect correct Unit title UEENEED104A Use engineering applications software on personal computers	40
2	Update	Group A	HLTCPR211A Perform CPR	10

3	Edit	Core	Edit Name to reflect correct Unit title UEENEEK145A Implement and monitor energy sector environmental and sustainable policies and procedures	20
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4	Update	Elective	HLTAID001 - Provide cardiopulmonary resuscitation	10
4	Edit	Core	Correct title of UEENEEE101A - Apply Occupational Health and Safety regulations, codes	20
			and practices in the workplace	
4	Edit	Core	Correct title of UEENEEE102A - Fabricate, assemble and dismantle utilities industry components	40
4	Edit	Core	Correct title of UEENEEJ102A - Prepare and connect refrigerant tubing and fittings	30
4	Edit	Elective	Correct title of UEENEED101A - Use computer applications relevant to a workplace	20
4	Edit	Elective	Correct title of UEENEEE114A - Supervise and coordinate energy sector work activities	40
4	Edit	Elective	Correct title of UEENEEI116A - Assemble, enter and verify operating instructions in microprocessor equipped devices	20

## **Description**

#### Scope

This qualification provides competencies to select, install, commission, fault find and maintain electrical systems and equipment in buildings and premises and split air-conditioning systems to a prescribed routine where the maximum plant capacity for each system does not exceed 18 kWr. It includes ERAC requirements for an 'Electrician's licence' and regulatory requirements for purchasing and handling refrigerants for split systems. Split systems include wall hung, floor and ceiling suspended, cassette and ducted fan coil split systems. This qualification excludes competencies required for service, repair, maintenance, or the safe and proper installation of commercial refrigeration and air conditioning plant and equipment.

#### Note:

- 1. The letter "r" denotes "refrigeration" or cooling capacity, not electrical input power.
- 2. The Ozone Protection and Synthetic Greenhouse Gas Legislation Amendment Bill 2003 and the Ozone Protection and Synthetic Gas Management Regulations apply to this qualification. Prior to planning the delivery of any training and/or assessment activities all legislative and regulatory requirements shall be identified and included.

#### **Pathways Information**

Not applicable.

## **Licensing/Regulatory Information**

Not applicable.

## **Entry Requirements**

Not applicable.

## **Employability Skills Summary**

## **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 160 points in accordance with the Elective Competency Standard Units table below.

Note: UEENEEG105A - Those holding an 'Unrestricted Electricians Licence or equivalent issued in an Australian State or Territory meets the requirements of this unit and its prerequisite requirements.

Core Competency Standard Units Weighting			
All Core competen	Points		
UEENEEE038B	Participate in development and follow a personal	20	
CLEIVELEOSOB	competency development plan		
UEENEEE101A	Apply Occupational Health and Safety regulations,	20	
	codes and practices in the workplace		
UEENEEE102A	Fabricate, assemble and dismantle utilities industry	40	
	components		
UEENEEE104A	Solve problems in d.c. circuits	80	
UEENEEE105A	Fix and secure electrotechnology equipment	20	
UEENEEE107A	Use drawings, diagrams, schedules, standards,	40	
CEETTEEE10771	codes and specifications		
UEENEEE117A	Implement and monitor energy sector OHS policies	20	
CEENEEETTIT	and procedures		
UEENEEE124A	Compile and produce an energy sector detailed	60	
	report		
UEENEEE137A	Document and apply measures to control OHS	20	
	risks associated with electrotechnology work		
UEENEEG006A	Solve problems in single and three phase low	80	
	voltage machines		
UEENEEG033A	Solve problems in single and three phase low	60	
	voltage electrical apparatus and circuits		
UEENEEG063A	Arrange circuits, control and protection for general	40	
	electrical installations		
UEENEEG101A	Solve problems in electromagnetic devices and	60	
	related circuits		
UEENEEG102A	Solve problems in low voltage a.c. circuits	80	
UEENEEG103A	Install low voltage wiring and accessories	20	

LIEEN EE CAOZA	Select wiring systems and cables for low voltage	60
UEENEEG107A	general electrical installations	
UEENEEG108A	Trouble-shoot and repair faults in low voltage	40
OLLIVLEGIOGA	electrical apparatus and circuits	
UEENEEG109A	Develop and connect electrical control circuits	80
UEENEEJ102A	Prepare and connect refrigerant tubing and fittings	30
UEENEEJ105A	Position, assemble and start up single head split air	70
CEETVEESTOSTI	conditioning and water heating heat pump systems	
UEENEEJ172A	Recover, pressure test, evacuate, charge and leak	60
	test refrigerants - split systems	
UEENEEK145A	Implement and monitor energy sector	20
	environmental and sustainable policies and	
	procedures	
Total points in co	1120	

## **Elective Competency Standard Units**

Complete Elective units to achieve a total of weighting of 160 points from the following groups:

Gr	oup	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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	80
В	<b>Qualification Elective Units</b>	0	80
C	Qualification Elective Units You may select all your elective units from this Group	80	160

Group A – Importe	Weighting			
You may complete u	You may complete units to a maximum weighting of 80			
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		
UEENEED101A	Use computer applications relevant to a workplace	20		
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20		
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20		
CPCCOHS1001A	Work safely in the construction industry	10		
HLTAID001	Provide cardiopulmonary resuscitation	10		
	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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	Up to 80 points		
	Note: For further information see Application of the NQC Flexibility Formula, UEE11 Electrotechnology Training Package, Version 1, Volume 1 Qualification Framework			

Group B – Qualific You may complete u	Weighting Points	
UEENEED104A	Use engineering applications software on personal computers	40
UEENEEI116A	Assemble, enter and verify operating instructions in microprocessor equipped devices	20
UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers	60
UEENEEJ103A	Establish the basic operating conditions of vapour compression systems	60
UEENEEJ104A	Establish the basic operating conditions of air conditioning systems	20
UEENEEJ174A	Apply safety awareness and legal requirements for hydrocarbon refrigerants	10

Group C – Qualifica	Weighting	
You must complete u	Points	
You may select all yo	our elective units from this Group	
UEENEEE114A	Supervise and coordinate energy sector work activities	40
UEENEEG122A	Conduct compliance inspection of single phase LV electrical installations	60
UEENEEG123A	Conduct compliance inspection of LV electrical installations with demand exceeding 100 A per phase	40
UEENEEJ192A	Analyse the psychrometric performance of HVAC/R systems	50
UEENEEJ193A	Analyse the thermodynamic performance of HVAC/R systems	40

#### 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.

#### **END OF QUALIFICATION**

### **Custom Content Section**

# **UEE40611 Certificate IV in Electrotechnology - Systems Electrician**

# **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Add	Group B	UETTDRIS67A Solve problems in energy	80
_			supply network equipment	
2.	Add	Group B	UETTDRIS68A Solve problems in energy	40
_			supply network protection equipment and systems	
2	Add	Group B	UETTDRIS44A Perform HV field switching	60
_			operation to a given schedule	
2	Edit		Edit Name to reflect correct Unit title	40
_			UEENEED104A Use engineering applications	
			software on personal computers	
	Edit		Edit Name to Reflect correct Unit Title	
			UEENEEI124A Fault find and repair analogue	
			circuits and components in electronic control systems	
2	Update	Group A	HLTCPR211A Perform CPR	10

3	Edit	Group B	Edit Name to reflect correct Unit title UEENEEI102A Solve problems in pressure measurement components and systems  40	
3	Edit	Group B	Edit Name to reflect correct Unit title UEENEEI103A Solve problems in density_level measurement components and systems	40
3	Edit	Group B	Edit Name to reflect correct Unit title UEENEEI104A Solve problems in flow measurement components and systems	40
3	Edit	Group B	Edit Name to reflect correct Unit title UEENEEI105A Solve problems in temperature measurement components and systems	40
3	Edit	Group C	Edit Name to reflect correct Unit title UEENEEI151A Develop, enter and verify word and analogue control programs for programmable logic controllers.	60
3	Edit	Core	Edit Name to reflect correct Unit title UEENEEK145A Implement and monitor energy sector environmental and sustainable policies and	20

		I
	procedures	

4	Update	Elective	HLTAID001 - Provide cardiopulmonary	10
т	Opunic	Licetive	resuscitation	
1	Edit	Core	Correct title of UEENEEE101A - Apply	20
			Occupational Health and Safety regulations, codes	
			and practices in the workplace	
1	Edit	Core	Correct title of UEENEEE102A - Fabricate,	40
•			assemble and dismantle utilities industry components	
ļ	Edit	Elective	Correct title of UEENEEE121A - Plan an integrated	40
•		cabling installation system		
1	Edit	Elective	Correct title of UEENEEG110A - Find and repair	60
			faults in LV d.c. electrical apparatus and circuits	
1	Edit	Elective	Correct title of UEENEEG111A - Carry out basic	40
Т			repairs to electrical components and equipment	
1	Edit	Elective	Correct title of UEENEEG113A - Install and	60
т			maintain emergency safety systems	
1	Edit	Elective	Correct title of UEENEEG116A - Diagnose and	80
+	rectify faults in traction lift systems			
ļ	Edit	Elective	Correct title of UEENEEG119A - Maintain	60
•			operation of electrical marine equipment and systems	
1	Edit	Elective	Correct title of UEENEEG120A - Select and arrange	60
+			equipment for special LV electrical installations	
1	Edit	Elective	Correct title of UEENEEG125A - Plan electrical	40
t			installations with a low voltage demand up to 400 A	
			per phase	
1	Edit	Elective	Correct title of UEENEEG126A - Install and	40
t			maintain field power and distribution systems with a	
			low voltage demand up to 200 A per phase	
1	Edit	Elective	Correct title of UEENEEG128A - Plan low voltage	40
+			switchboard and control panel layouts	
1	Edit	Elective	Correct title of UEENEEG129A - Overhaul and	60
+			repair major switchgear and controlgear	
1	Edit	Elective	Correct title of UEENEEG132A - Carry out low	60
ŀ			voltage electrical field testing and report findings	
1	Edit	Elective	Correct title of UEENEEG153A - Rewind three	60
1			phase low voltage induction machines	
1	Edit	Elective	Correct title of UEENEEG155A - Rewind HV three	60
4			phase induction machines rated for voltages to 3.3	
			kV	
4	Edit	Elective	Correct title of UEENEEG156A - Rewind HV three	60
4				

			phase induction machines rated for voltages above	
	Edit	Elective	3.3 kV  Correct title of UEENEEG159A - Conduct	40
4	Euit	Elective	mechanical tests on electrical machines and	40
			components	
	Edit	Elective	Correct title of UEENEEG164A - Repair and	40
4	Luit	Elective	maintain mechanical components of electrical	40
			machines	
	Edit	Elective	Correct title of UEENEEG165A - Maintain and	40
4	Luit	Elective	service traction lifts systems and equipment	40
	Edit	Elective	Correct title of UEENEEG166A - Install and	40
4	Ealt	Elective		40
	Edit	Elective	maintain escalators, moving walks and treadways	20
4	Ealt	Elective	Correct title of UEENEEG167A - Align and install	20
	T 1'4	El «	traction lift equipment	40
4	Edit	Elective	Correct title of UEENEEG168A - Diagnose and	40
	P.11		rectify faults in complex lift systems	
4	Edit	Elective	Correct title of UEENEEG172A - Investigate and	60
			report on electrical incidents and causes	
4	Edit	Elective	Correct title of UEENEEG177A - Select low voltage	40
			power factor correction equipment	
4	Edit	Elective	Correct title of UEENEEG185A - Select effective	60
			and efficient light sources and luminaries for given	
			locations and designs	
4	Edit	Elective	Correct title of UEENEEH102A - Repairs basic	40
			electronic apparatus faults by replacement of	
			components	
4	Edit	Elective	Correct title of UEENEEH150A - Assemble and set	80
•			up basic security systems	
4	Edit	Elective	Correct title of UEENEEI101A - Use	40
<b>T</b>			instrumentation drawings, specification, standards	
			and equipment manuals	
4	Edit	Elective	Correct title of UEENEEI103A - Solve problems in	40
4			density/level measurement components and systems	
1	Edit	Elective	Correct title of UEENEEI116A - Assemble, enter	20
4			and verify operating instructions in microprocessor	
			equipped devices	
1	Edit	Elective	Correct title of UEENEEI119A - Set up industrial	60
4			field control devices	
4	Edit	Elective	Correct title of UEENEEI126A - Provide solutions	80

4	Edit	Elective	Correct title of UEENEEI148A - Solve problems in	60
7			single phase electronic power control circuits	
4	Edit	Elective	Correct title of UEENEEI149A - Solve problems in	60
			polyphase electronic power control circuits	
4	Edit	Elective	Correct title of UEENEEK135A - Design grid	60
'			connected photovoltaic power supply systems	
4	Edit	Elective	Correct title of UEENEEK148A - Install, configure	60
'			and commission LV grid connected photovoltaic	
			power systems	
4	Edit	Elective	Correct title of UEENEEK153A - Assess energy	40
'			loads and uses for energy efficiency in residential,	
			office and retail premises	
4	Edit	Elective	Correct title of UEENEEK154A - Assess energy	40
'			loads and uses for energy efficiency in commercial	
			facilities	
4	Edit	Elective	Correct title of UEENEEK155A - Assess energy	40
			loads and uses for energy efficiency in industrial	
			properties and enterprises	
4	Edit	Elective	Correct title of UEENEEN104A - Test copper rail	20
			signalling cables	

5	Remov	Group C	UEENEEG197A - Apply currency of safe working 20	
	e		practices and compliance verification of electrical	
			installations	
5	Remov	Group C	UEENEEG198A - Apply compliance requirements	20
	e		to all aspects of electrical work	

# **Description**

#### **Scope**

This qualification provides competencies to select, install, commission, fault find and maintain electrical systems and equipment with options, typically in Explosion protection; Electrical machines; Electrical inspection; Safety auditing; Contracting; Lifts; Energy supply/distribution. It includes ERAC requirements for an 'Electrician's licence'.

## **Pathways Information**

# **Licensing/Regulatory Information**

Not applicable.

# **Entry Requirements**

Not applicable.

# **Employability Skills Summary**

## **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 320 points in accordance with the Elective Competency Standard Units table below.

Note: UEENEEG105A - Those holding an 'Unrestricted Electricians Licence or equivalent issued in an Australian State or Territory meets the requirements of this unit and its prerequisite requirements.

Core Competency Standard Units Weighting				
All Core competen	cy standard units to be achieved	Points		
UEENEEE038B	Participate in development and follow a personal	20		
CLEIVELEOSOB	competency development plan			
UEENEEE101A	Apply Occupational Health and Safety regulations,	20		
	codes and practices in the workplace			
UEENEEE102A	Fabricate, assemble and dismantle utilities industry	40		
	components			
UEENEEE104A	Solve problems in d.c. circuits	80		
UEENEEE105A	Fix and secure electrotechnology equipment	20		
UEENEEE107A	Use drawings, diagrams, schedules, standards,	40		
CEETTEEE10771	codes and specifications			
UEENEEE117A	Implement and monitor energy sector OHS policies	20		
	and procedures			
UEENEEE124A	Compile and produce an energy sector detailed	60		
	report			
UEENEEE137A	Document and apply measures to control OHS	20		
	risks associated with electrotechnology work			
UEENEEG006A	Solve problems in single and three phase low	80		
	voltage machines			
UEENEEG033A	Solve problems in single and three phase low	60		
	voltage electrical apparatus and circuits			
UEENEEG063A	Arrange circuits, control and protection for general	40		
	electrical installations			
UEENEEG101A	Solve problems in electromagnetic devices and	60		
	related circuits			
UEENEEG102A	Solve problems in low voltage a.c. circuits	80		
UEENEEG103A	Install low voltage wiring and accessories	20		

Total points in con	960	
	procedures	
UEENEEK145A	environmental and sustainable policies and	20
	Implement and monitor energy sector	20
UEENEEG109A	Develop and connect electrical control circuits	80
CLERTELOTOOM	electrical apparatus and circuits	
UEENEEG108A	Trouble-shoot and repair faults in low voltage	40
CEET VEE CTOTT	general electrical installations	
UEENEEG107A	Select wiring systems and cables for low voltage	60
0221 (22010011	voltage circuits	
UEENEEG106A	Terminate cables, cords and accessories for low	40
	general electrical installations	
UEENEEG105A	Verify compliance and functionality of low voltage	40
	accessories for low voltage electrical installations	
UEENEEG104A	Install appliances, switchgear and associated	20

# **Elective Competency Standard Units**

Complete Elective units to achieve a total of weighting of 320 points from the following groups:

Gro	oup	Minimu m 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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	100
В	Qualification Elective Units	0	100
С	Qualification Elective Units  You may select all your elective units from this Group	220	320

Group A – Import	Weighting	
You may complete	Points	
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
UEENEED101A	Use computer applications relevant to a workplace	20
UEENEEE009B	Comply with scheduled and preventative	20
	maintenance program processes	
UEENEEE020B	Provide basic instruction in the use of	20
CLEI (ELEOZOB	electrotechnology apparatus	
CPCCOHS1001A	Work safely in the construction industry	10
HLTAID001	Provide cardiopulmonary resuscitation	10
	Imported units from other training packages and/or	
	state accredited courses can be added to this group,	Up to 100 points
	but they must be selected from qualifications where	
	the unit is first packaged at AQF level 4. 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	

Group B – Qualif	Weighting Points	
You may complete	romis	
UEENEEA110A	UEENEEA110A Assemble, mount and connect control gear and switchgear	
UEENEEA112A	Fabricate and assemble bus bars	40
UEENEEA113A	Mount and wire control panel equipment	40
UEENEED104A	Use engineering applications software on personal computers	40
UEENEEE121A	Plan an integrated cabling installation system	40
UEENEEF102A	Install and maintain cabling for multiple access to telecommunication services	120
UEENEEF104A	Install and modify performance data communication copper cabling	40
UEENEEG110A	Find and repair faults in LV d.c. electrical apparatus and circuits	60
UEENEEG111A	Carry out basic repairs to electrical components and equipment	40
UEENEEG113A	Install and maintain emergency safety systems	60
UEENEEG116A	Diagnose and rectify faults in traction lift systems	80
UEENEEG118A	Maintain operation of electrical mining equipment and systems	60
UEENEEG119A	Maintain operation of electrical marine equipment and systems	60
UEENEEG120A	Select and arrange equipment for special LV electrical installations	60
UEENEEG126A	Install and maintain field power and distribution systems with a low voltage demand up to 200 A per phase	40
UEENEEG129A	Overhaul and repair major switchgear and controlgear	60
UEENEEG150A	Wind electrical coils	40
UEENEEG151A	Place and connect electrical coils	40
UEENEEG152A	Rewind single phase machines	40
UEENEEG153A	Rewind three phase low voltage induction machines	60
UEENEEG154A	Rewind LV direct current machines	60
UEENEEG157A	Conduct electrical tests on LV electrical machines	40

UEENEEG159A	Conduct mechanical tests on electrical machines and components	40
UEENEEG164A	Repair and maintain mechanical components of electrical machines	
UEENEEG165A	JEENEEG165A Maintain and service traction lifts systems and equipment	
UEENEEG166A	Install and maintain escalators, moving walks and treadways	40
UEENEEG167A	Align and install traction lift equipment	20
UEENEEG171A	Install, set up and commission interval metering	20
UEENEEG181A	Provide advice on effective and energy efficient lighting products	20
UEENEEG182A	Supply effective and efficient lighting products for domestic and small commercial applications	40
UEENEEG183A	Provide advice on the application of energy efficient lighting for ambient and aesthetic effect	20
UEENEEG189A	Install and maintain emergency lighting systems	40
UEENEEH102A	Repairs basic electronic apparatus faults by replacement of components	40
UEENEEH111A	Troubleshoot single phase input d.c. power supplies	40
UEENEEH150A	Assemble and set up basic security systems	80
UEENEEI140A	Plan the electrical installation of integrated systems	20
UEENEEI141A	Develop electrical integrated systems	20
UEENEEI101A	Use instrumentation drawings, specification, standards and equipment manuals	40
UEENEEI102A	Solve problems in pressure measurement components and systems	40
UEENEEI103A	Solve problems in density/level measurement components and systems	40
UEENEEI104A	Solve problems in flow measurement components and systems	40
UEENEEI105A	Solve problems in temperature measurement components and systems	40
UEENEEI116A	Assemble, enter and verify operating instructions in microprocessor equipped devices	20
UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers	60
UEENEEJ102A	Prepare and connect refrigerant tubing and fittings	30

UEENEEJ103A	Establish the basic operating conditions of vapour compression systems	60
UEENEEJ104A	Establish the basic operating conditions of air conditioning systems	20
UEENEEK125A	Solve basic problems in photovoltaic energy apparatus and systems	20
UEENEEK148A	Install, configure and commission LV grid connected photovoltaic power systems	40
UEENEEM019A	Attend to breakdowns in hazardous areas — coal mining	20
UEENEEM020A	Attend to breakdowns in hazardous areas — gas atmospheres	20
UEENEEM021A	Attend to breakdowns in hazardous areas — dust atmospheres	20
UEENEEM022A	Attend to breakdowns in hazardous areas — pressurisation	20
UEENEEM023A	Install explosion-protected equipment and wiring systems — coal mining	60
UEENEEM024A	Install explosion-protected equipment and wiring systems — gas atmospheres	60
UEENEEM025A	Install explosion-protected equipment and wiring systems — dust atmospheres	60
UEENEEM026A	Install explosion-protected equipment and wiring systems — pressurisation	60
UEENEEM027A	Maintain equipment in hazardous areas — coal mining	60
UEENEEM028A	Maintain equipment in hazardous areas — gas atmospheres	60
UEENEEM029A	Maintain equipment in hazardous areas — dust atmospheres	60
UEENEEM030A	Maintain equipment in hazardous areas — pressurisation	60
UEENEEM038A	Conduct testing of hazardous areas installations — coal mining	40
UEENEEM039A	Conduct testing of hazardous areas installations — gas atmospheres	40
UEENEEM040A	Conduct testing of hazardous areas installations — dust atmospheres	40
UEENEEM041A	Conduct testing of hazardous area installations — pressurisation	40
UEENEEM042A	Conduct visual inspection of hazardous areas	40

	installations	
UEENEEM076A Use and maintain the integrity of a portable gas detection device		20
UEENEEM077A	Install and maintain the integrity of fixed gas detection equipment	20
UEENEEM080A	Report on the integrity of explosion-protected equipment in a hazardous area	20
UEENEEN102A	Assemble and wire internal electrical rail signalling equipment	30
UEENEEN103A	Install and maintain rail track circuit leads and bonds	30
UEENEEN104A	Test copper rail signalling cables	20
UEENEEN121A	Repair rail signalling power and control cables	40
UETTDRIS43A	Perform low voltage field switching operation to a given schedule.	50
UETTDRIS44A	Perform HV field switching operation to a given schedule	50
UETTDRIS47A	Sample, test, filter and reinstate insulating oil	40
UETTDRIS67A	Solve problems in energy supply network equipment	80
UETTDRIS68A	Solve problems in energy supply network protection equipment and systems	40
UETTDRSB23A	Install and maintain substation direct current systems	30
UETTDRSB29A	Maintain capacitor bank equipment for voltage regulation	40
UETTDRSB39A	Perform power system substation switching operation to a given schedule	50

Group C - Qualif	ication Elective Units	Weighting
You must complete	e units to a minimum weighting of 220	Points
You may select all	your elective units from this Group	
UEENEEC005B	Estimate electrotechnology projects	40
UEENEEE185A	Write work activity reports	20
UEENEEG076A	Install and replace low voltage current transformer metering	20
UEENEEG121A	Verify compliance and functionality of special LV electrical installations	40
UEENEEG122A	Conduct compliance inspection of single phase LV electrical installations	60

