



**Australian Government**

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

**Release: 3**

# UEE42911 Certificate IV in Refrigeration and Air-conditioning Systems

## Modification History

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

## 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 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
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
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	60

	accessories	
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 refrigeration 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
UEENEEJ127A	Establish the thermodynamic parameters of refrigeration and air conditioning systems	80
UEENEEJ129A	Establish heat loads for commercial refrigeration and/or air conditioning applications.	80
UEENEEJ153A	Find and rectify faults motors and associated controls in refrigeration and air conditioning systems	50
UEENEEJ170A	Diagnose and rectify faults in air conditioning and refrigeration control systems	70
UEENEEJ192A	Analyse the psychrometric performance of HVAC/R systems	50
UEENEEJ194A	Solve problems in low voltage refrigeration circuits	40
UEENEEK145A	Implement and monitor energy sector environmental and sustainable energy policies and procedures	20
UEENEOP012A	Disconnect / reconnect composite appliances connected to low voltage installation wiring	60
UEENEOP017A	Locate and rectify faults in low voltage composite appliances using set procedures	20
UEENEOP024A	Attach cords and plugs to electrical equipment for	20

	connection to a single phase 230 Volt supply	
UEENEPP025A	Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply	20
<b>Total points in core</b>		<b>1230</b>

### Elective Competency Standard Units

Complete Elective units to achieve a total of weighting of 50 points from the following groups:

Group		Minimum points	Maximum points
<b>A</b>	<b>Imported and Common Elective Units</b> 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
<b>B</b>	<b>Qualification Elective Units</b>	0	30
<b>C</b>	<b>Qualification Elective Units</b> You may select all your elective units from this Group	20	50

<b>Group A – Imported and Common Elective Units</b>		<b>Weighting Points</b>
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
UEENEEE020B	Provide basic instruction in the use of	20

	electrotechnology apparatus	
CPCCOHS1001A	Work safely in the construction industry	10
HLTCPR211A	Perform CPR	10
	<p>Imported units from other training packages and/or state accredited courses can be added to this group, but they must be selected from qualifications where the unit is first packaged at AQF level 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.</p> <p>Note: For further information see Application of the NQC Flexibility Formula, UEE11 Electrotechnology Training Package, Version 1, Volume 1 Qualification Framework</p>	Up to 20 points

<b>Group B – Qualification Elective Units</b>		<b>Weighting Points</b>
You may complete units to a maximum weighting of 30		
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
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 systems, components and associated equipment	20
UEENEEJ188A	Repair and service self contained carbon dioxide refrigeration and heat pump systems	20

<b>Group C – Qualification Elective Units</b>		<b>Weighting Points</b>
You must complete units to a minimum weighting of 20 You may select all your elective units from this Group		
UEENEEC005B	Estimate electrotechnology projects	40
UEENEEJ190A	Select basic commercial refrigeration system equipment, components and accessories	40
UEENEEJ191A	Select residential air conditioning system equipment, components, and accessories	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**