



Australian Government

UEE50311 Diploma of Electrical and Refrigeration and Air-conditioning

Release 4

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Modification History

Release	Action	Core/Elective	Details	Points
2	Edit		Included Group B and C to Elective Competency Standard Units table.	
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 UEENEEE124A - Compile and produce an energy sector detailed report	60
4	Edit	Core	Correct title of UEENEEJ102A - Prepare and connect refrigerant tubing and fittings	30
4	Edit	Elective	Correct title of UEENEEED101A - Use computer applications relevant to a workplace	20
4	Edit	Elective	Correct title of UEENEEG131A - Evaluate performance of low voltage electrical apparatus	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 UEENEEJ178A - Apply safety awareness and legal requirements for ammonia refrigerant	10

Description

Scope

This qualification provides competencies to select, install, commission, maintain and diagnose faults/malfunctions on refrigeration systems and equipment that apply to commercial food storage and preservation and air conditioning and air distribution equipment and special applications and associated electrical systems. It includes ERAC requirements for an 'Electrician's licence' and regulatory requirements for purchasing and handling refrigerants.

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 80 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 pre-requisite requirements.

Note: 2. UEENEEJ109A - Those holding an 'Certificate III in Refrigeration and Air-conditioning trade qualification or equivalent" meet the requirements of this unit and its pre-requisite requirements.

Core Competency Standard Units		Weighting Points
All Core competency standard units to be achieved		
UEENEEE038B	Participate in development and follow a personal competency development plan	20
UEENEEE084A	Write specifications for electrotechnology engineering projects	40
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 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
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 test refrigerants	60

UEENEEJ109A	Verify functionality and compliance of refrigeration and air conditioning installations	20
UEENEEJ110A	Select refrigerant piping, accessories and associated controls	50
UEENEEJ111A	Diagnose and rectify faults in air conditioning and refrigeration systems and components	40
UEENEEJ113A	Commission air conditioning and refrigeration systems	40
UEENEEJ153A	Find and rectify faults in motors and associated controls in refrigeration and air conditioning systems	50
UEENEEJ170A	Diagnose and rectify faults in air conditioning and refrigeration control systems	70
UEENEEJ194A	Solve problems in low voltage refrigeration circuits	40
UEENEEK132A	Develop strategies to address environmental and sustainability issues in the energy sector	20
Total points in core		1620

Elective Competency Standard Units

Complete Elective units to achieve a total of weighting of 60 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 5. 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
B	Qualification Elective Units	0	20
C	Qualification Elective Units	0	20

Elective Competency Standard Units

Complete Elective units to achieve a total of weighting of 60 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 5. 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
D	Qualification Elective Units You may select all your elective units from this Group	40	60

Group A – Imported and Common Elective Units		Weighting Points
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
UEENEEED101A	Use computer applications relevant to a workplace	20
UEENEEEE009B	Comply with scheduled and preventative maintenance program processes	20
UEENEEEE020B	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 5. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee,	Up to 20 points

	<p>their weighting will be 10 points.</p> <p>Note: For further information see Application of the NQC Flexibility Formula, UEE11 Electrotechnology Training Package, Version 1, Volume 1 Qualification Framework</p>	
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Group B – Qualification Elective Units You may complete units to a maximum weighting of 20		Weighting Points
UEENEEG171A	Install, set up and commission interval metering	20
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
UEENEEJ118A	Resolve problems in post mix refrigeration systems	20
UEENEEJ119A	Resolve problems in ice making systems	20
UEENEEJ168A	Maintain microbial control of refrigeration and air conditioning systems	20
UEENEEJ174A	Apply safety awareness and legal requirements for hydrocarbon refrigerants	10
UEENEEJ178A	Apply safety awareness and legal requirements for ammonia refrigerant	10

Group C – Qualification Elective Units You may complete units to a maximum weighting of 20		Weighting Points
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
UEENEEG076A	Install and replace low voltage current transformer metering	20

Group D – Qualification Elective Units You must complete units to a minimum weighting of 40		Weighting Points
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You may select all your elective units from this Group		
UEENEEG131A	Evaluate performance of low voltage electrical apparatus	40
UEENEEE110A	Develop and implement energy sector maintenance programs	60
UEENEEJ137A	Evaluate and report on the indoor air quality of buildings	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.
3. Registered training organisations shall provide competency development advice in relation to any licensing requirements to practice that apply, or can contribute towards the qualification requirement, prior to establishing the competency development plan.

END OF QUALIFICATION**Custom Content Section**

Not applicable.