UEENEEG123A	TEENEEG123A Conduct compliance inspection of LV electrical installations with demand exceeding 100 A per phase	
UEENEEG124A	Conduct compliance inspection of special LV electrical installations	60
UEENEEG125A	Plan electrical installations with a low voltage demand up to 400 A per phase	
UEENEEG128A	Plan low voltage switchboard and control panel layouts	40
UEENEEG132A	Carry out low voltage electrical field testing and report findings	60
UEENEEG155A	Rewind HV three phase induction machines rated for voltages to 3.3 kV	60
UEENEEG156A	Rewind HV three phase induction machines rated for voltages above 3.3 kV	60
UEENEEG158A	Conduct electrical tests on HV electrical machines	60
UEENEEG162A	Set up and place LV electrical apparatus and associated circuits into service	40
UEENEEG168A	Diagnose and rectify faults in complex lift systems	40
UEENEEG172A Investigate and report on electrical incidents and causes		60
UEENEEG175A	Develop compliance policies and plans to conduct a electrical contracting business	80
UEENEEG177A	Select low voltage power factor correction equipment	40
UEENEEG179A	Develop detailed electrical drawings	60
UEENEEG184A	Provide photometric data for illumination system design	60
UEENEEG185A	Select effective and efficient light sources and luminaries for given locations and designs	60
UEENEEG186A	Design effective and efficient lighting for residential and commercial buildings	20
UEENEEG188A	Prepare quotations for the supply of effective and efficient lighting products for lighting projects	20
UEENEEI142A	Develop an electrical integrated system interface for access through a touch screen	20
UEENEEI143A	Develop access control of electrical integrated systems using logic-based programming tools	20
UEENEEI144A	Develop interfaces for multiple access methods to monitor, schedule and control an electrical integrated system	20

	Set up industrial field control devices	60
UEENEEI119A	EENEEIII9A	
UEENEEI120A	Provide solutions to problems in industrial control	60
	systems	
UEENEEI124A	Fault find and repair analogue circuits and	60
	components in electronic control systems	
UEENEEI125A	Provide solutions to fluid circuit operations	60
UEENEEI126A	Provide solutions to pneumatic-hydraulic system operations	80
UEENEEI139A	Diagnose and rectify faults in digital controls systems	60
UEENEEI148A	Solve problems in single phase electronic power control circuits	60
UEENEEI149A	Solve problems in polyphase electronic power control circuits	60
UEENEEI151A	Develop, enter and verify word and analogue control programs for programmable logic controllers.	60
	Develop, enter and verify programs in Supervisory	60
UEENEEI152A Control and Data Acquisition systems		00
UEENEEI155A	Develop structured programs to control external devices	40
UEENEEK135A	Design grid connected photovoltaic power supply systems	60
UEENEEK152A	Develop strategies to address sustainability issues for electrical installations	20
UEENEEK153A	Assess energy loads and uses for energy efficiency in residential, office and retail premises	40
UEENEEK154A	Assess energy loads and uses for energy efficiency in commercial facilities	40
UEENEEK155A	Assess energy loads and uses for energy efficiency in industrial properties and enterprises	40

#### **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.

#### **END OF QUALIFICATION**

## **Custom Content Section**

## **UEE40711 Certificate IV in Electronics and Communications**

# **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Add	Group B	UEENEEP024A Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply	
2	Add	Group B	UEENEEI150A Develop, enter and verify discrete control programs for programmable controllers	60
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	Update	Group A	MSS402001A Apply competitive systems and practices	
2	Update	Group A	MSS402021A Apply Just in Time procedures	
2	Update	Group A	MSS402080A Undertake root cause analysis	
2	Update	Group A	MSS402081A Contribute to the application of a proactive maintenance strategy	
2	Update	Group A	MSS402040A Apply 5S procedures	
2	Update	Group A	MSS402020A Apply quick changeover procedures	
3	Add	Group B	UEENEEP025A Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply	20
4	Remov	Group C	UEENEEH189A Design electronic printed	40
•	e		circuit boards	
4	Edit	Core	Correct title of UEENEEK145A - Implement and monitor energy sector environmental and sustainable policies and procedures	20

## **Description**

#### Scope

This qualification provides competencies in audio/video, data systems and computer/network hardware, medical applications and communication aspects of electronic i.e. transmitters, communications medium/channel, receivers, attenuation, noise reduction. It includes detection/surveillance.

## **Pathways Information**

Not applicable.

## **Licensing/Regulatory Information**

Not applicable.

## **Entry Requirements**

Not applicable.

## **Employability Skills Summary**

## **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 560 points in accordance with the Elective Competency Standard Units table below.

<b>Core Competency</b>	Standard Units	Weighting
All Core competency standard units to be achieved		
UEENEEE038B Participate in development and follow a personal competency development plan		20
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
UEENEEE117A	Implement and monitor energy sector OHS policies and procedures	20
UEENEEE124A	Compile and produce an energy sector detailed report	60
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20
UEENEEH102A	Repairs basic electronic apparatus faults by replacement of components	40
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
UEENEEH138A	Fault find and repair complex power supplies	40
UEENEEH139A	Troubleshoot basic amplifier circuits	40
UEENEEH146A	Solve fundamental electronic communications system problems	40
UEENEEK145A	Implement and monitor energy sector environmental and sustainable policies and procedures	20
Total points in co	re	720

## **Elective Competency Standard Units**

Complete Elective units to achieve a total of weighting of 560 points from the following groups:

Gre	Group		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	0	220
	must be selected from qualifications where the unit is first packaged at AQF level 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.		
В	Qualification Elective Units	0	360
С	Qualification Elective Units You may select all your elective units from this Group	200	560

Group A – Import You may complete	Weighting Points	
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
UEENEED101A	Use computer applications relevant to a workplace	20
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20
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	20
11155 10200111	maintenance strategy	
	Imported units from other training packages and/or	Up to 220
	state accredited courses can be added to this group,	points
	but they must be selected from qualifications where	
	the unit is first packaged at AQF level 4. 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	

Group B – Qualifi You may complete	Weighting Points			
UEENEEA101A	Assemble electronic components	40		
UEENEEA102A	Select electronic components for assembly	20		
UEENEEA103A	JEENEEA103A Set up and check electronic component assembly machines			
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)	80		
UEENEED153A	Set up, configure and test biometric devices	40		
UEENEEE105A	Fix and secure electrotechnology equipment	20		
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications	40		
UEENEEE108A	Lay wiring/cobling and terminate accessories for			
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		
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		
UEENEEH101A	Repair basic computer equipment faults by replacement of modules/sub-assemblies	40	
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	
UEENEEH115A	Develop software solutions for microcontroller based systems	60	
UEENEEH116A	Find and repair microwave amplifier section faults		
UEENEEH117A	Carry out repairs of predictable faults in video and audio replay/recording apparatus	120	

LIEPNEELL10A	Fault find and repair electronic apparatus	40	
UEENEEH118A	Repair predictable faults in television receivers	120	
UEENEEH119A			
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	
UEENEEH142A	Solve oscillator 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		
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	

UEENEEI116A	Assemble, enter and verify operating instructions in	20
	microprocessor equipped devices	
UEENEEI150A	Develop, enter and verify discrete control programs	60
CEENEERISON	for programmable controllers	
UEENEEP024A	Attach cords and plugs to electrical equipment for	20
CEETTEET 02 171	connection to a single phase 230 Volt supply	
UEENEEP025A	Attach cords, cables and plugs to electrical	20
CEETTEET 02371	equipment for connection to 1000 Va.c. or 1500	

Group C - Qualific	Weighting				
You must complete	Points				
You may select all y	You may select all your elective units from this Group				
UEENEEC004B	Prepare specifications for the supply of materials	40			
CEETTEECOOTE	and equipment for electrotechnology projects				
UEENEEC005B	Estimate electrotechnology projects	40			
UEENEED103A	Evaluate and modify object oriented code programs	40			
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			
UEENEEH129A	Fault find and repair navigation systems	60			
UEENEEH130A	UEENEEH130A Fault find and repair satellite-based surveillance and observation systems				
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			

UEENEEH157A	Develop basic plans for integrating security systems	40	
UEENEEH175A	Troubleshooting in security system installations	60	
UEENEEH176A	ENEEH176A Diagnose and rectify faults in electronic display circuits		
UEENEEH177A	Diagnose and rectify faults in recording and replay equipment	60	
UEENEEH178A	Diagnose and rectify faults in camera circuits and equipment	60	
UEENEEH179A	UEENEEH179A Diagnose and rectify faults in digital television circuits and apparatus		
UEENEEH180A	UEENEEH180A Diagnose and rectify faults in digital transmission circuits and systems		
UEENEEH186A	UEENEEH186A Commission satellite and microwave communication systems		
UEENEEI120A	JEENEEI120A Provide solutions to problems in industrial control systems		
UEENEEI124A Fault find and repair analogue circuits and components in electronic control systems		60	
UEENEEI139A	JEENEEI139A Diagnose and rectify faults in digital controls systems		
UEENEEI155A Develop structured programs to control external devices		40	

#### 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.

#### **END OF QUALIFICATION**

#### **Custom Content Section**

# **UEE40811** Certificate IV in Electrical - Fire Protection Control Systems

# **Modification History**

Releas	Action	Core/Elective	Details	Points
2	Edit		Edit Name to reflect correct Unit title UEENEED104A Use engineering applications software on personal computers	40
2	Update	Group A	HLTCPR211A Perform CPR	10
2	Update	Group A	CPPFES2043A Prevent ozone depleting substance and synthetic greenhouse gas emissions	10

3	Edit	Group C	Edit Name to reflect correct Unit title UEENEEI151A Develop, enter and verify word and analogue control programs for programmable logic controllers.	60
3	Edit	Core	Edit Name to reflect correct Unit title UEENEEK145A Implement and monitor energy sector environmental and sustainable policies and procedures	20

4	Update	Elective	HLTAID001 - Provide cardiopulmonary	10
_	Opuate	Elective	resuscitation	
4	Edit	Core	Correct title of UEENEEE101A - Apply	20
ļ '			Occupational Health and Safety regulations, codes	
			and practices in the workplace	
4	Edit	Core	Correct title of UEENEEE102A - Fabricate,	40
ļ '			assemble and dismantle utilities industry components	
Δ	Edit	Core	Correct title of UEENEEH161A - Install fire	40
			detection and warning system apparatus	
4	Edit	Core	Correct title of UEENEEH162A - Verify compliance	60
•			and functionality of fire protection system	
			installations	
4	Edit	Core	Correct title of UEENEEH163A - Enter and verify	40
			programs for fire protection systems	
4	Edit	Core	Correct title of UEENEEH164A - Commission large	40
			fire protection systems	

4	Edit	Core	Correct title of UEENEEH165A - Troubleshoot fire	40
'			protection systems	
4	Edit	Elective	Correct title of UEENEED101A - Use computer	20
'			applications relevant to a workplace	
4	Edit	Elective	Correct title of UEENEEG113A - Install and	60
'			maintain emergency safety systems	
4	Edit	Elective	Correct title of UEENEEG172A - Investigate and	60
'			report on electrical incidents and causes	
4	Edit	Elective	Correct title of UEENEEH102A - Repairs basic	40
'			electronic apparatus faults by replacement of	
			components	
4	Edit	Elective	Correct title of UEENEEI116A - Assemble, enter	20
'			and verify operating instructions in microprocessor	
			equipped devices	
4	Edit	Elective	Correct title of UEENEEI151A - Develop, enter and	60
'			verify word and analogue control programs for	
			programmable logic controllers.	
4	Edit	Elective	Correct title of UEENEEM024A - Install explosion-	40
			protected equipment and wiring systems - gas	
			atmospheres	

## **Description**

#### **Scope**

This qualification provides competencies to select, install, commission, fault find and maintain fire protection control systems in buildings. It includes ERAC requirements for an 'Electrician's licence'.

## **Pathways Information**

Not applicable.

## **Licensing/Regulatory Information**

Not applicable.

# **Entry Requirements**

# **Employability Skills Summary**

## **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 100 points in accordance with the Elective Competency Standard Units table below.

Note: UEENEEG105A - Those holding an 'Unrestricted Electricians Licence or equivalent issued in an Australian State or Territory meets the requirements of this unit and its prerequisite requirements.

Core Competency Standard Units Weighting				
All Core competen	Points			
UEENEEE038B	Participate in development and follow a personal	20		
UELNELEUSOD	competency development plan			
UEENEEE101A	Apply Occupational Health and Safety regulations,	20		
	codes and practices in the workplace			
UEENEEE102A	Fabricate, assemble and dismantle utilities industry	40		
	components			
UEENEEE104A	Solve problems in d.c. circuits	80		
UEENEEE105A	Fix and secure electrotechnology equipment	20		
UEENEEE107A	Use drawings, diagrams, schedules, standards,	40		
CELIVELETOTI	codes and specifications			
UEENEEE117A	Implement and monitor energy sector OHS policies	20		
CEENEEEII	and procedures			
UEENEEE124A	Compile and produce an energy sector detailed	60		
	report			
UEENEEE137A	Document and apply measures to control OHS	20		
	risks associated with electrotechnology work			
UEENEEG006A	Solve problems in single and three phase low	80		
	voltage machines			
UEENEEG033A	Solve problems in single and three phase low	60		
	voltage electrical apparatus and circuits			
UEENEEG063A	Arrange circuits, control and protection for general	40		
	electrical installations			
UEENEEG101A	Solve problems in electromagnetic devices and	60		
	related circuits			
UEENEEG102A	Solve problems in low voltage a.c. circuits	80		
UEENEEG103A	Install low voltage wiring and accessories	20		

UEENEEG104A	Install appliances, switchgear and associated	20	
CEENEEGIONI	accessories for low voltage electrical installations		
UEENEEG105A	Verify compliance and functionality of low voltage	40	
CEENEEGIOSII	general electrical installations		
UEENEEG106A	Terminate cables, cords and accessories for low	40	
CLEIVELGIOOM	voltage circuits		
UEENEEG107A	Select wiring systems and cables for low voltage	60	
CEENEEGIOTTI	general electrical installations		
UEENEEG108A	Trouble-shoot and repair faults in low voltage	40	
CLEIVELGIOOM	electrical apparatus and circuits		
UEENEEG109A	Develop and connect electrical control circuits	80	
UEENEEH161A	Install fire detection and warning system apparatus	40	
UEENEEH162A	Verify compliance and functionality of fire	60	
CEEI\EEII10211	protection system installations		
UEENEEH163A	Enter and verify programs for fire protection	40	
CEEIVEEIIIOSII	systems		
UEENEEH164A	Commission large fire protection systems	40	
UEENEEH165A	Troubleshoot fire protection systems	40	
UEENEEK145A	Implement and monitor energy sector	20	
CEETIEETT 1311	environmental and sustainable policies and		
	procedures		
Total points in co	re	1180	

Complete Elective units to achieve a total of weighting of 100 points from the following groups:

Gro	ир	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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	60
В	<b>Qualification Elective Units</b>	0	60
C	<b>Qualification Elective Units</b>	40	100

Complete Elective units to achieve a total of weighting of 100 points from the following groups:

Gro	Group		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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	60
	You may select all your elective units from this Group		

	Group A – Imported and Common Elective Units You may complete units to a maximum weighting of 60				
1 ou may complete	Tou may complete units to a maximum weighting of 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			
UEENEED101A	Use computer applications relevant to a workplace	20			
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20			
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20			
CPCCOHS1001A	Work safely in the construction industry	10			
HLTAID001	Provide cardiopulmonary resuscitation	10			
CPPFES2043A	Prevent ozone depleting substance and synthetic greenhouse gas emissions	10			
	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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee,	Up to 60 points			

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	

Group B – Qualification Elective Units You may complete units to a maximum weighting of 60				
UEENEED104A	Use engineering applications software on personal computers	40		
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		
UEENEEG113A	Install and maintain emergency safety systems	60		
UEENEEH102A	Repairs basic electronic apparatus faults by replacement of components	40		
UEENEEH111A	Troubleshoot single phase input d.c. power supplies	40		
UEENEEH138A	Fault find and repair complex power supplies	40		
UEENEEI116A	Assemble, enter and verify operating instructions in microprocessor equipped devices	20		
UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers	60		
UEENEEM024A	Install explosion-protected equipment and wiring systems — gas atmospheres	60		
UEENEEM077A	Install and maintain the integrity of fixed gas detection equipment	20		
UEENEEM080A	Report on the integrity of explosion-protected equipment in a hazardous area	20		

Group C - Qualific	Weighting Points				
You must complete	You must complete units to a minimum weighting of 40				
You may select all	You may select all your elective units from this Group				
UEENEEG121A	Verify compliance and functionality of special LV electrical installations	40			

UEENEEG122A	Conduct compliance inspection of single phase LV	60
	electrical installations	
UEENEEG123A	Conduct compliance inspection of LV electrical	40
CEET VEE CT2511	installations with demand exceeding 100 A per	
	phase	
UEENEEG124A	Conduct compliance inspection of special LV	60
OLLIVELO12 III	electrical installations	
UEENEEG172A	Investigate and report on electrical incidents and	60
OLLIVELOT /2/1	causes	
UEENEEG175A	Develop compliance policies and plans to conduct a	80
CEETVEECTYSTI	electrical contracting business	
UEENEEG179A	Develop detailed electrical drawings	60
UEENEEI151A	Develop, enter and verify word and analogue control	60
OLLIVELIIJII	programs for programmable logic controllers.	
UEENEEI152A	Develop, enter and verify programs in Supervisory	60
OEEI (EEI 1321)	Control and Data Acquisition systems	
UEENEEM042A	Install explosion-protected equipment and wiring	40
CEET TEETITO TEET	systems - gas atmospheres	

- 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.

END OF QUALIFICATION

# **Custom Content Section**

# **UEE40911 Certificate IV in Industrial Electronics and Control**

# **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Add	Group B	UEENEEH150A Assemble and set up basic	80
			security systems	
2	Edit		Edit Name to reflect correct Unit title	40
			UEENEED104A Use engineering applications	
			software on personal computers	
2	Edit		Edit Name to Reflect correct Unit Title	
			UEENEEI124A Fault find and repair analogue	
			circuits and components in electronic control systems	
2	Update	Group A	HLTCPR211A Perform CPR	10

			Edit Name to reflect correct Unit title	
3	Edit	Group B	UEENEEI102A Solve problems in pressure	40
			measurement components and systems	
			Edit Name to reflect correct Unit title	
3	Edit	Group B	UEENEEI103A Solve problems in density_level	40
			measurement components and systems	
			Edit Name to reflect correct Unit title	
3	Edit	Group B	UEENEEI104A Solve problems in flow	40
			measurement components and systems	
			Edit Name to reflect correct Unit title	
3	Edit	Group B	UEENEEI105A Solve problems in temperature	40
			measurement components and systems	
			Edit Name to reflect correct Unit title	
	Edit	dit Group C	UEENEEI151A Develop, enter and verify word and	60
3	Luit		analogue control programs for programmable logic	
			controllers.	
			Edit Name to reflect correct Unit title	
	Edit	lit Core	UEENEEK145A Implement and monitor energy	20
3	Ean		sector environmental and sustainable policies and	
			procedures	

1	Undata	Elective	HLTAID001 - Provide cardiopulmonary	10
4	Opuate	Elective	resuscitation	10

4	Edit	Core	Correct title of UEENEEE101A - Apply	20
7			Occupational Health and Safety regulations, codes	
			and practices in the workplace	
4	Edit	Core	Correct title of UEENEEE102A - Fabricate,	40
4			assemble and dismantle utilities industry components	
4	Edit	Elective	Correct title of UEENEED101A - Use computer	20
4			applications relevant to a workplace	
4	Edit	Elective	Correct title of UEENEEG110A - Find and repair	60
4			faults in LV d.c. electrical apparatus and circuits	
4	Edit	Elective	Correct title of UEENEEG119A - Maintain operation	60
4			of electrical marine equipment and systems	
4	Edit	Elective	Correct title of UEENEEG132A - Carry out low	60
4			voltage electrical field testing and report findings	
4	Edit	Elective	Correct title of UEENEEH102A - Repairs basic	40
4			electronic apparatus faults by replacement of	
			components	
4	Edit	Elective	Correct title of UEENEEI101A - Use instrumentation	40
4			drawings, specification, standards and equipment	
			manuals	
4	Edit	Elective	Correct title of UEENEEI103A - Solve problems in	40
4			density/level measurement components and systems	
4	Edit	Elective	Correct title of UEENEEI116A - Assemble, enter	20
4			and verify operating instructions in microprocessor	
			equipped devices	
4	Edit	Elective	Correct title of UEENEEI119A - Set up industrial	60
7			field control devices	
4	Edit	Elective	Correct title of UEENEEI126A - Provide solutions to	80
7			pneumatic-hydraulic system operations	
4	Edit	Elective	Correct title of UEENEEI148A - Solve problems in	60
7			single phase electronic power control circuits	
4	Edit	Elective	Correct title of UEENEEI149A - Solve problems in	60
+			polyphase electronic power control circuits	
			T = = = = = = = = = = = = = = = = = = =	L

# **Description**

#### Scope

This qualification provides competencies to select, install, commission, fault find and maintain equipment and systems for the control of plant, machines and processes. It includes ERAC requirements for an 'Electrician's licence'.

### **Pathways Information**

Not applicable.

### **Licensing/Regulatory Information**

Not applicable.

### **Entry Requirements**

Not applicable.

# **Employability Skills Summary**

### **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 200 points in accordance with the Elective Competency Standard Units table below.

Note: UEENEEG105A - Those holding an 'Unrestricted Electricians Licence or equivalent issued in an Australian State or Territory meets the requirements of this unit and its prerequisite requirements.

<b>Core Competency</b>	Standard Units	Weighting
All Core competen	Points	
UEENEEE038B	UEENEEE038B Participate in development and follow a personal competency development plan	
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
UEENEEE117A	Implement and monitor energy sector OHS policies and procedures	20
UEENEEE124A	Compile and produce an energy sector detailed report	60
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20
UEENEEG006A	Solve problems in single and three phase low voltage machines	80
UEENEEG033A	Solve problems in single and three phase low voltage electrical apparatus and circuits	60
UEENEEG063A	Arrange circuits, control and protection for general electrical installations	40
UEENEEG101A	Solve problems in electromagnetic devices and related circuits	60
UEENEEG102A	Solve problems in low voltage a.c. circuits	80
UEENEEG103A	Install low voltage wiring and accessories	20

UEENEEG104A	Install appliances, switchgear and associated	20
OEENEEG104A	accessories for low voltage electrical installations	
UEENEEG105A	Verify compliance and functionality of low voltage	40
OLLIVLEGIOSA	general electrical installations	
UEENEEG106A	Terminate cables, cords and accessories for low	40
CEETTEETTOOM	voltage circuits	
UEENEEG107A	Select wiring systems and cables for low voltage	60
CEENEEGIOTI	general electrical installations	
UEENEEG108A	Trouble-shoot and repair faults in low voltage	40
CEETTEETTOOT	electrical apparatus and circuits	
UEENEEG109A	Develop and connect electrical control circuits	80
UEENEEI124A	Fault find and repair analogue circuits and	60
CELIVEETIZ-II	components in electronic control systems	
UEENEEI139A	Diagnose and rectify faults in digital controls	60
CEETVEETI3711	systems	
UEENEEK145A	Implement and monitor energy sector	20
OLLIVELINI 1311	environmental and sustainable policies and	
	procedures	
Total points in con	re	1080

Complete Elective units to achieve a total of weighting of 200 points from the following groups:

Grou	ıp	Minimum points	Maximum points
A	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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.		100
В	<b>Qualification Elective Units</b>	0	100
С	Qualification Elective Units You may select all your elective units from this Group	100	200

Group A – Imported and Common Elective Units	Weighting

You may complete t	Points	
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
UEENEED101A	Use computer applications relevant to a workplace	20
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20
CPCCOHS1001A	Work safely in the construction industry	10
HLTAID001	Provide cardiopulmonary resuscitation	10
	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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	Up to 100 points
	Note: For further information see Application of the NQC Flexibility Formula, UEE11 Electrotechnology Training Package, Version 1, Volume 1 Qualification Framework	

-	cation Elective Units	Weighting Points
You may complete	units to a maximum weighting of 100	Tomics
UEENEED104A	Use engineering applications software on personal computers	40
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
UEENEEE192A	Produce detailed electrotechnology /utilities drawings using computer aided design equipment and software	60
UEENEEF102A	Install and maintain cabling for multiple access to telecommunication services	120
UEENEEF104A	Install and modify performance data communication copper cabling	40
UEENEEG110A	Find and repair faults in LV d.c. electrical apparatus and circuits	60
UEENEEG118A	Maintain operation of electrical mining equipment and systems	60
UEENEEG119A	Maintain operation of electrical marine equipment and systems	60
UEENEEH102A	Repairs basic electronic apparatus faults by replacement of components	40
UEENEEH111A	Troubleshoot single phase input d.c. power supplies	40
UEENEEH150A	Assemble and set up basic security systems	80
UEENEEI101A	Use instrumentation drawings, specification, standards and equipment manuals	40
UEENEEI102A	Solve problems in pressure measurement components and systems	40
UEENEEI103A	Solve problems in density/level measurement components and systems	40
UEENEEI104A	Solve problems in flow measurement components and systems	40
UEENEEI105A	Solve problems in temperature measurement components and systems	40
UEENEEI116A	Assemble, enter and verify operating instructions in microprocessor equipped devices	20
UEENEEI150A	Develop, enter and verify discrete control programs	60

	for programmable controllers	
UEENEEM019A	Attend to breakdowns in hazardous areas — coal	20
	mining	
UEENEEM020A	Attend to breakdowns in hazardous areas — gas	20
	atmospheres	
UEENEEM021A	Attend to breakdowns in hazardous areas — dust	20
	atmospheres	
UEENEEM022A	Attend to breakdowns in hazardous areas —	20
	pressurisation	
UEENEEM076A	Use and maintain the integrity of a portable gas	20
	detection device	
UEENEEM077A	Install and maintain the integrity of fixed gas	20
	detection equipment	
UEENEEM080A	Report on the integrity of explosion-protected	20
	equipment in a hazardous area	

Group C – Qualific	Weighting	
You must complete	Points	
You may select all y	our elective units from this Group	
UEENEEC005B	Estimate electrotechnology projects	40
UEENEEG132A	Carry out low voltage electrical field testing and report findings	60
UEENEEG179A	Develop detailed electrical drawings	60
UEENEEI119A	Set up industrial field control devices	60
UEENEEI120A	Provide solutions to problems in industrial control systems	60
UEENEEI125A	Provide solutions to fluid circuit operations	60
UEENEEI126A	Provide solutions to pneumatic-hydraulic system operations	80
UEENEEI148A	Solve problems in single phase electronic power control circuits	60
UEENEEI149A	Solve problems in polyphase electronic power control circuits	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
UEENEEI155A	Develop structured programs to control external	40

4:	I
devices	i e
	1

- 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.

END OF QUALIFICATION

#### **Custom Content Section**

# **UEE41011 Certificate IV in Energy Management and Control**

# **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Edit		Edit Name to reflect correct Unit title	40
			UEENEED104A Use engineering applications	
			software on personal computers	
2	Update	Group A	HLTCPR211A Perform CPR	10

			Edit Name to reflect correct Unit title	40
3	Edit	Group B	UEENEEI102A Solve problems in pressure	40
			measurement components and systems	
			Edit Name to reflect correct Unit title	
3	Edit	Group B	UEENEEI103A Solve problems in density_level	40
			measurement components and systems	
			Edit Name to reflect correct Unit title	
3	Edit	Group B	UEENEEI104A Solve problems in flow	40
			measurement components and systems	
			Edit Name to reflect correct Unit title	
3	Edit	Group B	UEENEEI105A Solve problems in temperature	40
			measurement components and systems	
			Edit Name to reflect correct Unit title	
	Edit	Core	UEENEEK145A Implement and monitor energy	20
3	Edit	sector environmental and sustainable	sector environmental and sustainable policies and	
			procedures	

4	Update	Elective	HLTAID001 - Provide cardiopulmonary resuscitation	10
4	Edit	Core	Correct title of UEENEEE101A - Apply Occupational Health and Safety regulations, codes and practices in the workplace	20
4	Edit	Core	Correct title of UEENEEE102A - Fabricate, assemble and dismantle utilities industry components	40
4	Edit	Elective	Correct title of UEENEED101A - Use computer applications relevant to a workplace	20
4	Edit	Elective	Correct title of UEENEEE121A - Plan an integrated cabling installation system	40

4	Edit	Elective	Correct title of UEENEEG113A - Install and	60
			maintain emergency safety systems	
4	Edit	Elective	Correct title of UEENEEG125A - Plan electrical	40
ľ			installations with a low voltage demand up to 400 A	
			per phase	
4	Edit	Elective	Correct title of UEENEEG128A - Plan low voltage	40
•			switchboard and control panel layouts	
4	Edit	Elective	Correct title of UEENEEG168A - Diagnose and	40
7			rectify faults in complex lift systems	
4	Edit	Elective	Correct title of UEENEEG172A - Investigate and	60
			report on electrical incidents and causes	
4	Edit	Elective	Correct title of UEENEEG177A - Select low voltage	60
_			power factor correction equipment	
4	Edit	Elective	Correct title of UEENEEG185A - Select effective	60
т			and efficient light sources and luminaries for given	
			locations and designs	
4	Edit	Elective	Correct title of UEENEEH102A - Repairs basic	40
7			electronic apparatus faults by replacement of	
			components	
4	Edit	Elective	Correct title of UEENEEI103A - Solve problems in	40
7			density/level measurement components and systems	
4	Edit	Elective	Correct title of UEENEEI116A - Assemble, enter	20
_			and verify operating instructions in microprocessor	
			equipped devices	
4	Edit	Elective	Correct title of UEENEEK153A - Assess energy	40
7			loads and uses for energy efficiency in residential,	
			office and retail premises	
4	Edit	Elective	Correct title of UEENEEK154A - Assess energy	40
7			loads and uses for energy efficiency in commercial	
			facilities	
4	Edit	Elective	Correct title of UEENEEK155A - Assess energy	40
7			loads and uses for energy efficiency in industrial	
			properties and enterprises	

### **Description**

#### **Scope**

This qualification provides competencies to develop strategies for the reduction of energy in buildings and to recommend changes in the way in which energy is controlled in the building either by the installation of new control equipment or by the modification or re-programming of that existing. It includes ERAC requirements for an 'Electrician's licence'.

### **Pathways Information**

Not applicable.

# **Licensing/Regulatory Information**

Not applicable.

### **Entry Requirements**

Not applicable.

### **Employability Skills Summary**

### **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 300 points in accordance with the Elective Competency Standard Units table below.

Note 1: UEENEEG105A - Those holding an 'Unrestricted Electricians Licence or equivalent issued in an Australian State or Territory meets the requirements of this unit and its prerequisite requirements.

Core Competency Standard Units Weighting					
All Core competend	All Core competency standard units to be achieved				
UEENEEE038B	Participate in development and follow a personal	20			
CELIVELEOSOB	competency development plan				
UEENEEE101A	Apply Occupational Health and Safety regulations,	20			
	codes and practices in the workplace				
UEENEEE102A	Fabricate, assemble and dismantle utilities industry	40			
	components				
UEENEEE104A	Solve problems in d.c. circuits	80			
UEENEEE105A	Fix and secure electrotechnology equipment	20			
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes	40			
CELIVELETOTA	and specifications				
UEENEEE117A	Implement and monitor energy sector OHS policies	20			
	and procedures				
UEENEEE124A	Compile and produce an energy sector detailed	60			
	report				
UEENEEE137A	Document and apply measures to control OHS risks	20			
	associated with electrotechnology work				
UEENEEG006A	Solve problems in single and three phase low voltage	80			
	machines				
UEENEEG033A	Solve problems in single and three phase low voltage	60			
	electrical apparatus and circuits				
UEENEEG063A	Arrange circuits, control and protection for general	40			
	electrical installations				
UEENEEG101A	Solve problems in electromagnetic devices and	60			
	related circuits				
UEENEEG102A	Solve problems in low voltage a.c. circuits	80			
UEENEEG103A	Install low voltage wiring and accessories	20			

UEENEEG104A	Install appliances, switchgear and associated	20
0221(22010)11	accessories for low voltage electrical installations	
UEENEEG105A	Verify compliance and functionality of low voltage	40
CLLINELGIOSII	general electrical installations	
UEENEEG106A	Terminate cables, cords and accessories for low	40
CEENEEGIOOI	voltage circuits	
UEENEEG107A	Select wiring systems and cables for low voltage	60
CLLINELGIOTTI	general electrical installations	
UEENEEG108A	Trouble-shoot and repair faults in low voltage	40
CLLIVLLOTOOTI	electrical apparatus and circuits	
UEENEEG109A	Develop and connect electrical control circuits	80
UEENEEK145A	Implement and monitor energy sector environmental	20
	and sustainable policies and procedures	
UEENEEK152A	Develop strategies to address sustainability issues for	20
	electrical installations	
Total points in cor	980	

Complete Elective units to achieve a total of weighting of 300 points from the following groups:

Group		Minimu m 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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	100
В	Qualification Elective Units	0	100
С	Qualification Elective Units You may select all your elective units from this Group	200	300

Group A – Imported and Common Elective Units You may complete units to a maximum weighting of 100			
UEENEEC001B	Maintain documentation	20	
UEENEEC002B Source and purchase material/parts for installation or			

	service jobs	
UEENEEC003B	Provide quotations for installation or service jobs	20
UEENEEC010B	Deliver a service to customers	20
UEENEED101A	Use computer applications relevant to a workplace	20
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20
CPCCOHS1001A	Work safely in the construction industry	10
HLTAID001	Provide cardiopulmonary resuscitation	10
	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 4. 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 100 points

Group B – Qualification Elective Units			
You may complete	You may complete units to a maximum weighting of 100		
UEENEED104A	Use engineering applications software on personal computers	40	
UEENEEE121A	Plan an integrated cabling installation system	40	
UEENEEF102A	Install and maintain cabling for multiple access to telecommunication services	120	
UEENEEF104A	Install and modify performance data communication copper cabling	40	
UEENEEG113A	Install and maintain emergency safety systems	60	
UEENEEG171A	Install, set up and commission interval metering	20	
UEENEEG181A	Provide advice on effective and energy efficient lighting products	20	
UEENEEG182A	Supply effective and efficient lighting products for domestic and small commercial applications	40	
UEENEEG183A	Provide advice on the application of energy efficient lighting for ambient and aesthetic effect	20	
UEENEEG189A	Install and maintain emergency lighting systems	40	
UEENEEH102A	Repairs basic electronic apparatus faults by replacement of components	40	
UEENEEH111A	Troubleshoot single phase input d.c. power supplies	40	
UEENEEI141A	Develop electrical integrated systems	40	
UEENEEI102A	Solve problems in pressure measurement components and systems	40	
UEENEEI103A	Solve problems in density/level measurement components and systems	40	
UEENEEI104A	Solve problems in flow measurement components and systems	40	
UEENEEI105A Solve problems in temperature measurement components and systems		40	
UEENEEI116A	Assemble enter and verify operating instructions in		
UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers	60	

Group C – Qualification Elective Units	Weighting
You must complete units to a minimum weighting of 200	Points
You may select all your elective units from this Group	

UEENEEE073B	Write specifications for refrigeration and air conditioning engineering projects	40
UEENEEG076A	Install and replace low voltage current transformer metering	20
UEENEEG121A	Verify compliance and functionality of special LV electrical installations	40
UEENEEG122A	Conduct compliance inspection of single phase LV electrical installations	60
UEENEEG123A	Conduct compliance inspection of LV electrical installations with demand exceeding 100 A per phase	40
UEENEEG124A	Conduct compliance inspection of special LV electrical installations	60
UEENEEG125A	Plan electrical installations with a low voltage demand up to 400 A per phase	40
UEENEEG128A	Plan low voltage switchboard and control panel layouts	40
UEENEEG162A	Set up and place LV electrical apparatus and associated circuits into service	40
UEENEEG168A	Diagnose and rectify faults in complex lift systems	40
UEENEEG172A	Investigate and produce reports on electrical incidents	60
UEENEEG175A	Develop compliance policies and plans to conduct a electrical contracting business	80
UEENEEG177A	Select power factor correction equipment	40
UEENEEG179A	Develop detailed electrical drawings	60
UEENEEG184A	Provide photometric data for illumination system design	60
UEENEEG185A	Select effective and efficient light sources and luminaries for given locations and designs	60
UEENEEG186A	Design effective and efficient lighting for residential and commercial buildings	20
UEENEEG188A	Prepare quotations for the supply of effective and efficient lighting products for lighting projects	20
UEENEEK153A	Assess energy loads and uses for energy efficiency in residential, office and retail premises	40
UEENEEK154A	Assess energy loads and uses for energy	40

	efficiency in commercial facilities	
UEENEENIJJA	Assess energy loads and uses for energy efficiency in industrial properties and enterprises	40

- 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.

#### **END OF QUALIFICATION**

#### **Custom Content Section**

# **UEE41111 Certificate IV in Electrical - Lift Systems**

# **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
	Edit		Edit Name to Reflect correct Unit Title	
			UEENEEI124A Fault find and repair analogue	
			circuits and components in electronic control systems	
2	Update	Group A	HLTCPR211A Perform CPR	10

3	Edit	Group C	Edit Name to reflect correct Unit title UEENEEI151A Develop, enter and verify word and analogue control programs for programmable logic controllers.	60
3	Edit	Core	Edit Name to reflect correct Unit title UEENEEK145A Implement and monitor energy sector environmental and sustainable policies and procedures	20

4 Update		te Elective	HLTAID001 - Provide cardiopulmonary	10
4	resuscitation		resuscitation	
4	Edit Core Correct title of UEENEEE101A - Apply Occupational Health and Safety regulations, codes		Correct title of UEENEEE101A - Apply	20
'				
			and practices in the workplace	
4	Edit	Core	Correct title of UEENEEE102A - Fabricate,	40
'			assemble and dismantle utilities industry components	
4	Edit	Core	Correct title of UEENEEG116A - Diagnose and	80
'			rectify faults in traction lift systems	
4	Edit	Core	Correct title of UEENEEG168A - Diagnose and	40
'	rectify faults in complex lift systems		rectify faults in complex lift systems	
4	Edit	Elective	Correct title of UEENEED101A - Use computer	20
			applications relevant to a workplace	
4	Edit	Elective	Correct title of UEENEEG110A - Find and repair	60
'			faults in LV d.c. electrical apparatus and circuits	
4	Edit Elective Correct title of UEENEEG165A - Maintain and		40	
'	service traction lifts systems and equipment			
4	Edit	Elective	Correct title of UEENEEG166A - Install and	40
			maintain escalators, moving walks and treadways	

4	Edit	Elective	Correct title of UEENEEG167A - Align and install	20
•			traction lift equipment	
4	Edit	Elective	Correct title of UEENEEI148A - Solve problems in	60
			single phase electronic power control circuits	
4	Edit	Elective	Correct title of UEENEEI149A - Solve problems in	60
•			polyphase electronic power control circuits	

# **Description**

#### Scope

This qualification provides competencies to select, install, commission, fault find and maintain lifts, escalators and associated equipment. It includes ERAC requirements for an 'Electrician's licence'.

# **Pathways Information**

Not applicable.

### **Licensing/Regulatory Information**

Not applicable.

# **Entry Requirements**

Not applicable.

# **Employability Skills Summary**

### **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 80 points in accordance with the Elective Competency Standard Units table below.

Note: UEENEEG105A - Those holding an 'Unrestricted Electricians Licence or equivalent issued in an Australian State or Territory meets the requirements of this unit and its prerequisite requirements.

<b>Core Competency</b>	Standard Units	Weighting	
All Core competen	All Core competency standard units to be achieved		
UEENEEE038B	Participate in development and follow a personal competency development plan	20	
UEENEEE101A	Apply Occupational Health Safety regulations, codes and practices in the workplace	20	
UEENEEE102A	Fabricate, dismantle, assemble of 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	
UEENEEE117A	Implement and monitor energy sector OHS policies and procedures	20	
UEENEEE124A	Compile and produce an energy sector detailed report	60	
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20	
UEENEEG006A	Solve problems in single and three phase low voltage machines	80	
UEENEEG033A	Solve problems in single and three phase low voltage electrical apparatus and circuits	60	
UEENEEG063A	Arrange circuits, control and protection for general electrical installations	40	
UEENEEG101A	Solve problems in electromagnetic devices and related circuits	60	
UEENEEG102A	Solve problems in low voltage a.c. circuits	80	
UEENEEG103A	Install low voltage wiring and accessories	20	

Total points in co	1200	
UEENEEK145A	UEENEEK145A Implement and monitor energy sector environmental and sustainable policies and procedures	
UEENEEI139A Diagnose and rectify faults in digital controls systems		60
UEENEEI124A	Fault find and repair analogue circuits and components in electronic control systems	60
UEENEEG168A	Diagnose and rectify faults in complex lift systems	40
UEENEEG116A	UEENEEG116A Diagnose and rectify faults in traction lift systems	
UEENEEG109A	Develop and connect electrical control circuits	80
UEENEEG108A	Trouble-shoot and repair faults in low voltage electrical apparatus and circuits	40
UEENEEG107A	Select wiring systems and cables for low voltage general electrical installations	60
UEENEEG106A	Terminate cables, cords and accessories for low voltage circuits	40
UEENEEG105A	Verify compliance and functionality of low voltage general electrical installations	40
UEENEEG104A	Install appliances, switchgear and associated accessories for low voltage electrical installations	20

Complete Elective units to achieve a total of weighting of 80 points from the following groups:

Gro	Group		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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	20
В	Qualification Elective Units	0	20
С	Qualification Elective Units  You may select all your elective units from this Group	60	60

Group A – Imported and Common Elective Units You may complete units to a maximum weighting of 20		
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
UEENEED101A	Use computer applications relevant to a workplace	20
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20
CPCCOHS1001A	Work safely in the construction industry	10
HLTAID001	Provide cardiopulmonary resuscitation	10
	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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	Up to 20 points
	Note: For further information see Application of the NQC Flexibility Formula, UEE11 Electrotechnology Training Package, Version 1, Volume 1 Qualification Framework	

Group B – Qualification Elective Units You may complete units to a maximum weighting of 20		Weighting Points
UEENEEF103A	UEENEEF103A Install and maintain telecommunication cabling for services in lifts	
UEENEEG110A	Find and repair faults in LV d.c. electrical apparatus and circuits	60
UEENEEG165A	Maintain and service traction lifts systems and equipment	40
UEENEEG166A	Install and maintain escalators, moving walks and treadways	40
UEENEEG167A	Align and install traction lift equipment	20
UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers	60

Group C – Qualification Elective Units		Weighting
Complete units to a	maximum weighting of 60	Points
UEENEEI148A Solve problems in single phase electronic power control circuits		60
UEENEEI149A Solve problems in polyphase electronic power control circuits		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

- 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.

#### **END OF QUALIFICATION**

#### **Custom Content Section**

# **UEE41211 Certificate IV in Electrical - Rail Signalling**

# **Modification History**

1,1001		ii iiistoi y	I	T
Releas e	Action	Core/Elective	Details	Points
2	Edit		Edit Name to reflect correct Unit title UEENEED104A Use engineering applications software on personal computers	
2	Edit		Added Heading for Performance Criteria Element 2 and 3	
2	Update	Group A	HLTCPR211A Perform CPR	10
3	Edit	Core	Edit Name to reflect correct Unit title UEENEEK145A Implement and monitor energy sector environmental and sustainable policies and procedures	20
4	Update	Elective	HLTAID001 - Provide cardiopulmonary resuscitation	10
4	Edit	Core	Correct title of UEENEEE101A - Apply Occupational Health and Safety regulations, codes and practices in the workplace	20
4	Edit	Core	Correct title of UEENEEE102A - Fabricate, assemble and dismantle utilities industry components	40
4	Edit	Elective Correct title of UEENEED101A - Use computer applications relevant to a workplace		20
4	Edit	Elective	Correct title of UEENEEN106A - Install and maintain non-vital screen based control systems	20

#### **Description**

#### Scope

This qualification provides competencies to install, certify, fault find and maintain rail signalling equipment and systems. This includes ERAC requirements for an 'Electrician's licence', performing like for like replacement, performing authorised installations and alterations, and applying emergency operational restriction. It excludes changing circuit principles, changing the design function and commissioning.

#### Note:

Commissioning is defined as the process to certify the signalling system to the enterprise standard. Certification is defined as the signing of certification documents by qualified, competent persons attesting to the design, product, or installation is in accordance with the specification requirements as verified by appropriate inspections and/or tests at equipment level.

#### **Pathways Information**

Not applicable.

#### **Licensing/Regulatory Information**

Not applicable.

#### **Entry Requirements**

Not applicable.

#### **Employability Skills Summary**

### **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 70 points in accordance with the Elective Competency Standard Units table below.

Note: UEENEEG105A - Those holding an 'Unrestricted Electricians Licence or equivalent issued in an Australian State or Territory meets the requirements of this unit and its prerequisite requirements.

<b>Core Competency</b>	Standard Units	Weighting	
All Core competen	All Core competency standard units to be achieved		
UEENEEE038B	UEENEEE038B Participate in development and follow a personal competency development plan		
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	
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	
UEENEEG006A	Solve problems in single and three phase low voltage machines	80	
UEENEEG033A	Solve problems in single and three phase low voltage electrical apparatus and circuits	60	
UEENEEG063A	Arrange circuits, control and protection for general electrical installations	40	
UEENEEG101A	Solve problems in electromagnetic devices and related circuits	60	
UEENEEG102A	Solve problems in low voltage a.c. circuits	80	
UEENEEG103A	Install low voltage wiring and accessories	20	
UEENEEG104A	Install appliances, switchgear and associated accessories for low voltage electrical installations	20	

UEENEEG105A	Verify compliance and functionality of low voltage general electrical installations	40
UEENEEG106A	UEENEEG106A Terminate cables, cords and accessories for low voltage circuits	
UEENEEG107A	Select wiring systems and cables for low voltage general electrical installations	60
UEENEEG108A	Trouble-shoot and repair faults in low voltage electrical apparatus and circuits	40
UEENEEG109A	Develop and connect electrical control circuits	80
UEENEEK145A	Implement and monitor energy sector environmental and sustainable policies and procedures	20
UEENEEN102A	Assemble and wire internal electrical rail signalling equipment	30
UEENEEN103A	Install and maintain rail track circuit leads and bonds	30
UEENEEN104A	Test copper rail signalling cables	20
UEENEEN105A	Install and maintain rail signalling power supplies	40
UEENEEN107A	Install and maintain active level crossing equipment	40
UEENEEN108A	Install and maintain power operated point actuating devices	40
UEENEEN109A	Install and maintain train detection equipment	40
UEENEEN111A	Install and maintain trackside signal and train protection equipment	40
UEENEEN112A	Install and maintain vital relay interlocking systems	40
UEENEEN118A	Find and repair rail signalling system faults	20
UEENEEN121A	Repair rail signalling power and control cables	40
Total points in con	re .	1280

Complete Elective units to achieve a total of weighting of 70 points from the following groups:

Group	Minimum	Maximum
010 <b>u</b> p	points	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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	30
В	<b>Qualification Elective Units</b>	0	40
C	Qualification Elective Units You may select all your elective units from this Group	30	70

Group A – Imported and Common Elective Units Weighting			
You may complete	Points		
CPCCOHS1001A	Work safely in the construction industry	10	
HLTAID001	Provide cardiopulmonary resuscitation	10	
TLIS2004A	Install and maintain rail bonding systems	40	
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	
UEENEED101A	Use computer applications relevant to a workplace	20	
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20	
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	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 4. 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	Up to 30 points	
	NQC Flexibility Formula, UEE11 Electrotechnology Training Package, Version 1, Volume 1		

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Group B – Qualifica You may complete un	Weighting Points	
UEENEED104A	Use engineering applications software on personal computers	40
UEENEED146A	Set up and configure basic local area network (LAN)	80

Group C - Qualifica	Weighting		
You must complete u	Points		
You may select all your elective units from this Group			
UEENEEE124A	Compile and produce an energy sector detailed	60	
CEEI\EEE1241\	report		
UEENEEE152A	Observe safety practices are followed in the	20	
CEEI (EEE 1321)	vicinity of isolated electrical cables		
UEENEEN101A	Maintain mechanical rail signalling equipment and	20	
CELIVELIVIOIA	infrastructure		
UEENEEN106A	Install and maintain non-vital screen based control	20	
CEETTEETTOOT	systems		
UEENEEN110A	Install and maintain non-vital telemetry systems	40	
UEENEEN114A	Install and maintain computer based interlocking	30	
CEENEENTI-71	rail systems		
UEENEEN116A	Maintain electronic and microprocessor-based	20	
CELIVELIVITOR	remote control systems		
UEENEEN126A	Develop rail signalling system maintenance	20	
OLLIVLLIVI2011	programs		
UEENEEN127A	Decommission electrical and electro-mechanical	20	
OLLIULIUZ/A	rail signalling from service		
UEENEEN128A	Test and commission rail power equipment	20	

- 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.

#### **END OF QUALIFICATION**

#### **Custom Content Section**

# **UEE41511 Certificate IV in Video and Audio Systems**

# **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Edit		Edit Name to reflect correct Unit title	40
			UEENEED104A Use engineering applications	
			software on personal computers	

4	Remov	Group C	UEENEEH189A Design electronic printed	40
	e		circuit boards	
4	Edit	Elective	Correct title of UEENEEH101A - Repair basic	40
			computer equipment faults by replacement of	
			modules/sub-assemblies	
4	Edit	Elective	Correct title of UEENEEH117A - Carry out repairs	120
'			of predictable faults in video and audio	
			replay/recording apparatus	
4	Edit	Elective	Correct title of UEENEEH174A - Troubleshoot	120
'			audio - video recording equipment	
4	Edit	Core	Correct title of UEENEEK145A - Implement and	120
			monitor energy sector environmental and sustainable	
			policies and procedures	

# **Description**

#### **Scope**

This qualification provides competencies to service high end audio, video, display systems and HDTV.

# **Pathways Information**

Not applicable.

# **Licensing/Regulatory Information**

### **Entry Requirements**

Not applicable.

### **Employability Skills Summary**

### **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 440 points in accordance with the Elective Competency Standard Units table below.

Core Competency Standard Units All Core competency standard units to be achieved				
UEENEEE038B	20			
UEENEEE101A	UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace			
UEENEEE102A	Fabricate, assemble and dismantle utilities industry components	40		
UEENEEE104A	Solve problems in d.c. circuits	80		
UEENEEE117A	Implement and monitor energy sector OHS policies and procedures	20		
UEENEEE124A	Compile and produce an energy sector detailed report	60		
-		20		
		40		
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			
UEENEEH119A	Repair predictable faults in television receivers	120		
UEENEEH138A	UEENEEH138A Fault find and repair complex power supplies			
UEENEEH139A	Troubleshoot basic amplifier circuits	40		
UEENEEH146A	Solve fundamental electronic communications			
UEENEEK145A	Implement and monitor energy sector environmental and sustainable policies and	20		

	procedures	
<b>Total points in core</b>		840

### **Elective Competency Standard Units**

Complete Elective units to achieve a total of weighting of 440 points from the following groups:

Gre	Group		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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	220
В	<b>Qualification Elective Units</b>	0	220
С	Qualification Elective Units You may select all your elective units from this Group	220	440

Group A – Import	Weighting	
You may complete	Points	
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
UEENEED101A Use computer applications relevant to a workplace		20
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20
UEENEEE020B	JEENEEE020B Provide basic instruction in the use of electrotechnology apparatus	
	Imported units from other training packages and/or	Up to 220
	state accredited courses can be added to this group,	points
	but they must be selected from qualifications where	
	the unit is first packaged at AQF level 4. 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	

Group B – Qualifi You may complete	Weighting Points		
UEENEEA101A	Assemble electronic components	40	
UEENEEA106A	JEENEEA106A Use lead-free soldering techniques		
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)	80	
UEENEED153A	Set up, configure and test biometric devices	40	
UEENEEE105A	Fix and secure electrotechnology equipment	20	
UEENEEE107A	JEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications		
_		40	
UEENEEE121A	Plan an integrated cabling installation system	40	
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		
		40	
UEENEEF105A Install and modify optical fibre performance data communication cabling		40	
UEENEEF106A	Solve problems in voice and data communications		
UEENEEF107A	Set up and configure the wireless capabilities of communications and data storage devices	40	

UEENEEF108A	Select and arrange equipment for wireless	40
CEETTEET TOOTT	communication networks	
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
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	Panair predictable faults in general electronic	
UEENEEH108A	Assemble and install reception antennae and signal distribution equipment	60
UEENEEH109A	Set up and test gaming and game equipment	
UEENEEH110A	Install commercial video/audio system components	120
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
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)	60

	transmission and reception systems	
UEENEEH128A	Install and test microwave antennae and waveguides	60
UEENEEH142A	Solve oscillator 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
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
UEENEEI116A Assemble, enter and verify operating instructions in microprocessor equipped devices		20

Group C – Qualific	Weighting	
You must complete u	Points	
You may select all yo	our elective units from this Group	
UEENEEC004B	Prepare specifications for the supply of materials	40
CEETVEECOOTE	and equipment for electrotechnology projects	
UEENEEC005B	40	
UEENEED103A Evaluate and modify object oriented code programs		40
UEENEED154A	Analyse and implement biometric measuring	120
	techniques and applications	
UEENEEE114A	Supervise and coordinate energy sector work	40
	activities	

		1
UEENEEH133A	Fault find and repair telecommunication apparatus	60
	and systems	
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	40
CEETVEETITSTIT	systems	
UEENEEH153A	Program and test large security systems	120
UEENEEH157A	JEENEEH157A Develop basic plans for integrating security systems	
UEENEEH175A	EENEEH175A Troubleshooting in security system installations	
UEENEEH176A	Diagnose and rectify faults in electronic display	60
	circuits	
UEENEEH177A	Diagnose and rectify faults in recording and replay	60
CEET (EETIT / //I	equipment	
UEENEEH178A	Diagnose and rectify faults in camera circuits and	60
OLLIVELIII / O/1	equipment	
UEENEEH179A	Diagnose and rectify faults in digital television	80
OLENEEIII / )A	circuits and apparatus	
UEENEEH180A	Diagnose and rectify faults in digital transmission	80
CLLICLITION	circuits and systems	
UEENEEI155A	Develop structured programs to control external	40
OLLI (LLI133)1	devices	

#### **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.

#### END OF QUALIFICATION

### **Custom Content Section**

## **UEE41611 Certificate IV in Renewable Energy**

### **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Update	Group A	HLTCPR211A Perform CPR	10

3	Edit	Group C	Edit Name to reflect correct Unit title UEENEEI151A Develop, enter and verify word and analogue control programs for programmable logic controllers.	60
3	Edit	Core	Edit Name to reflect correct Unit title UEENEEK145A Implement and monitor energy sector environmental and sustainable policies and procedures	20

4	Update	Elective	HLTAID001 - Provide cardiopulmonary	10
4	Opuate	Elective	resuscitation	
4	Edit	Core	Correct title of UEENEEE101A - Apply	20
_			Occupational Health and Safety regulations, codes	
			and practices in the workplace	
4	Edit	Core	Correct title of UEENEEE102A - Fabricate,	40
_			assemble and dismantle utilities industry components	
4	Edit	Core	Correct title of UEENEEE108A - Lay wiring/cabling	40
7			and terminate accessories for extra-low voltage	
			(ELV) circuits	
4	Edit	Core	Correct title of UEENEEE119A - Solve problems in	40
_			multiple path extra low voltage (ELV) a.c. circuits	
4	Edit	Core	Correct title of UEENEEK128A - Solve problems in	60
'			stand-alone renewable energy systems	
4	Edit	Core	Correct title of UEENEEK149A - Verify compliance	40
			and functionality of a extra low voltage renewable	
			energy installation	
4	Edit	Elective	Correct title of UEENEEC004B - Prepare	40
_			specifications for the supply of materials and	
			equipment for electrotechnology projects	
4	Edit	Elective	Correct title of UEENEED101A - Use computer	20
r			applications relevant to a workplace	

4	Edit	Elective	Correct title of UEENEEE114A - Supervise and	40
_			coordinate energy sector work activities	
4	Edit	Elective	Correct title of UEENEEE192A - Produce detailed	60
'			electrotechnology /utilities drawings using computer	
			aided design equipment and software	
4	Edit	Elective	Correct title of UEENEEK110A - Co-ordinate	20
'			maintenance of renewable energy (RE) apparatus and	
			systems	
4	Edit	Elective	Correct title of UEENEEK117A - Maintain and	120
			repair facilities associated with remote area essential	
			service operations	
4	Edit	Elective	Correct title of UEENEEK130A - Solve problems in	60
•			wind energy conversion systems rated up to 10 kW	
4	Edit	Elective	Correct title of UEENEEK134A - Install ELV stand-	60
•			alone photovoltaic power systems	
4	Edit	Elective	Correct title of UEENEEK135A - Design grid	60
•			connected photovoltaic power supply systems	
4	Edit	Elective	Correct title of UEENEEK143A - Install small wind	20
•			energy conversion systems rated up to 10 kW for	
			ELV stand-alone applications	
4	Edit	Elective	Correct title of UEENEEP026A - Conduct in-service	20
'			safety testing of electrical cord connected equipment	
			and cord assemblies	

### **Description**

#### Scope

This qualification provides competencies to select, install, commission, fault find and maintain multiple renewable energy sources and equipment for control of energy use.

### **Pathways Information**

Not applicable.

### **Licensing/Regulatory Information**

### **Entry Requirements**

Not applicable.

### **Employability Skills Summary**

### **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 540 points in accordance with the Elective Competency Standard Units table below.

Note: UEENEEK149A- Those holding a 'Certificate III in Renewable Energy – ELV qualification or equivalent' meet the requirements of this unit and its pre-requisite requirements.

Core Competency Standard Units Wes			
All Core compete	ency standard units to be achieved	Points	
UEENEEE117A	Implement and monitor energy sector OHS policies and procedures	20	
UEENEEE124A	Compile and produce an energy sector detailed report	60	
UEENEEE038B	Participate in development and follow a personal competency development plan	20	
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	
UEENEEE119A	Solve problems in multiple path extra low voltage (ELV) a.c. circuits	40	
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20	
UEENEEG101A	Solve problems in electromagnetic devices and related circuits	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	

	Total points in core	740
UEENEEK145A	Implement and monitor energy sector environmental and sustainable policies and procedures	20
	T 1 4 1 1	20
OBENDERIA 149A	renewable energy installation	
UEENEEK149A	Verify compliance and functionality of a extra low voltage	40
UEENEEK128A	Solve problems in stand-alone renewable energy systems	60

### **Elective Competency Standard Units**

Complete Elective units to achieve a total of weighting of 540 points from the following groups:

Gro	up	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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	220
В	<b>Qualification Elective Units</b>	0	320
С	<b>Qualification Elective Units</b>	220	380

Group A – Import	Group A – Imported and Common Elective Units Weighting			
You may complete	units to a maximum weighting of 220	Points		
UEENEEC001B	Maintain documentation	20		
UEENEEC002B	UEENEEC002B Source and purchase material/parts for installation or 2 service jobs			
UEENEEC003B	Provide quotations for installation or service jobs	20		
UEENEEC010B	Deliver a service to customers	20		
UEENEED101A	Use computer applications relevant to a workplace	20		
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20		
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20		
CPCCOHS1001A	Work safely in the construction industry	10		
HLTAID001	Provide cardiopulmonary resuscitation	10		
	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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee,	Up to 220 points		

1	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	

Group B – Qualific	cation Elective Units	Weighting Points
You may complete	units to a maximum weighting of 320	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
UEENEEP024A	Attach cords and plugs to electrical equipment for	
UEENEEP025A	Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply	20
UEENEEP026A	Conduct in-service safety testing of electrical cord connected equipment and cord assemblies	20

Group C – Qualifica	Weighting	
You must complete u	Points	
maximum of 380		
UEENEEC004B	Prepare specifications for the supply of materials	40

	and equipment for electrotechnology projects	
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	Co-ordinate maintenance of renewable energy (RE) apparatus and systems	20
UEENEEK135A	Design grid connected photovoltaic power supply systems	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.

### END OF QUALIFICATION

### **Custom Content Section**

# **UEE41711** Certificate IV in Rail - Communications and Network Systems

### **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Edit		Edit Name to reflect correct Unit title UEENEED104A Use engineering applications software on personal computers	40
2	Update	Group A	HLTCPR211A Perform CPR	10

			Edit Name to reflect correct Unit title	
3	Edit	Core	UEENEEK145A Implement and monitor energy	20
5 Edit	Edit	Core	sector environmental and sustainable policies and	
			procedures	

4	Update	Elective	HLTAID001 - Provide cardiopulmonary	10
4	Opuate	Elective	resuscitation	
4	Edit	Core	Correct title of UEENEEE101A - Apply	20
'			Occupational Health and Safety regulations, codes	
			and practices in the workplace	
4	Edit	Core	Correct title of UEENEEE102A - Fabricate,	40
-			assemble and dismantle utilities industry components	
4	Edit	Core	Correct title of UEENEEH102A - Repairs basic	40
-			electronic apparatus faults by replacement of	
			components	
4	Edit	Elective	Correct title of UEENEED101A - Use computer	20
			applications relevant to a workplace	
4	Edit	Elective	Correct title of UEENEEH127A - Set up and adjust	60
			commercial radio frequency (RF) transmission and	
			reception systems	
4	Edit	Elective	Correct title of UEENEEH129A - Fault find and	60
			repair navigation systems	
4	Edit	Elective	Correct title of UEENEEH137A - Program and	40
			commission commercial video/audio systems	
4	Edit	Elective	Correct title of UEENEEH175A - Troubleshooting in	60
'			security system installations	
4	Edit	Elective	Correct title of UEENEEH176A - Diagnose and	60

			rectify faults in electronic display circuits	
4	Edit	Elective	Correct title of UEENEEH177A - Diagnose and	60
			rectify faults in recording and replay equipment	
4	Edit	Elective	Correct title of UEENEEH178A - Diagnose and	60
•			rectify faults in camera circuits and equipment	
4	Edit	Elective	Correct title of UEENEEH179A - Diagnose and	80
'			rectify faults in digital television circuits and	
			apparatus	
4	Edit	Elective	Correct title of UEENEEH180A - Diagnose and	80
•			rectify faults in digital transmission circuits and	
			systems	

### **Description**

#### **Scope**

This qualification provides competencies to select, install, commission, fault find and maintain radio and dedicated telecommunications networks in rail systems.

### **Pathways Information**

Not applicable.

### **Licensing/Regulatory Information**

Not applicable.

### **Entry Requirements**

Not applicable.

### **Employability Skills Summary**

### **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 560 points in accordance with the Elective Competency Standard Units table below.

Core Competency All Core competen	Standard Units cy standard units to be achieved	Weighting Points
UEENEEE038B	Participate in development and follow a personal competency development plan	20
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
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications	40
UEENEEE117A	Implement and monitor energy sector OHS policies and procedures	20
UEENEEE124A	Compile and produce an energy sector detailed report	60
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20
UEENEEH102A	Repairs basic electronic apparatus faults by replacement of components	40
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
UEENEEH138A	Fault find and repair complex power supplies	40
UEENEEH139A	Troubleshoot basic amplifier circuits	40
UEENEEK145A	Implement and monitor energy sector environmental and sustainable policies and procedures	20
Total points in co	re	720

### **Elective Competency Standard Units**

Complete Elective units to achieve a total of weighting of 560 points from the following groups:

Grou	Group		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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	220
В	Qualification Elective Units	0	340
С	Qualification Elective Units You may select all your elective units from this Group	220	560

Group A – Import	Group A – Imported and Common Elective Units Weighting		
You may complete	units to a maximum weighting of 220	Points	
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	
UEENEED101A	Use computer applications relevant to a workplace	20	
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20	
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20	
CPCCOHS1001A	Work safely in the construction industry	10	
HLTAID001	Provide cardiopulmonary resuscitation	10	
	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 4. If units have not being assigned a weighting by the relevant	Up to 220 points	

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	

Group B – Qualifica	Weighting	
You may complete u	Points	
UEENEED104A	Use engineering applications software on personal	40
CEEIVEEDIOIII	computers	
UEENEEF102A	Install and maintain cabling for multiple access to	120
CEEIVEEI 10211	telecommunication services	
UEENEEF104A	Install and modify performance data	40
CEETVEETTOTT	communication copper cabling	
UEENEEF105A	Install and modify optical fibre performance data	40
	communication cabling	
UEENEEF107A	Set up and configure the wireless capabilities of	40
	communications and data storage devices	
UEENEEF108A	Select and arrange equipment for wireless	60
	communication networks	
UEENEEF109A	Install and connect data and voice communication	40
	equipment	
UEENEEF110A	Select and arrange data and voice equipment for	40
	local area networks	
UEENEEH115A	Develop software solutions for microcontroller	60
	based systems	

Group C - Qualifica	Group C – Qualification Elective Units	
You must complete u	nits to a minimum weighting of 220	Points
You may select all yo	our elective units from this Group	
UEENEEH127A	Set up and adjust commercial radio frequency (RF)	60
	transmission and reception systems	
UEENEEH129A	Fault find and repair navigation systems	60
UEENEEH137A	Program and commission commercial video/audio	40
CEETVEETTISTI	systems	
UEENEEH175A	Troubleshooting in security system installations	60
UEENEEH176A	Diagnose and rectify faults in electronic display	60

	circuits	
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

#### **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.

### END OF QUALIFICATION

### **Custom Content Section**

### **UEE41911 Certificate IV in Electrical - Renewable Energy**

Modification History					
Releas e	Action	Core/Elective	Details	Points	
2	Edit		Edit Name to reflect correct Unit title UEENEED104A Use engineering applications software on personal computers	40	
2	Update	Group A	HLTCPR211A Perform CPR	10	
3	Edit	Core	Edit Name to reflect correct Unit title UEENEEK145A Implement and monitor energy sector environmental and sustainable policies and procedures	20	
4	Update	Elective	HLTAID001 - Provide cardiopulmonary resuscitation	10	
4	Edit	Core	Correct title of UEENEEE101A - Apply Occupational Health and Safety regulations, codes and practices in the workplace	20	
4	Edit	Core	Correct title of UEENEEE102A - Fabricate, assemble and dismantle utilities industry components	40	
4	Edit	Elective	Correct title of UEENEED101A - Use computer applications relevant to a workplace	20	
4	Edit	Elective	Correct title of UEENEEI116A - Assemble, enter and verify operating instructions in microprocessor equipped devices	20	
4	Edit	Elective	Correct title of UEENEEK110A - Co-ordinate maintenance of renewable energy (RE) apparatus and systems	20	
4	Edit	Elective	Correct title of UEENEEK128A - Solve problems in stand-alone renewable energy systems	60	
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 UEENEEK134A - Install ELV standalone photovoltaic power systems	60	
4	Edit	Elective	Correct title of UEENEEK135A - Design grid	60	

connected photovoltaic power supply systems

4	Edit	Elective	Correct title of UEENEEK137A - Install, set up and	20
			maintain ELV micro-hydro systems rated up to 6.4	
			kW	
4	Edit	Elective	Correct title of UEENEEK143A - Install small wind	20
•			energy conversion systems rated up to 10 kW for	
			ELV stand-alone applications	
4	Edit	Elective	Correct title of UEENEEK144A - Install, configure	40
			and commission LV wind energy conversion systems	
			rated up to 10 kW	
4	Edit	Elective	Correct title of UEENEEK148A - Install, configure	40
			and commission LV grid connected photovoltaic	
			power systems	
4	Edit	Elective	Correct title of UEENEEK153A - Assess energy	40
			loads and uses for energy efficiency in residential,	
			office and retail premises	
4	Edit	Elective	Correct title of UEENEEK154A - Assess energy	40
			loads and uses for energy efficiency in commercial	
			facilities	
4	Edit	Elective	Correct title of UEENEEK155A - Assess energy	40
T			loads and uses for energy efficiency in industrial	
			properties and enterprises	

### **Description**

#### Scope

Select, install, set up, test, fault find, repair and maintain electrical systems and equipment in buildings and premises. It includes ERAC requirements for an 'Electrician's licence' and competencies to select, install, set up, test, fault find, repair and maintain stand alone renewable energy equipment and systems.

### **Pathways Information**

Not applicable.

### **Licensing/Regulatory Information**

### **Entry Requirements**

Not applicable.

### **Employability Skills Summary**

### **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 160 points in accordance with the Elective Competency Standard Units table below.

Note: UEENEEG105A - Those holding an 'Unrestricted Electricians Licence or equivalent issued in an Australian State or Territory meets the requirements of this unit and its prerequisite requirements

_ •	Core Competency Standard Units Weighting		
All Core competer	Points		
UEENEEE038B	Participate in development and follow a personal competency development plan	20	
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	
UEENEEE117A	Implement and monitor energy sector OHS policies and procedures	20	
UEENEEE124A	Compile and produce an energy sector detailed report	60	
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20	
UEENEEG006A	Solve problems in single and three phase low voltage machines	80	
UEENEEG033A	Solve problems in single and three phase low voltage electrical apparatus and circuits	60	
UEENEEG063A	Arrange circuits, control and protection for general electrical installations	40	
UEENEEG101A	Solve problems in electromagnetic devices and related circuits	60	
UEENEEG102A	Solve problems in low voltage a.c. circuits	80	
UEENEEG103A	Install low voltage wiring and accessories	20	

UEENEEG104A	Install appliances, switchgear and associated accessories	20
CELIVEEGIOIA	for low voltage electrical installations	
UEENEEG105A	Verify compliance and functionality of low voltage	40
CLEIVEEGIOSII	general electrical installations	
UEENEEG106A	Terminate cables, cords and accessories for low voltage	40
CLERCECTOOT	circuits	
UEENEEG107A	Select wiring systems and cables for low voltage general	60
CEERCEEGIOTII	electrical installations	
UEENEEG108A	Trouble-shoot and repair faults in low voltage electrical	40
0221(22010011	apparatus and circuits	
UEENEEG109A	Develop and connect electrical control circuits	80
UEENEEK123A	Carry out basic repairs to renewable energy apparatus	80
UEENEEK125A	Solve basic problems in photovoltaic energy apparatus	20
OLDI (EDITIZOTI	and systems	
UEENEEK127A	Diagnose and rectify faults in renewable energy control	60
0221(221112711	systems	
UEENEEK145A	Implement and monitor energy sector environmental and	20
	sustainable policies and procedures	
Total points in co	1120	

### **Elective Competency Standard Units**

Complete Elective units to achieve a total of weighting of 160 points from the following groups:

Grou	Group		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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	50
В	<b>Qualification Elective Units</b>	0	120
С	Qualification Elective Units You may select all your elective units from this Group	40	160

Group A – Imported and Common Elective Units	Weighting
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You may complete	Points	
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
UEENEED101A	Use computer applications relevant to a workplace	20
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20
CPCCOHS1001A	Work safely in the construction industry	10
HLTAID001	Provide cardiopulmonary resuscitation	10
	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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	Up to 50 points
	Note: For further information see Application of the NQC Flexibility Formula, UEE11 Electrotechnology Training Package, Version 1, Volume 1 Qualification Framework	

Group B – Qualific	Weighting Points		
You may complete	You may complete units to a maximum weighting of 120		
UEENEED104A	Use engineering applications software on personal computers	40	
UEENEEG171A	Install, set up and commission interval metering	20	
UEENEEI116A	Assemble, enter and verify operating instructions in microprocessor equipped devices	20	
UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers	60	
UEENEEK101A	Maintain safety and tidiness of remote area power supply systems	20	
UEENEEK102A	Work safely with remote area power supply systems	20	
UEENEEK124A	Solve basic problems in micro hydro systems	20	
UEENEEK128A	Solve problems in stand-alone renewable energy systems	60	
UEENEEK130A	Solve problems in wind energy conversion systems rated up to 10 kW	60	
UEENEEK134A	Install ELV stand-alone photovoltaic power systems	60	
UEENEEK136A	Install, configure and commission LV micro-hydro systems rated up to 6.4 kW	20	
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	
UEENEEK144A	Install, configure and commission LV wind energy conversion systems rated up to 10 kW	40	
UEENEEK148A	Install, configure and commission LV grid connected photovoltaic power systems	40	

UEENEEK148A	Install, configure and commission LV grid	40
	connected photovoltaic power systems	
Group C - Qualific	ation Elective Units	Weighting
You must complete	units to a minimum weighting of 40	Points
You may select all y	our elective units from this Group	
UEENEEG076A	Install and replace low voltage current transformer	20
CELITELGOTOIT	metering	
UEENEEK110A	Co-ordinate maintenance of renewable energy (RE)	20
CELIVELITION	apparatus and systems	
UEENEEK135A	Design grid connected photovoltaic power supply	60
CEETVEERTSST	systems	

UEENEEK152A	Develop strategies to address sustainability issues	20
ODEN EER 1321	for electrical installations	
UEENEEK153A	Assess energy loads and uses for energy efficiency	40
	in residential, office and retail premises	
UEENEEK154A	Assess energy loads and uses for energy efficiency	40
	in commercial facilities	
UEENEEK155A	Assess energy loads and uses for energy efficiency	40
	in industrial properties and enterprises	

#### 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.

#### END OF QUALIFICATION

### **Custom Content Section**

### **UEE42011** Certificate IV in Electrical - Photovoltaic systems

### **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Edit		Edit Name to reflect correct Unit title	40
			UEENEED104A Use engineering applications	
			software on personal computers	
2	Update	Group A	HLTCPR211A Perform CPR	10

			Edit Name to reflect correct Unit title	
2	Edit	Group C	UEENEEI151A Develop, enter and verify word and	60
3	Eart	Group C	analogue control programs for programmable logic	
			controllers.	
3	Edit	Core	Edit Name to reflect correct Unit title	20
			UEENEEK145A Implement and monitor energy	
			sector environmental and sustainable policies and	
			procedures	

1	4 Update	Elective	HLTAID001 - Provide cardiopulmonary	10
4	Opuate	Elective	resuscitation	
4	Edit	Core	Correct title of UEENEEE101A - Apply	20
			Occupational Health and Safety regulations, codes	
			and practices in the workplace	
4	Edit	Core	Correct title of UEENEEE102A - Fabricate,	40
			assemble and dismantle utilities industry components	
4	Edit	Core	Correct title of UEENEEK135A - Design grid	60
			connected photovoltaic power supply systems	
4	Edit	Core	Correct title of UEENEEK148A - Install, configure	40
			and commission LV grid connected photovoltaic	
			power systems	
4	Edit	Elective	Correct title of UEENEEC004B - Prepare	40
			specifications for the supply of materials and	
			equipment for electrotechnology projects	
4	Edit	Elective	Correct title of UEENEED101A - Use computer	20
			applications relevant to a workplace	
4	Edit	Elective	Correct title of UEENEEE192A - Produce detailed	60
			electrotechnology /utilities drawings using computer	
			aided design equipment and software	

	Edit	Elective	Correct title of UEENEEG125A - Plan electrical	40
4	Lan	Licetive		40
			installations with a low voltage demand up to 400 A	
			per phase	
4	Edit	Elective	Correct title of UEENEEG172A - Investigate and	60
			report on electrical incidents and causes	
4	Edit	Elective	Correct title of UEENEEI116A - Assemble, enter	20
'			and verify operating instructions in microprocessor	
			equipped devices	
4	Edit	Elective	Correct title of UEENEEK128A - Solve problems in	60
-			stand-alone renewable energy systems	
4	Edit	Elective	Correct title of UEENEEK130A - Solve problems in	60
-			wind energy conversion systems rated up to 10 kW	
4	Edit	Elective	Correct title of UEENEEK134A - Install ELV stand-	60
'			alone photovoltaic power systems	
4	Edit	Elective	Correct title of UEENEEK137A - Install, set up and	20
-			maintain ELV micro-hydro systems rated up to 6.4	
			kW	
4	Edit	Elective	Correct title of UEENEEK143A - Install small wind	20
•			energy conversion systems rated up to 10 kW for	
			ELV stand-alone applications	
4	Edit	Elective	Correct title of UEENEEK144A - Install, configure	40
-			and commission LV wind energy conversion systems	
			rated up to 10 kW	

### **Description**

#### Scope

Select, install, set up, test, fault find, repair and maintain electrical systems and equipment in buildings and premises. It includes ERAC requirements for an 'Electrician's licence' and competencies to select, install, set up, test, fault find, repair and maintain photovoltaic systems and associated equipment

### **Pathways Information**

Not applicable.

### **Licensing/Regulatory Information**

### **Entry Requirements**

Not applicable.

### **Employability Skills Summary**

### **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 180 points in accordance with the Elective Competency Standard Units table below.

Note: UEENEEG105A - Those holding an 'Unrestricted Electricians Licence or equivalent issued in an Australian State or Territory meets the requirements of this unit and its prerequisite requirements.

Core Competency Standard Units Weighting				
All Core competen	cy standard units to be achieved	Points		
UEENEEE038B	Participate in development and follow a personal competency development plan	20		
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		
UEENEEE117A	Implement and monitor energy sector OHS policies and procedures	20		
UEENEEE124A	Compile and produce an energy sector detailed report	60		
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20		
UEENEEG006A	Solve problems in single and three phase low voltage machines	80		
UEENEEG033A	Solve problems in single and three phase low voltage electrical apparatus and circuits	60		
UEENEEG063A	Arrange circuits, control and protection for general electrical installations	40		
UEENEEG101A	Solve problems in electromagnetic devices and related circuits	60		
UEENEEG102A	Solve problems in low voltage a.c. circuits	80		
UEENEEG103A	Install low voltage wiring and accessories	20		

UEENEEG104A	Install appliances, switchgear and associated	20
UEENEEG105A	accessories for low voltage electrical installations	
	Verify compliance and functionality of low voltage	40
UEENEEG106A	general electrical installations	
	Terminate cables, cords and accessories for low	40
UEENEEG107A	voltage circuits	
	Select wiring systems and cables for low voltage	60
UEENEEG108A	general electrical installations	
	Trouble-shoot and repair faults in low voltage	40
CLEILEGIOOM	electrical apparatus and circuits	
UEENEEG109A	Develop and connect electrical control circuits	80
UEENEEG171A	Install, set up and commission interval metering	20
UEENEEK125A	Solve basic problems in photovoltaic energy	20
	apparatus and systems	
UEENEEK135A	Design grid connected photovoltaic power supply	60
UEENEEK145A	systems	
	Implement and monitor energy sector environmental	20
UEENEEK148A	and sustainable policies and procedures	
	Install, configure and commission LV grid connected	40
	photovoltaic power systems	
Total points in cor	1100	

### **Elective Competency Standard Units**

Complete Elective units to achieve a total of weighting of 180 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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	90
В	<b>Qualification Elective Units</b>	0	90
C	Qualification Elective Units You may select all your elective units from this Group	90	180

Group A – Import You may complete	Weighting Points	
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
UEENEED101A	Use computer applications relevant to a workplace	20
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20
CPCCOHS1001A	Work safely in the construction industry	10
HLTAID001	Provide cardiopulmonary resuscitation	10
	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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	Up to 90 points
	Note: For further information see Application of the NQC Flexibility Formula, UEE11 Electrotechnology Training Package, Version 1, Volume 1 Qualification Framework	

Group B – Qualific	Weighting Points		
You may complete i	You may complete units to a maximum weighting of 90		
UEENEED104A	Use engineering applications software on personal computers	40	
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	
UEENEEG120A	Select and arrange equipment for special LV electrical installations	60	
UEENEEI116A	Assemble, enter and verify operating instructions in microprocessor equipped devices	20	
UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers	60	
UEENEEK123A	Carry out basic repairs to renewable energy apparatus	80	
UEENEEK124A	Solve basic problems in micro hydro systems	20	
UEENEEK127A	Diagnose and rectify faults in renewable energy control systems	60	
UEENEEK128A	Solve problems in stand-alone renewable energy systems apparatus and systems	60	
UEENEEK130A	Solve problems in wind energy conversion systems rated up to 10 kW	60	
UEENEEK134A	Install ELV stand-alone photovoltaic power systems	60	
UEENEEK136A	Install, configure and commission LV micro-hydro systems rated up to 6.4 kW	20	
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	
UEENEEK144A	Install, configure and commission LV wind energy conversion systems rated up to 10 kW	40	

Group C – Qualification Elective Units	Weighting
You must complete units to a minimum weighting of 90	Points
You may select all your elective units from this Group	

UEENEEC004B	Prepare specifications for the supply of materials and equipment for electrotechnology projects	40
UEENEEC005B	Estimate electrotechnology projects	40
UEENEEE192A	Produce detailed electrotechnology /utilities drawings using computer aided design equipment and software	60
UEENEEG076A	Install and replace low voltage current transformer metering	20
UEENEEG121A	Verify compliance and functionality of special LV electrical installations	40
UEENEEG122A	Conduct compliance inspection of single phase LV electrical installations	60
UEENEEG123A	Conduct compliance inspection of LV electrical installations with demand exceeding 100 A per phase	40
UEENEEG124A	Conduct compliance inspection of special LV electrical installations	60
UEENEEG125A	Plan electrical installations with a low voltage demand up to 400 A per phase	40
UEENEEG172A	Investigate and report on electrical incidents and causes	60
UEENEEG175A	Develop compliance policies and plans to conduct a electrical contracting business	80
UEENEEG179A	Develop detailed electrical drawings	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
UEENEEK152A	Develop strategies to address sustainability issues for electrical installations	20

#### 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.

### **END OF QUALIFICATION**

# **Custom Content Section**

# **UEE42111 Certificate IV in Electrotechnology - Electrical Contracting**

# **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
3	Edit	Core	Edit Name to reflect correct Unit title	20
			UEENEEK145A Implement and monitor energy	
			sector environmental and sustainable policies and	
			procedures	

4	Undata	Elective	HLTAID001 - Provide cardiopulmonary	10
4	Update	Elective	resuscitation	10
4	Edit	Core	Correct title of UEENEEE101A - Apply	20
			Occupational Health and Safety regulations, codes	
			and practices in the workplace	
4	Edit	Core	Correct title of UEENEEE102A - Fabricate,	40
			assemble and dismantle utilities industry components	
4	Edit	Elective	Correct title of UEENEED101A - Use computer	20
			applications relevant to a workplace	
4	Edit	Elective	Correct title of UEENEEG113A - Install and	60
			maintain emergency safety systems	
4	Edit	Elective	Correct title of UEENEEG120A - Select and arrange	60
			equipment for special LV electrical installations	
4	Edit	Elective	Correct title of UEENEEG125A - Plan electrical	40
•			installations with a low voltage demand up to 400 A	
			per phase	
4	Edit	Elective	Correct title of UEENEEG128A - Plan low voltage	40
•			switchboard and control panel layouts	
4	Edit	Elective	Correct title of UEENEEG132A - Carry out low	60
ļ ·			voltage electrical field testing and report findings	
4	Edit	Elective	Correct title of UEENEEG172A - Investigate and	60
			report on electrical incidents and causes	
4	Edit	Elective	Correct title of UEENEEG177A - Select low voltage	40
ļ ·			power factor correction equipment	
4	Edit	Elective	Correct title of UEENEEG185A - Select effective	60
•			and efficient light sources and luminaries for given	
			locations and designs	

### **Description**

#### **Scope**

This qualification provides competencies to set up and manage an electrical contracting business. It includes competencies required by regulations for an electrical contracting licence. It includes ERAC requirements for an 'Electrician's licence' and competencies to select, install, set up, test, fault find, repair and maintain photovoltaic systems and associated equipment.

### **Pathways Information**

Not applicable.

# **Licensing/Regulatory Information**

Not applicable.

# **Entry Requirements**

Not applicable.

# **Employability Skills Summary**

# **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 240 points in accordance with the Elective Competency Standard Units table below.

Note: UEENEEG105A - Those holding an 'Unrestricted Electricians Licence or equivalent issued in an Australian State or Territory meets the requirements of this unit and its prerequisite requirements.

Core Competency Standard Units Weighting			
All Core competer	Points		
UEENEEE038B	Participate in development and follow a personal competency development plan	20	
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	
UEENEEE117A	Implement and monitor energy sector OHS policies and procedures	20	
UEENEEE124A	Compile and produce an energy sector detailed report	60	
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20	
UEENEEG006A	Solve problems in single and three phase low voltage machines	80	
UEENEEG033A	Solve problems in single and three phase low voltage electrical apparatus and circuits	60	
UEENEEG063A	Arrange circuits, control and protection for general electrical installations	40	
UEENEEG101A	Solve problems in electromagnetic devices and related circuits	60	
UEENEEG102A	Solve problems in low voltage a.c. circuits	80	
UEENEEG103A	Install low voltage wiring and accessories	20	

UEENEEG104A	Install appliances, switchgear and associated	20
	accessories for low voltage electrical installations	
UEENEEG105A	Verify compliance and functionality of low voltage	40
	general electrical installations	
UEENEEG106A	Terminate cables, cords and accessories for low voltage	40
CLEIVELGIOOFI	circuits	
UEENEEG107A	Select wiring systems and cables for low voltage	60
CEETTEETOTT	general electrical installations	
UEENEEG108A	Trouble-shoot and repair faults in low voltage electrical	40
CZZI(ZZGTGGIT	apparatus and circuits	
UEENEEG109A	Develop and connect electrical control circuits	80
UEENEEK145A	Implement and monitor energy sector environmental	20
	and sustainable policies and procedures	
Total points in co	960	

# **Elective Competency Standard Units**

Complete Elective units to achieve a total of weighting of 240 points from the following groups:

Grou	Group		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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	120
В	<b>Qualification Elective Units</b>	0	120
C	Qualification Elective Units You may select all your elective units from this Group	120	240

Group A – Importory You may complete	Weighting Points	
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
UEENEED101A	Use basic computer applications relevant to a workplace	20
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20
CPCCOHS1001A	Work safely in the construction industry	10
HLTAID001	Provide cardiopulmonary resuscitation	10
	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 4. 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 120 points

Group B – Qualific You may complete u	Weighting Points	
UEENEEG113A	Install and maintain emergency safety systems	60
UEENEEG120A	Select and arrange equipment for special LV electrical installations	60
UEENEEG171A	Install, set up and commission interval metering	20
UEENEEG181A	Provide advice on effective and energy efficient lighting products	20
UEENEEG182A	Supply effective and efficient lighting products for domestic and small commercial applications	40
UEENEEG183A	Provide advice on the application of energy efficient lighting for ambient and aesthetic effect	20
UEENEEG189A	Install and maintain emergency lighting systems	40
UEENEED104A	Use engineering applications software on personal computers	40
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

Group C – Qualification Elective Units Weigh				
You must complete u	Points			
You may select all yo	our elective units from this Group			
UEENEEC004B	Prepare specifications for the supply of materials	40		
CEEIVEECOOIB	and equipment for electrotechnology projects			
UEENEEC005B	Estimate electrotechnology projects	40		
UEENEEC009B	Provide quotations for inspection and compliance	20		
CELIVELECOOPE	audit services			
UEENEEG076A	Install and replace low voltage current transformer	20		
CEEIVEEGOTOIT	metering			
UEENEEG121A	Verify compliance and functionality of special LV	40		
CEEIVEEGIZIII	electrical installations			
UEENEEG122A	Conduct compliance inspection of single phase LV	60		
CEEI\EEG12211	electrical installations			
UEENEEG123A	Conduct compliance inspection of LV electrical	40		
CEEIVEEG12371	installations with demand exceeding 100 A per			
	phase			
UEENEEG124A	UEENEEG124A Conduct compliance inspection of special LV			

	electrical installations			
UEENEEG125A	Plan electrical installations with a low voltage demand up to 400 A per phase	40		
UEENEEG128A	UEENEEG128A Plan low voltage switchboard and control panel layouts			
UEENEEG132A	UEENEEG132A Carry out low voltage electrical field testing and report findings			
UEENEEG162A	Set up and place LV electrical apparatus and associated circuits into service	40		
UEENEEG172A	Investigate and report on electrical incidents and causes	60		
UEENEEG175A	UEENEEG175A Develop compliance policies and plans to conduct a electrical contracting business			
UEENEEG177A Select low voltage power factor correction equipment		40		
UEENEEG179A	Develop detailed electrical drawings	60		
UEENEEG184A	Provide photometric data for illumination system design	60		
UEENEEG185A	Select effective and efficient light sources and luminaries for given locations and designs	60		
UEENEEG186A	Design affective and afficient lighting for			
UEENEEG188A Prepare quotations for the supply of effective and efficient lighting products for lighting projects		20		
UEENEEE192A	Produce detailed electrotechnology /utilities drawings using computer aided design equipment and software	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.

# END OF QUALIFICATION

# **Custom Content Section**

# **UEE42211 Certificate IV in Instrumentation and Control**

# **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Edit		Edit Name to reflect correct Unit title	40
			UEENEED104A Use engineering applications	
			software on personal computers	
2	Edit		Edit Name to Reflect correct Unit Title	
			UEENEEI124A Fault find and repair analogue	
			circuits and components in electronic control systems	
2	Update	Group A	HLTCPR211A Perform CPR	10

			Edit Name to reflect correct Unit title	
3	Edit	Core	UEENEEI102A Solve problems in pressure	40
			measurement components and systems	
			Edit Name to reflect correct Unit title	
3	Edit	Core	UEENEEI103A Solve problems in density_level	40
			measurement components and systems	
			Edit Name to reflect correct Unit title	
3	Edit	Core	UEENEEI104A Solve problems in flow	40
			measurement components and systems	
			Edit Name to reflect correct Unit title	
3	Edit	Core	UEENEEI105A Solve problems in temperature	40
			measurement components and systems	
2	Edit	Core	Edit Name to reflect correct Unit title	40
3	Edit	Edit Cole	UEENEEI106A Set up and adjust PID control loops	
			Edit Name to reflect correct Unit title	
3	Edit	Core	UEENEEI110A Set up and adjust advanced PID	40
			process control loops	
			Edit Name to reflect correct Unit title	
2	Edit	Group C	UEENEEI151A Develop, enter and verify word and	60
3	Lan	Group C	analogue control programs for programmable logic	
			controllers.	
3	Edit	Core	Edit Name to reflect correct Unit title	20
			UEENEEK145A Implement and monitor energy	
			sector environmental and sustainable policies and	
			procedures	
3	Edit	Group B	Edit Name to reflect correct Unit title	60

UEENEEI114A Trouble shoot process control	
systems	

4	Update	Elective	HLTAID001 - Provide cardiopulmonary	10
4	Opuate	Elective	resuscitation	
4	Edit	Core	Correct title of UEENEEE101A - Apply	20
•			Occupational Health and Safety regulations, codes	
			and practices in the workplace	
4	Edit	Core	Correct title of UEENEEE102A - Fabricate,	40
т			assemble and dismantle utilities industry components	
4	Edit	Core	Correct title of UEENEEE119A - Solve problems in	40
•			multiple path extra low voltage (ELV) a.c. circuits	
4	Edit	Core	Correct title of UEENEEI101A - Use instrumentation	40
7			drawings, specification, standards and equipment	
			manuals	
4	Edit	Core	Correct title of UEENEEI103A - Solve problems in	40
7			density/level measurement components and systems	
4	Edit	Core	Correct title of UEENEEI107A - Install	20
т			instrumentation and control cabling and tubing	
4	Edit	Core	Correct title of UEENEEI108A - Install	20
7			instrumentation and control apparatus and associated	
			equipment	
4	Edit	Core	Correct title of UEENEEP013A - Disconnect -	60
7			reconnect control devices connected to low voltage	
			installation wiring	
4	Edit	Elective	Correct title of UEENEED101A - Use computer	20
7			applications relevant to a workplace	
4	Edit	Elective	Correct title of UEENEEH102A - Repairs basic	40
7			electronic apparatus faults by replacement of	
			components	
4	Edit	Elective	Correct title of UEENEEI117A - Calibrate, adjust	40
7			and test measuring instruments	
4	Edit	Elective	Correct title of UEENEEI121A - Trouble shoot in	40
7			measuring and analysis systems	
4	Edit	Elective	Correct title of UEENEEI122A - Assist in	40
7			commissioning process and instrumentation control	
			systems	
4	Edit	Elective	Correct title of UEENEEI126A - Provide solutions to	80
т			pneumatic-hydraulic system operations	
4	Edit	Elective	Correct title of UEENEEI148A - Solve problems in	60

# **Description**

### **Scope**

This qualification provides competencies to select, install, set up, test, fault find, repair, maintain and commission systems and devices for measurement and recording of physical/chemical phenomenon and related process control systems.

# **Pathways Information**

Not applicable.

# **Licensing/Regulatory Information**

Not applicable.

# **Entry Requirements**

Not applicable.

# **Employability Skills Summary**

# **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 200 points in accordance with the Elective Competency Standard Units table below.

Note: UEENEEI112A - Those holding an 'Certificate III in Instrumentation and Control trade qualification or equivalent" meet the requirements of this unit and its pre-requisite requirements.

Core Competency Standard Units Weighti				
All Core competency	Points			
UEENEEE038B	Participate in development and follow a personal competency development plan	20		
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	UEENEEE107A  Use drawings, diagrams, schedules, standards, codes and specifications			
UEENEEE117A Implement and monitor energy sector OHS policies and procedures		20		
		40		
UEENEE124A Compile and produce an energy sector detailed report		60		
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20		
UEENEEI101A	Use instrumentation drawings, specification, standards and equipment manuals	40		
UEENEEI102A	Solve problems in pressure measurement			
UEENEEI103A	Solva problems in density/level measurement			
UEENEEI104A	Solve problems in flow measurement components and systems	40		

UEENEEI105A	40			
UEENEEI106A	Set up and adjust PID control loops	40		
UEENEEI107A	UEENEEI107A Install instrumentation and control cabling and tubing			
UEENEEI108A	Install instrumentation and control apparatus and associated equipment	20		
UEENEEI110A	Set up and adjust advanced PID process control loops	40		
UEENEEI111A	Find and rectify faults in process final control elements	40		
UEENEEI112A	UEENEEI112A Verify compliance and functionality of instrumentation and control installations			
UEENEEI113A	Setup and configure human-machine interface (HMI) and industrial networks	60		
UEENEEI124A	Fault find and renair analogue circuits and			
UEENEEI139A	Diagnose and rectify faults in digital controls			
UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers	60		
UEENEEK145A	20			
UEENEEP013A	60			
<b>Total points in core</b>		1080		

# **Elective Competency Standard Units**

Complete Elective units to achieve a total of weighting of 200 points from the following groups:

Group	Minimum	Maximum
•	points	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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	60
В	<b>Qualification Elective Units</b>	0	100
C	Qualification Elective Units You may select all your elective units from this Group	100	200

Group A – Import	Weighting			
You may complete	Points			
UEENEEC001B	Maintain documentation	20		
UEENEEC002B	JEENEEC002B Source and purchase material/parts for installation or service jobs			
UEENEEC003B	Provide quotations for installation or service jobs	20		
UEENEEC010B	Deliver a service to customers	20		
UEENEED101A	Use computer applications relevant to a workplace	20		
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20		
UEENEEE020B Provide basic instruction in the use of electrotechnology apparatus		20		
CPCCOHS1001A Work safely in the construction industry		10		
HLTAID001	Provide cardiopulmonary resuscitation	10		
	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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	Up to 60 points		
	Note: For further information see Application of the NQC Flexibility Formula, UEE11 Electrotechnology Training Package, Version 1, Volume 1 Qualification Framework			

Group B – Qualific	Weighting Points	
You may complete	units to a maximum weighting of 100	Tomes
UEENEED104A	Use engineering applications software on personal computers	40
UEENEEH102A	Repairs basic electronic apparatus faults by replacement of components	40
UEENEEH111A	Troubleshoot single phase input d.c. power supplies	40
UEENEEH112A	Troubleshoot digital sub-systems	80
UEENEEI114A	Trouble shoot process control systems	60
UEENEEI117A	Calibrate, adjust and test measuring instruments	40
UEENEEI118A	Set up weighting measuring and control instruments	20
UEENEEM019A	Attend to breakdowns in hazardous areas — coal mining	20
UEENEEM020A	Attend to breakdowns in hazardous areas — gas atmospheres	20
UEENEEM021A	Attend to breakdowns in hazardous areas — dust atmospheres	20
UEENEEM022A	Attend to breakdowns in hazardous areas — pressurisation	20
UEENEEM023A	Install explosion-protected equipment and wiring systems — coal mining	60
UEENEEM024A	Install explosion-protected equipment and wiring systems — gas atmospheres	60
UEENEEM025A	Install explosion-protected equipment and wiring systems — dust atmospheres	60
UEENEEM026A	Install explosion-protected equipment and wiring systems — pressurisation	60
UEENEEM027A	Maintain equipment in hazardous areas — coal mining	60
UEENEEM028A	Maintain equipment in hazardous areas — gas atmospheres	60
UEENEEM029A	Maintain equipment in hazardous areas — dust atmospheres	60
UEENEEM030A	Maintain equipment in hazardous areas — pressurisation	60
UEENEEM076A	Use and maintain the integrity of a portable gas detection device	20

UEENEEM077A	Install and maintain the integrity of fixed gas detection equipment	20
UEENEEM080A	Report on the integrity of explosion-protected	20
	equipment in a hazardous area	

Group C – Qualific	cation Elective Units	Weighting
You must complete	Points	
You may select all y		
UEENEEC005B	Estimate electrotechnology projects	40
UEENEEI121A	Trouble shoot in measuring and analysis systems	40
UEENEEI122A	Assist in commissioning process and instrumentation control systems	40
UEENEEI125A	Provide solutions to fluid circuit operations	60
UEENEEI126A	Provide solutions to pneumatic-hydraulic system operations	80
UEENEEI148A	Solve problems in single phase electronic power control circuits	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
UEENEEI155A	Develop structured programs to control external devices	40
UEENEEM078A	Manage compliance of hazardous areas	20
UEENEEM038A	Conduct testing of hazardous areas installations — coal mining	40
UEENEEM039A	Conduct testing of hazardous areas installations — gas atmospheres	40
UEENEEM040A	Conduct testing of hazardous areas installations — dust atmospheres	40
UEENEEM041A	Conduct testing of hazardous area installations — pressurisation	40
UEENEEM042A	Conduct visual inspection of hazardous areas installations	40
UEENEEM043A	Conduct detailed inspection of hazardous areas installations — coal mining	40
UEENEEM044A	Conduct detailed inspection of hazardous areas installations — gas atmospheres	40

UEENEEM045A	Conduct detailed inspection of hazardous areas	40
	installations — dust atmospheres	
UEENEEM046A	Conduct detailed inspection of hazardous areas	40
CLEIVEDIVIO IOI I	installations — pressurisation	

#### 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.

### **END OF QUALIFICATION**

### **Custom Content Section**

# **UEE42611 Certificate IV in Hazardous areas - Electrical**

# **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Update	Group A	HLTCPR211A Perform CPR	10

		_	Edit Name to reflect correct Unit title UEENEEK145A Implement and monitor energy	20
3	Edit	Core.	sector environmental and sustainable policies and	20
			procedures	

4	Update	Elective	HLTAID001 - Provide cardiopulmonary	10
4	Opuaic	Liective	resuscitation	
4	Edit	Core	Correct title of UEENEEE101A - Apply	20
			Occupational Health and Safety regulations, codes	
			and practices in the workplace	
4	Edit	Core	Correct title of UEENEEE102A - Fabricate,	40
			assemble and dismantle utilities industry components	
4	Edit	Core	Correct title of UEENEEM080A - Report on the	20
'			integrity of explosion-protected equipment in a	
			hazardous area	
4	Edit	Elective	Correct title of UEENEED101A - Use computer	20
·			applications relevant to a workplace	

# **Description**

### **Scope**

This qualification provides competencies to supervise selection, installation, commissioning maintenance and testing of explosion-protected equipment and systems for control and monitoring of plant and processes. The qualification provides competencies in working with explosion protections techniques with elections in how they apply to coal mining, gas and dust atmospheres. It includes ERAC requirements for an 'Electrician's licence' and competencies to select, install, set up, test, fault find, repair and maintain stand alone renewable energy equipment and systems.

### **Pathways Information**

Not applicable.

# **Licensing/Regulatory Information**

Not applicable.

## **Entry Requirements**

Not applicable.

# **Employability Skills Summary**

# **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 300 points in accordance with the Elective Competency Standard Units table below.

Note: UEENEEG105A - Those holding an 'Unrestricted Electricians Licence or equivalent issued in an Australian State or Territory meets the requirements of this unit and its prerequisite requirements.

Core Competency	y Standard Units	Weighting
All Core competer	Points	
UEENEEE038B	Participate in development and follow a personal competency development plan	20
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
UEENEEE117A	Implement and monitor energy sector OHS policies and procedures	20
UEENEEE124A	Compile and produce an energy sector detailed report	60
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20
UEENEEG006A	Solve problems in single and three phase low voltage machines	80
UEENEEG033A	Solve problems in single and three phase low voltage electrical apparatus and circuits	60
UEENEEG063A	Arrange circuits, control and protection for general electrical installations	40
UEENEEG101A	Solve problems in electromagnetic devices and related circuits	60
UEENEEG102A	Solve problems in low voltage a.c. circuits	80
UEENEEG103A	Install low voltage wiring and accessories	20

UEENEEG104A	Install appliances, switchgear and associated	20
CLEIVELGIONI	accessories for low voltage electrical installations	
UEENEEG105A	Verify compliance and functionality of low voltage	40
CLEIVEEGIOSIA	general electrical installations	
UEENEEG106A	Terminate cables, cords and accessories for low	40
CLEIVEEGIOOIT	voltage circuits	
UEENEEG107A	Select wiring systems and cables for low voltage	60
CLEIVELGIOTI	general electrical installations	
UEENEEG108A	Trouble-shoot and repair faults in low voltage	40
CLEIVEEGIOOII	electrical apparatus and circuits	
UEENEEG109A	Develop and connect electrical control circuits	80
UEENEEK145A	Implement and monitor energy sector environmental	20
CEET(EEIT) 1311	and sustainable policies and procedures	
UEENEEM080A	Report on the integrity of explosion-protected	20
CLEINEUM	equipment in a hazardous area	
Total points in co	re	980

# **Elective Competency Standard Units**

Complete Elective units to achieve a total of weighting of 300 points from the following groups:

Grou	Group		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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	60
В	Qualification Elective Units	0	80
C	Qualification Elective Units  You may select all your elective units from this Group	220	300

Group A – Importory You may complete	Weighting Points	
UEENEEC001B	Maintain documentation	20
UEENEEC002B	Source and purchase material/parts for installation or	20

	service jobs	
UEENEEC003B	Provide quotations for installation or service jobs	20
UEENEEC010B	Deliver a service to customers	20
UEENEED101A	Use computer applications relevant to a workplace	20
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20
CPCCOHS1001A	Work safely in the construction industry	10
HLTAID001	Provide cardiopulmonary resuscitation	10
	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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	Up to 60 points
	Note: For further information see Application of the NQC Flexibility Formula, UEE11 Electrotechnology Training Package, Version 1, Volume 1 Qualification Framework	

Group B – Qualification Elective Units		Weighting Points	
You may complete i	You may complete units to a maximum weighting of 80		
UEENEEM019A	Attend to breakdowns in hazardous areas — coal mining	20	
UEENEEM020A	Attend to breakdowns in hazardous areas — gas atmospheres	20	
UEENEEM021A	Attend to breakdowns in hazardous areas — dust atmospheres	20	
UEENEEM022A	Attend to breakdowns in hazardous areas — pressurisation	20	
UEENEEM023A	Install explosion-protected equipment and wiring systems — coal mining	60	
UEENEEM024A	Install explosion-protected equipment and wiring systems — gas atmospheres	60	
UEENEEM025A	Install explosion-protected equipment and wiring systems — dust atmospheres	60	
UEENEEM026A	Install explosion-protected equipment and wiring systems — pressurisation	60	
UEENEEM027A	Maintain equipment in hazardous areas — coal mining	60	
UEENEEM028A	Maintain equipment in hazardous areas — gas atmospheres	60	
UEENEEM029A	Maintain equipment in hazardous areas — dust atmospheres	60	
UEENEEM030A	Maintain equipment in hazardous areas — pressurisation	60	
UEENEEM031A	Overhaul and repair of explosion-protected equipment — coal mining	60	
UEENEEM032A	Overhaul and repair of explosion-protected equipment — flameproof enclosures	60	
UEENEEM033A	Overhaul and repair of explosion-protected equipment — gas atmospheres	60	
UEENEEM034A	Overhaul and repair of explosion-protected equipment — dust atmospheres	40	
UEENEEM060A	Carry out overhaul and repair of explosion- protected equipment — coal mining	60	
UEENEEM061A	Carry out overhaul and repair of explosion- protected equipment — flameproof enclosures	60	
UEENEEM062A	Carry out overhaul and repair of explosion- protected equipment — gas atmospheres	60	

UEENEEM063A	Carry out overhaul and repair of explosion- protected equipment — dust atmospheres	60
UEENEEM070A	Repair reeling, trailing and flexible cables	60
UEENEEM071A	Test reeling, trailing and flexible cables	60
UEENEEM072A	Inspect and fit plugs/couplers for reeling, trailing and flexible cables	60
UEENEEM073A	Verify compliance of repaired reeling, trailing and flexible cables	60
UEENEEM076A	Use and maintain the integrity of a portable gas detection device	20
UEENEEM077A	Install and maintain the integrity of fixed gas detection equipment	20

Group C – Qualification Elective Units		Weighting
You must complete units to a minimum weighting of 220		Points
You may select all your elective units from this Group		
UEENEEM038A	Conduct testing of hazardous areas installations —	- 40
CEETVEENTOSOFT	coal mining	
UEENEEM039A	Conduct testing of hazardous areas installations —	- 40
CEETVEENIOSTI	gas atmospheres	
UEENEEM040A	Conduct testing of hazardous areas installations —	- 40
CELIVELIVIOTOR	dust atmospheres	
UEENEEM041A	Conduct testing of hazardous area installations —	40
CELIVELIVIOTIT	pressurisation	
UEENEEM042A	Conduct visual inspection of hazardous areas	40
CEEIVEEIVIO+211	installations	
UEENEEM043A	Conduct detailed inspection of hazardous areas	40
CEETVEETVIOTSIT	installations — coal mining	
UEENEEM044A	Conduct detailed inspection of hazardous areas	40
CEETVEENTOTITY	installations — gas atmospheres	
UEENEEM045A	Conduct detailed inspection of hazardous areas	40
CEEI VEEI VIO + 3/1	installations — dust atmospheres	
UEENEEM046A	Conduct detailed inspection of hazardous areas	40
CELIVELIVIOTOR	installations — pressurisation	
UEENEEM047A	Develop and manage maintenance programs for	20
OLLIVLEWIO-77A	hazardous areas electrical equipment — coal	
	mining	
UEENEEM048A	Develop and manage maintenance programs for	20
CEET TEETITO TOTA	hazardous areas electrical equipment — gas	
	atmospheres	

UEENEEM049A	Develop and manage maintenance programs for hazardous areas electrical equipment — dust atmospheres	20
UEENEEM050A	Develop and manage maintenance programs for hazardous areas electrical equipment — pressurisation	20
UEENEEM054A	Plan electrical installations for hazardous areas — gas atmospheres	20
UEENEEM055A	Plan electrical installations for hazardous areas — dust atmospheres	20
UEENEEM056A	Plan electrical installations for hazardous areas — pressurisation	20
UEENEEM074A	Plan electrical installations in hazardous areas — coal mining	20
UEENEEM078A	Manage compliance of hazardous areas	20

### **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.

### **END OF QUALIFICATION**

### **Custom Content Section**

# **UEE42711** Certificate IV in Air-conditioning and Refrigeration Servicing

# **Modification History**

MOGI	iicatio	11 1115tor y		
Releas	Action	Core/Elective	Details	Points
e				
3	Update	Group A	HLTCPR211A Perform CPR	10
	ı			_
4	Edit	Group C	Edit Name to reflect correct Unit title UEENEEI151A Develop, enter and verify word and analogue control programs for programmable logic controllers.	60
5	Update	Elective	HLTAID001 - Provide cardiopulmonary resuscitation	10
5	Edit	Core	Correct title of UEENEEJ110A - Select refrigerant piping, accessories and associated controls	50
5	Edit	Core	Correct title of UEENEEJ153A - Find and rectify faults in motors and associated controls in refrigeration and air conditioning systems	50
5	Edit	Core	Correct title of UEENEEK145A - Implement and monitor energy sector environmental and sustainable policies and procedures	20
5	Edit	Elective	Correct title of UEENEEJ178A - Apply safety awareness and legal requirements for ammonia refrigerant	10

# **Description**

### Scope

This qualification provides competencies in high level fault diagnosis and rectification, commissioning and maintenance of refrigeration systems and equipment that apply to commercial food storage and preservation, air-conditioning, air distribution equipment and/or special applications. It includes regulatory requirements for purchasing and handling refrigerants.

#### Note:

The Ozone Protection and Synthetic Greenhouse Gas Legislation Amendment Bill 2003 apply to this qualification. Prior to planning the delivery of any training and/or assessment activities all legislative and regulatory requirements shall be identified and included.

### **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 180 points in accordance with the Elective Competency Standard Units table below.

Note: UEENEEJ109A - Those holding an 'Certificate III in Refrigeration and Airconditioning trade qualification or equivalent" meet the requirements of this unit and its prerequisite requirements.

<b>Core Competency</b>	Weighting		
All Core competend	All Core competency standard units to be achieved		
UEENEEE038B	Participate in development and follow a personal competency development plan	20	
UEENEEE101A	Apply Occupational Health and Safety regulations, codes and practices in the workplace	20	
UEENEEE102A	Fabricate, assemble and dismantle utilities industry components	40	
UEENEEE103A	Solve problems in ELV single path circuits	40	
UEENEEE105A	Fix and secure electrotechnology equipment	20	
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications	40	
UEENEEE117A	Implement and monitor energy sector OHS policies and procedures	20	
UEENEEE124A	Compile and produce an energy sector detailed report	60	
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20	
UEENEEJ102A	Prepare and connect refrigerant tubing and fittings	30	
UEENEEJ103A	Establish the basic operating conditions of vapour compression systems	60	
UEENEEJ104A	Establish the basic operating conditions of air conditioning systems	20	
UEENEEJ106A	Install refrigerant pipe work, flow controls and accessories	60	
UEENEEJ107A	Install air conditioning and refrigeration systems, major components and associated equipment	80	

Total points in co	re	1100
	Vd.c. supply	
OLENEEF025A	equipment for connection to 1000 Va.c. or 1500	
UEENEEP025A	Attach cords, cables and plugs to electrical	20
UEENEEP024A	Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply	20
UEENEEP017A	Locate and rectify faults in low voltage composite appliances using set procedures	20
UEENEEP012A	Disconnect / reconnect composite appliances connected to low voltage installation wiring	60
UEENEEK145A	Implement and monitor energy sector environmental and sustainable policies and procedures	20
UEENEEJ170A	Diagnose and rectify faults in air conditioning and refrigeration control systems	70
UEENEEJ153A	Find and rectify faults in motors and associated controls in refrigeration and air conditioning systems	50
UEENEEJ113A	Commission air conditioning and refrigeration systems	40
UEENEEJ112A	Diagnose and rectify faults in complex air conditioning/ refrigeration systems	100
UEENEEJ111A	Diagnose and rectify faults in air conditioning and refrigeration systems and components	40
UEENEEJ110A	Select refrigerant piping, accessories and associated controls	50
UEENEEJ109A	Verify functionality and compliance of refrigeration and air conditioning installations	20
UEENEEJ108A	Recover, pressure test, evacuate, charge and leak test refrigerants	60

Elective Competency Standard Units
Complete Elective units to achieve a total of weighting of 180 points from the following groups:

Gro	Groups		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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.		90
В	<b>Qualification Elective Units</b>	0	90
C	Qualification Elective Units  You may select all your elective units from this Group	90	180

Group A – Importo	ed and Common Elective Units	Weighting
You may complete u	units to a maximum weighting of 90	Points
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
UEENEED101A	Use computer applications relevant to a workplace	20
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20
CPCCOHS1001A	Work safely in the construction industry	10
HLTAID001	Provide cardiopulmonary resuscitation	10
	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 4. If units have not being assigned a weighting by the relevant EE-Oz	Up to 90 points

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	

-	ication Elective Units	Weighting Points
You may complete	units to a maximum weighting of 90	
UEENEEI116A	Assemble, enter and verify operating instructions in	20
	microprocessor equipped devices	
UEENEEI150A	Develop, enter and verify discrete control programs	60
	for programmable controllers	
UEENEEJ114A	Resolve problems in hydronic systems	40
UEENEEJ115A	Resolve problems in beverage dispensers	40
UEENEEJ116A	Resolve problems in transport refrigeration systems	20
UEENEEJ117A	Resolve problems in ultra-low temperature	20
UEENEEJ11/A	refrigeration systems	
UEENEEJ118A	Resolve problems in post mix refrigeration systems	20
UEENEEJ119A	Resolve problems in ice making systems	20
UEENEEJ120A	Resolve problems in industrial refrigeration systems	20
	Resolve problems in central plant air conditioning	40
UEENEEJ167A	systems	
	Maintain microbial control of refrigeration and air	20
UEENEEJ168A	conditioning systems	
UEENEEJ171A	Resolve problems in refrigerated beverage vending	20
OEENEEJ1/1A	cabinets	
UEENEEJ174A	Apply safety awareness and legal requirements for	10
OEENEEJ1/4A	hydrocarbon refrigerants	
UEENEEJ175A	Service and repair self contained hydrocarbon air	20
OEENEEJ1/JA	conditioning and refrigeration systems	
UEENEEJ176A	Install and commission hydrocarbon refrigeration	20
OEENEEJ170A	systems, components and associated equipment	
UEENEEJ178A	Apply safety awareness and legal requirements for	10
OEENEEJ176A	ammonia refrigerant	
UEENEEJ179A	Repair and service ammonia refrigeration systems	20
	Install and commission ammonia refrigeration	20
UEENEEJ180A	systems, components and associated equipment	
UEENEEJ182A	Repair and service secondary refrigeration systems	20
	Apply safety awareness and legal requirements for	10
UEENEEJ184A	carbon dioxide refrigerant	
	Repair and service carbon dioxide refrigeration	20
UEENEEJ185A	systems	
	Install and commission carbon dioxide refrigeration	20
UEENEEJ186A	systems, components and associated equipment	

UEENEEJ188A	Repair and service self contained carbon dioxide	20
	refrigeration and heat pump systems	

Group C - Qualific	Weighting	
You must complete	Points	
You may select all y	our elective units from this Group	
UEENEEE110A	Develop and implement energy sector maintenance	60
0221(22211011	programs	
UEENEEI151A	Develop, enter and verify word and analogue control	60
	programs for programmable logic controllers.	
UEENEEI152A	Develop, enter and verify programs in Supervisory	60
CEETVEET13211	Control and Data Acquisition systems	
UEENEEJ121A	Monitor and adjust refrigeration energy management	40
CEETTEETT	systems	
UEENEEJ122A	Diagnose faults in complex HVAC /refrigeration	80
CEETTEESTEET	control systems	
UEENEEJ123A	Commission complex (HVAC) heating, ventilation	80
CEETVEES 12311	and air conditioning systems	
UEENEEJ124A	Commission refrigeration/air conditioning hydronic	80
CEET (EESTE III	systems	
UEENEEJ125A	Commission complex refrigeration systems and	80
CEETIES 12311	equipment	
UEENEEJ126A	Commission complex refrigeration/air conditioning	40
CELINEL 12011	control systems	

- 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.

### **END OF QUALIFICATION**

# **UEE42811 Certificate IV in Air-conditioning Systems Energy Management and Control**

# **Modification History**

Moul	Widdineation History				
Releas	Action	Core/Elective	Details	Points	
e					
3	Update	Group A	HLTCPR211A Perform CPR	10	
4	Edit	Group C	Edit Name to reflect correct Unit title UEENEEI151A Develop, enter and verify word and analogue control programs for programmable logic controllers.	60	
5	Update	Elective	HLTAID001 - Provide cardiopulmonary resuscitation	10	
5	Edit	Core	Correct title of UEENEEJ110A - Select refrigerant piping, accessories and associated controls	50	
5	Edit	Core	Correct title of UEENEEJ153A - Find and rectify faults in motors and associated controls in refrigeration and air conditioning systems	50	
5	Edit	Core	Correct title of UEENEEK145A - Implement and monitor energy sector environmental and sustainable policies and procedures	20	
5	Edit	Elective	Correct title of UEENEED101A - Use computer applications relevant to a workplace	20	

### **Description**

#### Scope

This qualification provides competencies to develop strategies for the reduction of energy in buildings and to recommend changes in the way in which energy is controlled in the building either by the installation of new control equipment or by the modification or re-programming of that existing. It includes regulatory requirements for purchasing and handling refrigerants.

#### Note:

The Ozone Protection and Synthetic Greenhouse Gas Legislation Amendment Bill 2003 apply to this qualification. Prior to planning the delivery of any training and/or assessment activities all legislative and regulatory requirements shall be identified and included.

### **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 160 points in accordance with the Elective Competency Standard Units table below.

Note: UEENEEJ109A - Those holding an 'Certificate III in Refrigeration and Airconditioning trade qualification or equivalent" meet the requirements of this unit and its prerequisite requirements.

<b>Core Competency</b>	Standard Units	Weighting
All Core competen	Points	
UEENEEE117A	UEENEEE117A Implement and monitor energy sector OHS policies and procedures	
UEENEEE124A	Compile and produce an energy sector detailed report	60
UEENEEE038B	Participate in development and follow a personal competency development plan	20
UEENEEE101A	Apply Occupational Health and Safety regulations, codes and practices in the workplace	20
UEENEEE102A	Fabricate, assemble and dismantle utilities industry components	40
UEENEEE103A	Solve problems in ELV single path circuits	40
UEENEEE105A	Fix and secure electrotechnology equipment	20
UEENEEE107A	UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications	
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20
UEENEEJ102A	Prepare and connect refrigerant tubing and fittings	30
UEENEEJ103A	Establish the basic operating conditions of vapour compression systems	60
UEENEEJ104A	Establish the basic operating conditions of air conditioning systems	20
UEENEEJ106A Install refrigerant pipe work, flow controls and accessories		60
UEENEEJ107A	Install air conditioning and refrigeration systems, major components and associated equipment	80
UEENEEJ108A	Recover, pressure test, evacuate, charge and leak	60

	test refrigerants	
UEENEEJ109A	Verify functionality and compliance of	20
CEETTESTOTT	refrigeration and air conditioning installations	
UEENEEJ110A	Select refrigerant piping, accessories and	50
OLLIVLES I TOTA	associated controls	
UEENEEJ111A	Diagnose and rectify faults in air conditioning and	40
CEETTESTITT	refrigeration systems and components	
UEENEEJ113A	Commission air conditioning and refrigeration	40
CEEIVEESTIST	systems	
UEENEEJ136A	Evaluate and report on building services energy	80
CEETVEENTSOIT	management systems	
UEENEEJ153A	Find and rectify faults in motors and associated	50
CEET (EEU 1991 I	controls in refrigeration and air conditioning	
	systems	
UEENEEJ170A	Diagnose and rectify faults in air conditioning and	70
0221 (2201 / 011	refrigeration control systems	
UEENEEJ194A	Solve problems in low voltage refrigeration circuits	40
UEENEEK145A	Implement and monitor energy sector	20
CEEI (EEIXI 1311	environmental and sustainable policies and	
	procedures	
UEENEEP012A	Disconnect / reconnect composite appliances	60
0221 (221 01211	connected to low voltage installation wiring	
UEENEEP017A	Locate and rectify faults in low voltage composite	20
CEEI(EEI 01711	appliances using set procedures	
UEENEEP024A	Attach cords and plugs to electrical equipment for	20
CEEI (EEI 02 III	connection to a single phase 230 Volt supply	
UEENEEP025A	Attach cords, cables and plugs to electrical	20
CEET (EET 023/1	equipment for connection to 1000 Va.c. or 1500	
	Vd.c. supply	
Total points in co	re	1120

# **Elective Competency Standard Units**

Complete Elective units to achieve a total of weighting of 160 points from the following groups:

	Minimum	Maximum
Groups	points	points

	Imported and Common Elective Units		
	Imported units from other training packages and/or state		
	accredited courses can be added to this group, but they		
$\mathbf{A}$	must be selected from qualifications where the unit is first	0	80
	packaged at AQF level 4. If units have not being assigned		
	a weighting by the relevant EE-Oz Industry Technical		
	Advisory Committee, their weighting will be 10 points.		
В	<b>Qualification Elective Units</b>	0	80
	Qualification Elective Units	80	160
C	You may select all your elective units from this Group	00	

Group A – Imported and Common Elective Units				
You may complete units to a maximum weighting of 80				
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		
UEENEED101A	Use computer applications relevant to a workplace	20		
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20		
1 0 1		20		
CPCCOHS1001A	Work safely in the construction industry	10		
HLTAID001	Provide cardiopulmonary resuscitation	10		
	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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	Up to 80 points		
	Note: For further information see Application of the NQC Flexibility Formula, UEE11 Electrotechnology Training Package, Version 1, Volume 1 Qualification Framework			

Group B – Qualifica You may complete us	Weighting Points	
UEENEEI116A	20	
UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers	60
UEENEEJ167A Resolve problems in central plant air conditioning systems		40

Group C - Qualific	Weighting	
You must complete	Points	
You may select all y	our elective units from this Group	
UEENEEE110A	Develop and implement energy sector maintenance	60
	programs	
UEENEEI151A	Develop, enter and verify word and analogue control	60
	programs for programmable logic controllers.	
UEENEEI152A	Develop, enter and verify programs in Supervisory	60
	Control and Data Acquisition systems	
UEENEEJ121A	Monitor and adjust refrigeration energy management	40
	systems	
UEENEEJ122A	Diagnose faults in complex HVAC /refrigeration	80
	control systems	
UEENEEJ123A	Commission complex (HVAC) heating, ventilation	80
0221(22012311	and air conditioning systems	
UEENEEJ124A	Commission refrigeration/air conditioning hydronic	80
	systems	
UEENEEJ125A	Commission complex refrigeration systems and	80
	equipment	
UEENEEJ126A	Commission complex refrigeration/air conditioning	40
0 221 (22012011	control systems	

- 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.

#### **END OF QUALIFICATION**

# **UEE42911** Certificate IV in Refrigeration and Air-conditioning Systems

### **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2	Update	Group A	HLTCPR211A Perform CPR	10

5	Update	Elective	HLTAID001 - Provide cardiopulmonary	10
	Opuate	Elective	resuscitation	
5	Edit	Core	Correct title of UEENEEJ110A - Select refrigerant	50
			piping, accessories and associated controls	
5	Edit	Core	Correct title of UEENEEJ153A - Find and rectify	50
			faults in motors and associated controls in	
			refrigeration and air conditioning systems	
5	Edit	Core	Correct title of UEENEEK145A - Implement and	20
			monitor energy sector environmental and sustainable	
			policies and procedures	
5	Edit	Elective	Correct title of UEENEEJ191A - Select residential	40
			air conditioning system equipment, components and	
			accessories	

# **Description**

#### Scope

This qualification provides the competencies to determine heat loads and select equipment for basic commercial refrigeration or residential air conditioning applications. It includes regulatory requirements for purchasing and handling refrigerants.

#### Note:

- 1. Basic commercial refrigeration includes commercial coldrooms, freezer rooms and cabinets with single a compressor or condensing unit. This does not include large, complex commercial applications or industrial applications.
- 2. Residential air conditioning applications are those covered under the Building Code of Australia's Class 1A Residential Buildings.
- 3. The Ozone Protection and Synthetic Greenhouse Gas Legislation Amendment Bill 2003 apply to this qualification. Prior to planning the delivery of any training and/or assessment activities all legislative and regulatory requirements shall be identified and included.

# **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 50 points in accordance with the Elective Competency Standard Units table below.

Note: UEENEEJ109A - Those holding an 'Certificate III in Refrigeration and Airconditioning trade qualification or equivalent" meet the requirements of this unit and its prerequisite requirements.

<b>Core Competency</b>	Standard Units	Weighting
All Core competen	cy standard units to be achieved	Points
UEENEEE038B	Participate in development and follow a personal	20
OEENEEE036B	competency development plan	
UEENEEE101A	Apply Occupational Health and Safety regulations,	20
CEENEELION	codes and practices in the workplace	
UEENEEE102A	Fabricate, assemble and dismantle utilities industry	40
CEET VEEET 0211	components	
UEENEEE103A	Solve problems in ELV single path circuits	40
UEENEEE105A	Fix and secure electrotechnology equipment	20
UEENEEE107A	Use drawings, diagrams, schedules, standards,	40
OLLIVLE 10/11	codes and specifications	
UEENEEE124A	Compile and produce an energy sector detailed	60
CEENEEL12+11	report	
UEENEEE137A	Document and apply measures to control OHS	20
CEET (EEETS / II	risks associated with electrotechnology work	
UEENEEJ102A	Prepare and connect refrigerant tubing and fittings	30
UEENEEJ103A	Establish the basic operating conditions of vapour	60
CEET (EES 10311	compression systems	
UEENEEJ104A	Establish the basic operating conditions of air	20
	conditioning systems	
UEENEEJ106A	Install refrigerant pipe work, flow controls and	60
	accessories	
UEENEEJ107A	Install air conditioning and refrigeration systems,	80
0221 (22010)11	major components and associated equipment	
UEENEEJ108A	Recover, pressure test, evacuate, charge and leak	60
	test refrigerants	
UEENEEJ109A	UEENEEJ109A Verify functionality and compliance of	

	refrigeration and air conditioning installations	
UEENEEJ110A	Select refrigerant piping, accessories and	50
	associated controls	
UEENEEJ111A	Diagnose and rectify faults in air conditioning and	40
OEENEEJIIIA	refrigeration systems and components	
UEENEEJ113A	Commission air conditioning and refrigeration	40
CLEIVEES I 1311	systems	
UEENEEJ127A	Establish the thermodynamic parameters of	80
CEET (EES 12711	refrigeration and air conditioning systems	
UEENEEJ129A	Establish heat loads for commercial refrigeration	80
CLEIVLES 12911	and/or air conditioning applications.	
UEENEEJ153A	Find and rectify faults in motors and associated	50
CELIVEES 13311	controls in refrigeration and air conditioning	
	systems	
UEENEEJ170A	Diagnose and rectify faults in air conditioning and	70
OEEI (EE3 1 / O/ 1	refrigeration control systems	
UEENEEJ192A	Analyse the psychrometric performance of	50
0221(2201)211	HVAC/R systems	
UEENEEJ194A	Solve problems in low voltage refrigeration circuits	40
UEENEEK145A	Implement and monitor energy sector	20
OEENEEK143A	environmental and sustainable policies and	
	procedures	
UEENEEP012A	Disconnect / reconnect composite appliances	60
OLLIGILI 012A	connected to low voltage installation wiring	
UEENEEP017A	Locate and rectify faults in low voltage composite	20
OLLIULI OI /A	appliances using set procedures	
UEENEEP024A	Attach cords and plugs to electrical equipment for	20
ODDINDDI UZTI	connection to a single phase 230 Volt supply	
UEENEEP025A	Attach cords, cables and plugs to electrical	20
CLLINELI OLUIT	equipment for connection to 1000 Va.c. or 1500	
	Vd.c. supply	
		1230

<b>Elective Competency Standard Units</b>		
Complete Elective units to achieve a total of weighting of 50	o points from	the following
groups:		
		Marrina

Group	Minimum	Maximum
_	points	points

A	Imported and Common Elective Units	0	20
1.	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 4. If units have		
	not being assigned a weighting by the relevant EE-Oz		
	Industry Technical Advisory Committee, their		
	weighting will be 10 points.		
В	<b>Qualification Elective Units</b>	0	30
	<b>Qualification Elective Units</b>	20	50
C	You may select all your elective units from this Group		

Group A – Imported and Common Elective Units					
You may complete un	You may complete units to a maximum weighting of 20				
UEENEEC001B	UEENEEC001B Maintain documentation				
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			
UEENEED101A	Use computer applications relevant to a workplace	20			
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20			
CPCCOHS1001A	Work safely in the construction industry	10			
HLTAID001	Provide cardiopulmonary resuscitation	10			
	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 4. 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,	Up to 20 points			

•	ication Elective Units units to a maximum weighting of 30	Weighting Points
UEENEEJ114A	Resolve problems in hydronic systems	40
UEENEEJ115A	Resolve problems in beverage dispensers	40
UEENEEJ116A	Resolve problems in transport refrigeration 2 systems	
UEENEEJ117A	Resolve problems in ultra-low temperature refrigeration systems	20
UEENEEJ118A	Resolve problems in post mix refrigeration systems	20
UEENEEJ119A	Resolve problems in ice making systems	20
UEENEEJ120A	Resolve problems in industrial refrigeration systems	20
UEENEEJ167A	Resolve problems in central plant air conditioning systems	40
UEENEEJ168A	Maintain microbial control of refrigeration and air conditioning systems	20
UEENEEJ171A	Resolve problems in refrigerated beverage vending cabinets	20
UEENEEJ174A	Apply safety awareness and legal requirements for hydrocarbon refrigerants	10
UEENEEJ175A	Service and repair self contained hydrocarbon air conditioning and refrigeration systems	20
UEENEEJ176A	Install and commission hydrocarbon refrigeration systems, components and associated equipment	20
UEENEEJ178A	Apply safety awareness and legal requirements for ammonia refrigerant	10
UEENEEJ179A	Repair and service ammonia refrigeration systems	20
UEENEEJ180A	Install and commission ammonia refrigeration systems, components and associated equipment	20
UEENEEJ182A	Repair and service secondary refrigeration systems	20
UEENEEJ184A	Apply cafety awareness and legal requirements	
UEENEEJ185A	Repair and service carbon dioxide refrigeration systems	20
UEENEEJ186A	Install and commission carbon dioxide	20

	refrigeration systems, components and associated equipment	
UEENEEJIOOA	Repair and service self contained carbon dioxide refrigeration and heat pump systems	20

Group C – Qualifica	Group C – Qualification Elective Units			
You must complete u	Points			
You may select all yo	You may select all your elective units from this Group			
UEENEEC005B	40			
UEENEEJ190A	Select basic commercial refrigeration system equipment, components and accessories	40		
UEENEEJ191A	Select residential air conditioning system equipment, components and accessories	40		

- 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.

#### **END OF QUALIFICATION**

# **UEE43011 Certificate IV in Electrical Equipment and Systems**

# **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2.	Add	Group B	UETTDRIS67A Solve problems in energy	80
			supply network equipment	
2	Add	Group B	UETTDRIS68A Solve problems in energy	40
			supply network protection equipment and systems	
3	Edit	Group C	Edit Name to reflect correct Unit title	60
			UEENEEI124A Fault find and repair analogue	
			circuits and components in electronic control systems	

				,
			Edit Name to reflect correct Unit title	
3	Edit	Group B	UEENEEI102A Solve problems in pressure	40
			measurement components and systems	
			Edit Name to reflect correct Unit title	
3	Edit	Group B	UEENEEI103A Solve problems in density_level	40
			measurement components and systems	
			Edit Name to reflect correct Unit title	
3	Edit	Group B	UEENEEI104A Solve problems in flow	40
			measurement components and systems	
			Edit Name to reflect correct Unit title	
3	Edit	it Group B	UEENEEI105A Solve problems in temperature	40
			measurement components and systems	
			Edit Name to reflect correct Unit title	
	Edit	Crown C	UEENEEI151A Develop, enter and verify word and	60
3	Edit	Group C	analogue control programs for programmable logic	
			controllers.	
			Edit Name to reflect correct Unit title	
	Edit	Core	UEENEEK145A Implement and monitor energy	20
3	Edit	Core	sector environmental and sustainable policies and	20
			procedures	
			Edit Name to reflect correct Unit title	
3	Edit	Group C	UEENEEI124A Fault find and repair analogue	60
			circuits and components in electronic control systems	
	1	<u> </u>	<u> </u>	

Δ	Undate	Elective	HLTAID001 - Provide cardiopulmonary	10
7	Opuate	Licetive	resuscitation	

	E 12		C CHEENEEE 101 A A 1	20
4	Edit	Core	Correct title of UEENEEE101A - Apply	20
			Occupational Health and Safety regulations, codes	
			and practices in the workplace	
4	Edit	Core	Correct title of UEENEEE102A - Fabricate,	40
			assemble and dismantle utilities industry components	
4	Edit	Core	Correct title of UEENEEG199A - Conduct	40
•			compliance and functional verification of electrical	
			apparatus and existing circuits	
4	Edit	Elective	Correct title of UEENEEA110A - Assemble, mount	40
7			and connect control gear and switchgear	
4	Edit	Elective	Correct title of UEENEEA112A - Fabricate and	60
4			assemble bus bars	
4	Edit	Elective	Correct title of UEENEEA113A - Mount and wire	40
4			control panel equipment	
4	Edit	Elective	Correct title of UEENEED101A - Use computer	20
4			applications relevant to a workplace	
	Edit	Elective	Correct title of UEENEEG110A - Find and repair	60
4	Zan	Ziocci ( c	faults in LV d.c. electrical apparatus and circuits	
	Edit	Elective	Correct title of UEENEEG111A - Carry out basic	40
4	Lan	Licetive	repairs to electrical components and equipment	10
	Edit	Elective	Correct title of UEENEEG116A - Diagnose and	80
4	Eun	Elective	_	80
	T7.424	Elective	rectify faults in traction lift systems	60
4	Edit	Elective	Correct title of UEENEEG119A - Maintain operation	60
	D.11.		of electrical marine equipment and systems	40
4	Edit	Elective	Correct title of UEENEEG128A - Plan low voltage	40
			switchboard and control panel layouts	_
4	Edit	Elective	Correct title of UEENEEG129A - Overhaul and	60
			repair major switchgear and controlgear	
4	Edit	Elective	Correct title of UEENEEG153A - Rewind three	60
			phase low voltage induction machines	
4	Edit	Elective	Correct title of UEENEEG155A - Rewind HV three	60
			phase induction machines rated for voltages to 3.3	
			kV	
4	Edit	Elective	Correct title of UEENEEG156A - Rewind HV three	60
7			phase induction machines rated for voltages above	
			3.3 kV	
4	Edit	Elective	Correct title of UEENEEG159A - Conduct	40
4			mechanical tests on electrical machines and	
			components	
1	Edit	Elective	Correct title of UEENEEG164A - Repair and	40
4			maintain mechanical components of electrical	

			machines	
4	Edit	Elective	Correct title of UEENEEG165A - Maintain and	40
7			service traction lifts systems and equipment	
4	Edit	Elective	Correct title of UEENEEG166A - Install and	40
7			maintain escalators, moving walks and treadways	
4	Edit	Elective	Correct title of UEENEEG167A - Align and install	20
			traction lift equipment	
4	Edit	Elective	Correct title of UEENEEG168A - Diagnose and	40
			rectify faults in complex lift systems	
4	Edit	Elective	Correct title of UEENEEH102A - Repairs basic	40
			electronic apparatus faults by replacement of	
			components	
4	Edit	Elective	Correct title of UEENEEI101A - Use instrumentation	40
			drawings, specification, standards and equipment	
			manuals	
4	Edit	Elective	Correct title of UEENEEI103A - Solve problems in	40
			density/level measurement components and systems	
4	Edit	Elective	Correct title of UEENEEI107A - Install	20
			instrumentation and control cabling and tubing	
4	Edit	Elective	Correct title of UEENEEI108A - Install	20
			instrumentation and control apparatus and associated	
			equipment	
4	Edit	Elective	Correct title of UEENEEI116A - Assemble, enter	20
			and verify operating instructions in microprocessor	
			equipped devices	
4	Edit	Elective	Correct title of UEENEEI119A - Set up industrial	60
			field control devices	
4	Edit	Elective	Correct title of UEENEEI126A - Provide solutions to	80
			pneumatic-hydraulic system operations	
4	Edit	Elective	Correct title of UEENEEI148A - Solve problems in	60
			single phase electronic power control circuits	
4	Edit	Elective	Correct title of UEENEEI149A - Solve problems in	60
			polyphase electronic power control circuits	
4	Edit	Elective	Correct title of UEENEEJ153A - Find and rectify	50
			faults in motors and associated controls in	
			refrigeration and air conditioning systems	
4	Edit	Elective	Correct title of UETTDRIS44A - Perform HV field	40
			switching operation to a given schedule	

### **Description**

#### Scope

This qualification provides competencies to manufacture, fit, assemble, erect, operate, test, fault find, alter, repair electrical equipment and includes electrical wiring work only if that work is associated with assembling, maintaining, terminating or altering the wiring between electrical components within a plant or machinery. An electrical fitter is not authorised to install any electrical wiring systems within an electrical installation as prescribed by definitions contained in AS/NZS 3000.

Electrical equipment means any appliance, article, accessory, wire, fitting, cable, conduit or apparatus that generates, uses, conveys or controls (or that is intended to generate, use, convey or control) electricity above extra low voltage.

### **Pathways Information**

Not applicable.

### Licensing/Regulatory Information

Not applicable.

### **Entry Requirements**

Not applicable.

# **Employability Skills Summary**

# **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 420 points in accordance with the Elective Competency Standard Units table below.

Note: UEENEEG199A - Those holding an 'Electrical Fitter Licence or equivalent issued in an Australian State or Territory meets the requirements of this unit and its pre-requisite requirements.

Core Competency Standard Units We				
All Core competend	Points			
UEENEEE038B	Participate in development and follow a personal	20		
OEENEEE036B	competency development plan			
UEENEEE101A	Apply Occupational Health and Safety regulations,	20		
CELIVELETOTA	codes and practices in the workplace			
UEENEEE102A	Fabricate, assemble and dismantle utilities industry	40		
CEEI (EEEI ()21 (	components			
UEENEEE104A	Solve problems in d.c. circuits	80		
UEENEEE105A	Fix and secure electrotechnology equipment	20		
UEENEEE107A	Use drawings, diagrams, schedules, standards,	40		
OBEIVEEE10771	codes and specifications			
UEENEEE117A	Implement and monitor energy sector OHS policies	20		
CEETVEEETTYTT	and procedures			
UEENEEE124A	Compile and produce an energy sector detailed	60		
-	report			
UEENEEE137A	Document and apply measures to control OHS	20		
	risks associated with electrotechnology work			
UEENEEG006A	Solve problems in single and three phase low	80		
	voltage machines			
UEENEEG033A	Solve problems in single and three phase low	60		
	voltage electrical apparatus and circuits			
UEENEEG063A	Arrange circuits, control and protection for general	40		
	electrical installations			
UEENEEG101A	Solve problems in electromagnetic devices and	60		
	related circuits			
UEENEEG102A	Solve problems in low voltage a.c. circuits	80		
UEENEEG106A	Terminate cables, cords and accessories for low	40		

Total points in con	860	
	procedures	
	environmental and sustainable policies and	
UEENEEK145A	Implement and monitor energy sector	20
	electrical apparatus and existing circuits	
UEENEEG199A	Conduct compliance and functional verification of	40
UEENEEG109A	Develop and connect electrical control circuits	80
0221,22010011	electrical apparatus and circuits	
UEENEEG108A	Trouble-shoot and repair faults in low voltage	40
	voltage circuits	

# **Elective Competency Standard Units**

Complete Elective units to achieve a total of weighting of 420 points from the following groups:

Gro	oup	Minimu m 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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	60
В	<b>Qualification Elective Units</b>	0	200
С	<b>Qualification Elective Units</b> You may select all your elective units from this Group	220	420

Group A – Import	Group A – Imported and Common Elective Units Weighting				
You may complete	Points				
UEENEEC001B	UEENEEC001B Maintain documentation				
UEENEEC002B	20				
UEENEEC003B	Provide quotations for installation or service jobs	20			
UEENEEC010B	Deliver a service to customers	20			
UEENEED101A	Use computer applications relevant to a workplace	20			
UEENEEE009B	Comply with scheduled and preventative	20			

	maintenance program processes	
UEENEEE020B	Provide basic instruction in the use of	20
CELIVELEOZOB	electrotechnology apparatus	
CPCCOHS1001A	Work safely in the construction industry	10
HLTAID001	Provide cardiopulmonary resuscitation	10
	Imported units from other training packages and/or	
	state accredited courses can be added to this group,	Up to 60
but they must be selected from qualifications where		points
the unit is first packaged at AQF level 4. If unit		
	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	

•	ication Elective Units	Weighting Points	
You may complete			
UEENEEA110A	40		
UEENEEA112A	Fabricate and assemble bus bars	60	
UEENEEA113A	Mount and wire control panel equipment	40	
UEENEED104A	Use engineering applications software on personal computers	40	
UEENEEF102A	Install and maintain cabling for multiple access to telecommunication services	120	
UEENEEF104A	Install and modify performance data communication copper cabling	40	
UEENEEF115A	Assemble and connect telecommunication frames and cabinets	60	
UEENEEG110A	Find and repair faults in LV d.c. electrical apparatus and circuits	60	
UEENEEG111A Carry out basic repairs to electrical components and equipment			
UEENEEG116A Diagnose and rectify faults in traction lift systems			
UEENEEG118A Maintain operation of electrical mining equipment and systems			
UEENEEG119A Maintain operation of electrical marine equipment and systems		60	
UEENEEG129A	Overhaul and repair major switchgear and controlgear	60	
UEENEEG150A	Wind electrical coils	40	
UEENEEG151A	Place and connect electrical coils	40	
UEENEEG152A	Rewind single phase machines	40	
UEENEEG153A	Rewind three phase low voltage induction machines	60	
UEENEEG154A	UEENEEG154A Rewind LV direct current machines		
UEENEEG157A	UEENEEG157A Conduct electrical tests on LV electrical machines		
UEENEEG159A	UEENEEG159A Conduct mechanical tests on electrical machines and components		
UEENEEG164A	Repair and maintain mechanical components of electrical machines	40	
UEENEEG165A	Maintain and service traction lifts systems and equipment	40	

UEENEEG166A	treadways			
UEENEEG167A	JEENEEG167A Align and install traction lift equipment  Provide advice on effective and energy efficient			
UEENEEG181A	20			
UEENEEG182A	Supply effective and efficient lighting products for domestic and small commercial applications	40		
UEENEEG183A	Provide advice on the application of energy efficient lighting for ambient and aesthetic effect	20		
UEENEEH102A	Repairs basic electronic apparatus faults by replacement of components	40		
UEENEEH111A	Troubleshoot single phase input d.c. power supplies	40		
UEENEEI101A	Use instrumentation drawings, specification, standards and equipment manuals	40		
UEENEEI102A	Solve problems in pressure measurement components and systems	40		
UEENEEI103A	Solve problems in density/level measurement			
UEENEEI104A	Solve problems in flow measurement components and systems	40		
UEENEEI105A	Solve problems in temperature measurement components and systems	40		
UEENEEI107A	Install instrumentation and control cabling and tubing	20		
UEENEEI108A	Install instrumentation and control apparatus and associated equipment	20		
UEENEEI116A	Assemble, enter and verify operating instructions in microprocessor equipped devices	20		
UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers	60		
UEENEEJ102A	Prepare and connect refrigerant tubing and fittings	30		
UEENEEJ103A	EEJ103A Establish the basic operating conditions of vapour compression systems			
UEENEEJ104A	Establish the basic operating conditions of air			
UEENEEJ105A	Position, assemble and start up single head split air conditioning and water heating heat pump systems	70		
UEENEEJ106A	Install refrigerant nine work flow controls and			
UEENEEJ108A	Recover, pressure test, evacuate, charge and leak test	60		

	refrigerants	
UEENEEJ151A	Service small electrical appliances and power tools	60
JEENEEJ153A Find and rectify faults in motors and associated controls in refrigeration and air conditioning systems		50
UEENEEJ154A	Find and rectify faults in appliance control systems and devices	60
UEENEEJ155A	Service refrigeration appliances	60
UEENEEJ156A	Service clothes washing machines and dryers	40
UEENEEJ157A	Service electrical heating appliances	60
UEENEEJ158A	Service dishwasher machines	40
UEENEEJ159A	Service gas heating appliances	40
UEENEEJ162A	Recover, pressure test, evacuate, charge and leak test refrigerants - appliances	50
UEENEEJ170A	Diagnose and rectify faults in air conditioning and refrigeration control systems	70
UEENEEJ173A	Carvice and renair microwave ovens	
UEENEEJ194A	Solve problems in low voltage refrigeration circuits	40
UEENEEJ195A	Establish the basic operating conditions of vapour	
UEENEEM019A	Attend to breakdowns in hazardous areas coal	
UEENEEM020A	Attend to breakdowns in hazardous areas age	
UEENEEM021A	Attend to breakdowns in hazardous areas — dust atmospheres	20
UEENEEM022A	Attend to breakdowns in hazardous areas — pressurisation	20
UEENEEM027A	Maintain equipment in hazardous areas coal	
UEENEEM028A	Maintain equipment in hazardous areas — gas	
UEENEEM029A	Maintain equipment in hazardous areas — dust atmospheres	60
UEENEEM030A	Maintain equipment in hazardous areas — pressurisation	60
UEENEEM031A	Overhaul and repair of explosion-protected equipment — coal mining	60

		60
UEENEEM032A	Overhaul and repair of explosion-protected	60
	equipment — flameproof enclosures	60
UEENEEM033A	Overhaul and repair of explosion-protected	60
	equipment — gas atmospheres	40
UEENEEM034A	Overhaul and repair of explosion-protected	40
	equipment — dust atmospheres	60
UEENEEM060A	Carry out overhaul and repair of explosion-protected	60
	equipment — coal mining	60
UEENEEM061A	Carry out overhaul and repair of explosion-protected	60
	equipment — flameproof enclosures	
UEENEEM062A	Carry out overhaul and repair of explosion-protected	60
	equipment — gas atmospheres	
UEENEEM063A	Carry out overhaul and repair of explosion-protected	60
	equipment — dust atmospheres	
UEENEEM070A	Repair reeling, trailing and flexible cables	60
UEENEEM071A	Test reeling, trailing and flexible cables	60
UEENEEM072A	Inspect and fit plugs/couplers for reeling, trailing	60
OEENLEWIO/2A	and flexible cables	
UEENEEM073A	Verify compliance of repaired reeling, trailing and	60
OEENEEMO/3A	flexible cables	
UEENEEM076A	Use and maintain the integrity of a portable gas	20
UEENEEMU/0A	detection device	
LIEENIEEN 4077 A	Install and maintain the integrity of fixed gas	20
UEENEEM077A	detection equipment	
LIEENIEEN (OOO A	Report on the integrity of explosion-protected	20
UEENEEM080A	equipment in a hazardous area	
LIEENEENIAGA	Assemble and wire internal electrical rail signalling	30
UEENEEN102A	equipment	
	Perform low voltage field switching operation to a	50
UETTDRIS43A	given schedule.	50
	Perform HV field switching operation to a given	40
UETTDRIS44A	schedule	
UETTDRIS47A	Sample, test, filter and reinstate insulating oil	40
		80
UETTDRIS67A	Solve problems in energy supply network equipment	30
UETTDRIS68A	Solve problems in energy supply network protection	40
OLI IDKISO8A	equipment and systems	
		1
LIETTDD CDAO A	Maintain capacitor bank equipment for voltage	40
UETTDRSB29A	Maintain capacitor bank equipment for voltage regulation	40

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operation	tΩ	а	orven	schedule
operation	w	и	81 (011	belledate

-	ication Elective Units	Weighting
You must complete	Points	
You may select all	your elective units from this Group	
UEENEEG128A	Plan low voltage switchboard and control panel	40
	layouts	
UEENEEG155A	Rewind HV three phase induction machines rated	60
	for voltages to 3.3 kV	
UEENEEG156A	Rewind HV three phase induction machines rated	60
	for voltages above 3.3 kV	
UEENEEG158A	Conduct electrical tests on HV electrical machines	60
UEENEEG168A	Diagnose and rectify faults in complex lift systems	40
UEENEEG179A	Develop detailed electrical drawings	60
UEENEEI119A	Set up industrial field control devices	60
UEENEEI120A	Provide solutions to problems in industrial control	60
OLENEE1120A	systems	
UEENEEI124A	Fault find and repair analogue circuits and	60
UEENEE1124A	components in electronic control systems	
UEENEEI125A	Provide solutions to fluid circuit operations	60
UEENEEI126A	Provide solutions to pneumatic-hydraulic system	80
	operations	
UEENEEI139A	Diagnose and rectify faults in digital controls	60
OLENEEIISA	systems	
UEENEEI148A	Solve problems in single phase electronic power	60
OLENEEH 40A	control circuits	
UEENEEI149A	Solve problems in polyphase electronic power	60
OLENELII49A	control circuits	
UEENEEI151A	Develop, enter and verify word and analogue control	60
OLENELIIJIA	programs for programmable logic controllers.	
UEENEEI152A	Develop, enter and verify programs in Supervisory	60
OLENELII 32A	Control and Data Acquisition systems	
UEENEEI155A	Develop structured programs to control external	40
UEENEEHJJA	devices	
TIEENIEEMA20 A	Conduct testing of hazardous areas installations —	40
UEENEEM038A	coal mining	
LIEENIEEMO20A	Conduct testing of hazardous areas installations —	40
UEENEEM039A	gas atmospheres	
UEENEEM040A	Conduct testing of hazardous areas installations —	40
ULENEEWIU4UA		

	dust atmospheres	
LIEENIEEMO41A	Conduct testing of hazardous area installations —	40
UEENEEM041A	pressurisation	
UEENEEM042A	Conduct visual inspection of hazardous areas	40
OEENEEWI042A	installations	
UEENEEM043A	Conduct detailed inspection of hazardous areas	40
OLLIVLLIVIO-3/1	installations — coal mining	
UEENEEM044A	Conduct detailed inspection of hazardous areas	40
CLEIVELIVIOTTI	installations — gas atmospheres	
UEENEEM045A	Conduct detailed inspection of hazardous areas	40
CEEI (EEI (IO 1371	installations — dust atmospheres	
UEENEEM046A	Conduct detailed inspection of hazardous areas	40
CEET (EET/TO TOTT	installations — pressurisation	
UEENEEM047A	Develop and manage maintenance programs for	20
	hazardous areas electrical equipment — coal mining	
UEENEEM048A	Develop and manage maintenance programs for	20
UEENEEWIU46A	hazardous areas electrical equipment — gas	
	atmospheres	
UEENEEM049A	Develop and manage maintenance programs for	20
CLEIVEEIVIO+711	hazardous areas electrical equipment — dust	
	atmospheres	
UEENEEM050A	Develop and manage maintenance programs for	20
	hazardous areas electrical equipment —	
	pressurisation	
UEENEEM054A	Plan electrical installations for hazardous areas —	20
	gas atmospheres	
UEENEEM055A	Plan electrical installations for hazardous areas —	20
	dust atmospheres	
UEENEEM056A	Plan electrical installations for hazardous areas —	20
	pressurisation	
UEENEEM074A	Plan electrical installations in hazardous areas - Coal	20
	mining	
UEENEEM078A	Manage compliance of hazardous areas	20
	ı	l

- 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.

# END OF QUALIFICATION

# **Custom Content Section**

# **UEE43111 Certificate IV in Energy Efficiency and Assessment**

# **Modification History**

Releas e	Action	Core/Elective	Details	Points
2	Edit		Edit Name to reflect correct Unit title UEENEED104A Use engineering applications software on personal computers	40
3	Edit	Core	Edit Name to reflect correct Unit title UEENEEK145A Implement and monitor energy sector environmental and sustainable policies and procedures	20
4	Edit	Core	Correct title of UEENEEE101A - Apply Occupational Health and Safety regulations, codes and practices in the workplace	20
4	Edit	Core	Correct title of UEENEEE102A - Fabricate, assemble and dismantle utilities industry components	40
4	Edit	Elective	Correct title of UEENEED101A - Use computer applications relevant to a workplace	20
4	Edit	Elective	Correct title of UEENEED104A - Use engineering applications software on personal computers	40
4	Edit	Elective	Correct title of UEENEEG185A - Select effective and efficient light sources and luminaries for given locations and designs	60
4	Edit	Elective	Correct title of UEENEEG186A - Design effective and efficient lighting for residential and commercial buildings	20
4	Edit	Elective	Correct title of UEENEEK155A - Assess energy loads and uses for energy efficiency in industrial properties and enterprises	40

### **Description**

#### Scope

This qualification provides competencies to conduct a residential, office and retail dwellings residential and Small Medium Enterprises (SME) energy audit and to develop energy efficient strategies to reduce an energy use in a range of energy services. The qualification also addresses the environmental and legislative contexts with the fundamental energy audit methodology to develop the initiative and solutions of sustainability and financial viability. The core competencies of this qualification meets the prescribed requirements for ERAC requirements for an 'Electrician's licence'.

### **Pathways Information**

Not applicable.

# **Licensing/Regulatory Information**

Not applicable.

### **Entry Requirements**

Not applicable.

# **Employability Skills Summary**

# **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 260 points in accordance with the Elective Competency Standard Units table below.

Note: UEENEEG105A - Those holding an 'Unrestricted Electricians Licence or equivalent issued in an Australian State or Territory meets the requirements of this unit and its prerequisite requirements.

Core Competency All Core competen	y Standard Units acy standard units to be achieved	Weighting Points
UEENEEE038B	Participate in development and follow a personal competency development plan	20
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
UEENEEE117A	Implement and monitor energy sector OHS policies and procedures	20
UEENEEE124A	Compile and produce an energy sector detailed report	60
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20
UEENEEG006A	Solve problems in single and three phase low voltage machines	80
UEENEEG033A	Solve problems in single and three phase low voltage electrical apparatus and circuits	60
UEENEEG063A	Arrange circuits, control and protection for general electrical installations	40
UEENEEG101A	Solve problems in electromagnetic devices and related circuits	60
UEENEEG102A	Solve problems in low voltage a.c. circuits	80
UEENEEG103A	Install low voltage wiring and accessories	20

Total points in con	re	1020
UEENEEK153A residential, office and retail premises		170
	electrical installations  Assess energy loads and uses for energy efficiency in	40
UEENEEK152A	Develop strategies to address sustainability issues for	20
UEENEEK145A	Implement and monitor energy sector environmental and sustainable policies and procedures	20
UEENEEG109A	Develop and connect electrical control circuits	80
UEENEEG108A	Trouble-shoot and repair faults in low voltage electrical apparatus and circuits	40
UEENEEG107A	Select wiring systems and cables for low voltage general electrical installations	60
UEENEEG106A	Terminate cables, cords and accessories for low voltage circuits	40
UEENEEG105A	Verify compliance and functionality of low voltage general electrical installations	40
UEENEEG104A	Install appliances, switchgear and associated accessories for low voltage electrical installations	20

# **Elective Competency Standard Units**

Complete Elective units to achieve a total of weighting of 260 points from the following groups:

Gre	oup	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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	120
В	<b>Qualification Elective Units</b>	0	120
C	<b>Qualification Elective Units</b>	140	260

Group A – Imported and Common Electives Units. You may complete units to a maximum weighting of 120		
UEENEEC001B	Maintain documentation	20

UEENEEC002B	Source and purchase material/parts for installation or	20
	service jobs	
UEENEEC003B	Provide quotations for installation or service jobs	20
UEENEEC010B	Deliver a service to customers	20
UEENEED101A	Use computer applications relevant to a workplace	20
UEENEEE006B	Apply methods to maintain currency of industry developments	20
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20
	Imported units from other training packages and/or state	Up to 120
	accredited courses can be added to this group, but they	points
	must be selected from qualifications where the unit is first	
	packaged at AQF level 4. 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	

Group B – Qualific You may complete	Weighting Points	
UEENEED104A	Use engineering applications software on personal computers	40
UEENEEF102A	Install and maintain cabling for multiple access to telecommunication services	120
UEENEEG171A	Install, set up and commission interval metering	20
UEENEEG181A	Provide advice on effective and energy efficient lighting products	20
UEENEEG182A	Supply effective and efficient lighting products for domestic and small commercial applications	40
UEENEEG183A	Provide advice on the application of energy efficient lighting for ambient and aesthetic effect	20
UEENEEI140A	Plan the electrical installation of integrated systems	20
UEENEEI141A	Develop electrical integrated systems	20

Group C – Qualifi You must complete You may select all	Weighting Points	
UEENEEC005B	Estimate electrotechnology projects	40
UEENEEE110A	Develop and implement energy sector maintenance programs	60
UEENEEG076A	Install and replace low voltage current transformer metering	20
UEENEEG184A	Provide photometric data for illumination system design	60
UEENEEG185A	Select effective and efficient light sources and luminaries for given locations and designs	60
UEENEEG186A	Design effective and efficient lighting for residential and commercial buildings	20
UEENEEI142A	Develop an electrical integrated system interface for access through a touch screen	20
UEENEEI143A	Develop access control of electrical integrated systems using logic-based programming tools	20
UEENEEI144A	Develop interfaces for multiple access methods to monitor, schedule and control an electrical integrated system	20
UEENEEK154A	Assess energy loads and uses for energy efficiency in commercial facilities	40
UEENEEK155A	Assess energy loads and uses for energy efficiency in industrial properties and enterprises	40

- 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.

END OF QUALIFICATION

# **Custom Content Section**

# **UEE43211 Certificate IV in Industrial Automation and Control**

# **Modification History**

Releas	Action	Core/Elective	Details	Points
e				
2.	Edit		Edit Name to reflect correct Unit title	40
			UEENEED104A Use engineering applications	
			software on personal computers	
2	Update	Group A	HLTCPR211A Perform CPR	10
	Update	Group A	Edit Unit Code to reflect correct Unit Code	40
			TLILIC2001 Licence to operate a forklift truck	

		Cassan	Edit Name to reflect correct Unit title	
3	Edit	Group	UEENEEI102A Solve problems in pressure measurement components	40
		В	and systems	
		Group	Edit Name to reflect correct Unit title	
3	Edit	Group B	UEENEEI103A Solve problems in density_level measurement	40
		Б	components and systems	
		Group	Edit Name to reflect correct Unit title	
3	Edit	Group B	UEENEEI104A Solve problems in flow measurement components and	40
		Б	systems	
		Group	Edit Name to reflect correct Unit title	
3	Edit	lit B	UEENEEI105A Solve problems in temperature measurement	40
		D	components and systems	
2	Edit	Group	Edit Name to reflect correct Unit title	40
3	Lan	В	UEENEEI106A Set up and adjust PID control loops	
	Edit	Group	Edit Name to reflect correct Unit title	40
3	Eun	В	UEENEEI110A Set up and adjust advanced PID process control loops	
		Group	Edit Name to reflect correct Unit title	
3	Edit	C	UEENEEI151A Develop, enter and verify word and analogue control	60
			programs for programmable logic controllers.	
3	Edit	Core	Edit Name to reflect correct Unit title	20
			UEENEEK145A Implement and monitor energy sector environmental	
			and sustainable policies and procedures	

4	Update	te Elective	HLTAID001 - Provide cardiopulmonary	10
	Opulic		resuscitation	
4	Edit	Core	Correct title of UEENEEE101A - Apply	20
'			Occupational Health and Safety regulations, codes	
			and practices in the workplace	
4	Edit	Core	Correct title of UEENEEE102A - Fabricate,	40
-			assemble and dismantle utilities industry components	
4	Edit	Core	Correct title of UEENEEE119A - Solve problems in	40
'			multiple path extra low voltage (ELV) a.c. circuits	
4	Edit	Core	Correct title of UEENEEI138A - Provide solutions to	60
			extra low voltage (ELV) electro-pneumatic control	
			systems and drives	
4	Edit	Core	Correct title of UEPOPS416B - Monitor the	20
-			implementation of the enterprise's production-	
			maintenance quality control procedures	
4	Edit	Elective	Correct title of UEENEED101A - Use computer	20
'			applications relevant to a workplace	

4	Edit	Elective	Correct title of UEENEED102A - Assemble, set-up	80
			and test computing devices	100
4	Edit	Elective	Correct title of UEENEED117A - Install and	120
			configure network systems for internetworking	
4	Edit	Elective	Correct title of UEENEEG111A - Carry out basic	40
			repairs to electrical components and equipment	
4	Edit	Elective	Correct title of UEENEEG164A - Repair and	60
			maintain mechanical components of electrical	
			machines	
4	Edit	Elective	Correct title of UEENEEH111A - Troubleshoot	40
-			single phase input d.c. power supplies	
4	Edit	Elective	Correct title of UEENEEH114A - Troubleshoot	80
•			resonance circuits in an electronic apparatus	
4	Edit	Elective	Correct title of UEENEEI101A - Use instrumentation	40
•			drawings, specification, standards and equipment	
			manuals	
4	Edit	Elective	Correct title of UEENEEI103A - Solve problems in	40
T			density/level measurement components and systems	
4	Edit	Elective	Correct title of UEENEEI107A - Install	20
T			instrumentation and control cabling and tubing	
4	Edit	Elective	Correct title of UEENEEI108A - Install	20
т			instrumentation and control apparatus and associated	
			equipment	
4	Edit	Elective	Correct title of UEENEEI116A - Assemble, enter	20
•			and verify operating instructions in microprocessor	
			equipped devices	
4	Edit	Elective	Correct title of UEENEEI121A - Trouble shoot in	40
т			measuring and analysis systems	
4	Edit	Elective	Correct title of UEENEEI122A - Assist in	40
т			commissioning process and instrumentation control	
			systems	
4	Edit	Elective	Correct title of UEENEEI126A - Provide solutions to	80
т			pneumatic-hydraulic system operations	
4	Edit	Elective	Correct title of UEENEEI148A - Solve problems in	60
T			single phase electronic power control circuits	
4	Edit	Elective	Correct title of UEENEEI149A - Solve problems in	60
+			polyphase electronic power control circuits	
4	Edit	Elective	Correct title of UEENEEP026A - Conduct in-service	20
+			safety testing of electrical cord connected equipment	
			and cord assemblies	

# **Description**

#### **Scope**

This qualification provides competencies to assemble, set up and program, fault find, repair and maintain automated equipment, apparatus, associated circuits and systems. It's includes the supervision of plant maintenance programs and providing technical advice to process staff.

# **Pathways Information**

Not applicable.

# **Licensing/Regulatory Information**

Not applicable.

# **Entry Requirements**

Not applicable.

# **Employability Skills Summary**

# **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 760 points in accordance with the Elective Competency Standard Units table below.

Core Competency Standard Units		
All Core competency standard units to be achieved		
UEENEED104A	Use engineering applications software on personal computers	
UEENEEE038B	Participate in development and follow a personal competency development plan	20
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
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications	40
UEENEEE117A	Implement and monitor energy sector OHS policies and procedures	20
UEENEEE119A	Solve problems in multiple path extra low voltage (ELV) a.c. circuits	
UEENEEE124A	Compile and produce an energy sector detailed report	60
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20
UEENEEI138A	Provide solutions to extra low voltage (ELV) electro- pneumatic control systems and drives	60
UEENEEK145A	Implement and monitor energy sector environmental and sustainable policies and procedures	20
UEPOPS202B	Apply Quality Systems To Work	20
UEPOPS337B	Maintain Quality Systems within the Team	20
UEPOPS416B Monitor the implementation of the enterprise's production-maintenance quality control procedures		20
Total points in core		

# **Elective Competency Standard Units**

Complete Elective units to achieve a total of weighting of 760 points from the following groups:

Gro	Group		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 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	220
В	<b>Qualification Elective Units</b>	0	540
С	Qualification Elective Units You may select all your elective units from this Group	220	760

Group A – Imported and Common Elective Units. You may complete units to a maximum weighting of 220		
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
UEENEED101A	Use computer applications relevant to a workplace	20
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20
BSBINN301A	Promote Innovation in a team Environment	40
BSBCUS401B	Coordinate implementation of customer service strategies	40
BSBINM401A	Implement workplace information system	40
BSBLED401A	Develop teams and individuals	40
BSBMGT402A	Implement operational plan	40
BSBMGT403A	Implement continuous improvement	40

BSBWOR401A	Establish effective workplace relationships	50
BSBWOR402A	Promote team effectiveness	50
BSBWOR404B	Develop Work Priorities	40
TLILIC2001A	Licence to operate a forklift truck	40
HLTAID001	Provide cardiopulmonary resuscitation	10

Group B - Qualif	Weighting	
You may complete	Points	
UEENEED102A Assemble, set-up and test computing devices		80
UEENEED146A	Set up and configure basic local area network (LAN)	40
UEENEEF108A	Select and arrange equipment for wireless communication networks	40
UEENEEG111A	Carry out basic repairs to electrical components and equipment	40
UEENEEG101A	Solve problems in electromagnetic devices and related circuits	60
UEENEEG102A	Solve problems in low voltage a.c. circuits	80
UEENEEG106A	Terminate cables, cords and accessories for low voltage circuits	40
UEENEEG164A	Repair and maintain mechanical components of electrical machines	60
UEENEEH111A	Troubleshoot single phase input d.c. power supplies	40
UEENEEH114A	Troubleshoot resonance circuits in an electronic apparatus	80
UEENEEI101A	Use instrumentation drawings, specification, standards and equipment manuals	40
UEENEEI102A	Solve problems in pressure measurement components and systems	40
UEENEEI103A	Solve problems in density/level measurement components and systems	40
UEENEEI104A	Solve problems in flow measurement components and systems	40
UEENEEI105A	Solve problems in temperature measurement components and systems	40
UEENEEI106A	Set up and adjust PID control loops	40
UEENEEI107A	Install instrumentation and control cabling and tubing	20

UEENEEI108A	Install instrumentation and control apparatus and associated equipment	20
UEENEEI110A	Set up and adjust advanced PID process control loops  4	
UEENEEI111A	Find and rectify faults in process final control elements	40
UEENEEI112A	Verify compliance and functionality of instrumentation and control installations	40
UEENEEI113A	Setup and configure human-machine interface (HMI) and industrial networks	60
UEENEEI116A Assemble, enter and verify operating instructions in microprocessor equipped devices		20
UEENEEI150A Develop, enter and verify discrete control programs for programmable controllers		60
UEENEEM080A	Report on the integrity of explosion-protected equipment in a hazardous area	20
UEENEEP024A Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply		20
UEENEEP025A Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply		20
UEENEEP026A Conduct in-service safety testing of electrical cord connected equipment and cord assemblies		20

Group C - Qualif	Weighting	
You must complet	Points	
You may select all	your elective units from this Group	
UEENEED117A	Install and configure network systems for internetworking	120
UEENEEI119A	Set up industrial field control devices	60
UEENEEI120A	Provide solutions to problems in industrial control systems	60
UEENEEI121A	Trouble shoot in measuring and analysis systems	40
UEENEEI122A	Assist in commissioning process and instrumentation control systems	40
UEENEEI125A	Provide solutions to fluid circuit operations	60
UEENEEI126A	Provide solutions to pneumatic-hydraulic system operations	80
UEENEEI139A	Diagnose and rectify faults in digital controls systems	60
UEENEEI148A	Solve problems in single phase electronic power control circuits	60
UEENEEI149A	Solve problems in polyphase electronic power control circuits	60

Group C - Qualif	Weighting	
You must complete	Points	
You may select all		
UEENEEI151A	Develop, enter and verify word and analogue control	60
CEENEERISIN	programs for programmable logic controllers.	
UEENEEI152A	Develop, enter and verify programs in Supervisory Control	60
and Data Acquisition systems		
UEENEEI155A Develop structured programs to control external devices		40

- 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**