



**Australian Government**

# **UEE42920 Certificate IV in Refrigeration and Air Conditioning Systems**

**Release 2**

# UEE42920 Certificate IV in Refrigeration and Air Conditioning Systems

## Modification History

Release 2: This minor update is the second release of this qualification in the UEE Electrotechnology Training Package.

Two units added to general electives.

Imported elective units updated.

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

## Qualification Description

This qualification covers 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.

Basic commercial refrigeration includes commercial cold rooms, freezer rooms and cabinets with a single compressor or condensing unit. This does not include large, complex commercial applications or industrial applications.

Competency development activities in this qualification are subject to regulations directly related to licencing. A relevant contract of training through an apprenticeship or relevant employment may be required to enable the application of the required knowledge and skills to on the job work activities and environments.

Refrigerant Handling Licence:

The achievement of the qualification meets the training components for the full national Refrigerant Handling Licence which is required to work on refrigeration and air conditioning equipment that carries the risk of a fluorocarbon refrigerant being emitted while decanting the refrigerant or manufacturing, installing, commissioning, servicing, maintaining or decommissioning refrigeration and air conditioning equipment.

Refrigeration and Air Conditioning Occupational Licence:

Additional and/or other conditions may apply in some jurisdictions subject to regulations related to refrigeration/air conditioning work. Practice in the workplace and during training is also subject to work health and safety (WHS)/occupational health and safety (OHS) regulations.

Electrical Occupation Licence:

The achievement of this qualification with the core restricted electrical units meet the electrical regulatory requirements for related restricted electrical work in most state/territories. This is required to work on electrical installations which are designed to operate at voltages greater than 50 volt (V) alternating current (a.c.) or 120 V direct current (d.c.).

## Entry Requirements

There are no entry requirements for this qualification.

## Packaging Rules

A total of **1360 weighting points** comprising:

**1300 core weighting points** listed below; **plus**

**60 general elective weighting points** from the general elective units listed below.

Choose a total of 60 **weighting points** elective units from the list below, of which between 0 and 20 **weighting points** can be taken from Group A; and between 0 and 20 **weighting points** can be taken from Group B; and 40 **weighting points** must be taken from Group C.

**Up to 20 weighting points of the general elective units Group A**, may be selected, with appropriate contextualisation, from any relevant nationally endorsed Training Package or accredited course, provided selected units contribute to the vocational outcome of the qualification. Previously assigned weighting points are listed in the UEE Electrotechnology Training Package Companion Volume Implementation Guide (CVIG), if not listed weighting points will be 10 points, unless directed from the Electrotechnology Industry Reference Committee (IRC).

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

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

Core units		Weighting Points
UEECD0007	Apply work health and safety regulations, codes and practices in the workplace	20
UEECD0010	Compile and produce an energy sector detailed report	60
UEECD0016	Document and apply measures to control WHS risks associated with electrotechnology work*	20
UEECD0019	Fabricate, assemble and dismantle utilities industry components*	40
UEECD0020	Fix and secure electrotechnology equipment*	20
UEECD0027	Participate in development and follow a personal competency development plan	20

UEECD0042	Solve problems in ELV single path circuits*	40
UEECD0051	Use drawings, diagrams, schedules, standards, codes and specifications*	40
UEERA0002	Analyse the psychrometric performance of HVAC/R systems*	50
UEERA0031	Diagnose and rectify faults in air conditioning and refrigeration control systems*	60
UEERA0034	Establish heat loads for commercial refrigeration and/or air conditioning applications*	80
UEERA0035	Establish the basic operating conditions of air conditioning systems*	20
UEERA0036	Establish the basic operating conditions of vapour compression systems*	60
UEERA0038	Establish the thermodynamic parameters of refrigeration and air conditioning systems*	80
UEERA0044	Find and rectify faults in single phase motors and associated controls*	40
UEERA0045	Find and rectify faults in three phase motors and associated controls*	30
UEERA0050	Install refrigerant pipe work, flow controls and accessories*	60
UEERA0051	Install, commission, service and maintain air conditioning systems*	80
UEERA0052	Install, commission, service and maintain low temperature systems*	40
UEERA0053	Install, commission, service and maintain medium temperature systems*	60
UEERA0059	Prepare and connect refrigerant tubing and fittings*	40
UEERA0062	Recover and charge refrigerants*	40
UEERA0079	Safely handle refrigerants and lubricants*	40
UEERA0081	Select refrigerant piping, accessories and associated	40

controls\*

UEERA0094	Verify functionality and compliance of refrigeration and air conditioning installations*	40
UEERA0092	Solve problems in low voltage refrigeration and air conditioning circuits*	40
UEERE0015	Implement and monitor energy sector environmental and sustainable policies and procedures	20
UEERL0001	Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply*	20
UEERL0002	Attach cords, cables and plugs to electrical equipment for connection to 1000 V a.c. or 1500 V d.c.*	20
UEERL0004	Disconnect - reconnect electrical equipment connected to low voltage (LV) installation wiring*	60
UEERL0005	Locate and rectify faults in low voltage (LV) electrical equipment using set procedures*	20

**Group A: Imported and common elective units.****Weighting Points**

BSBOPS203	Deliver a service to customers	20
CPCCWHS1001	Prepare to work safely in the construction industry	10
HLTAID009	Provide cardiopulmonary resuscitation	10
ICTICT214	Operate application software packages	20
UEECD0035	Provide basic instruction in the use of electrotechnology apparatus	20
UEECO0002	Maintain documentation	20
UEECO0015	Provide quotations for installation or service jobs	20
UEECO0017	Source and purchase material/parts for installation or service jobs	20

**Group B: Qualification elective units.****Weighting Points**

UEERA0005	Apply safety awareness and legal requirements for ammonia refrigerant	10
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UEERA0006	Apply safety awareness and legal requirements for carbon dioxide refrigerant	10
UEERA0007	Apply safety awareness and legal requirements for flammable refrigerants	10
UEERA0046	Install and commission ammonia refrigeration systems, components and associated equipment*	20
UEERA0047	Install and commission carbon dioxide refrigeration systems, components and associated equipment*	20
UEERA0048	Install and commission flammable refrigerant air conditioning and refrigeration systems*	20
UEERA0054	Maintain microbial control of refrigeration and air conditioning systems	20
UEERA0065	Repair and service ammonia refrigeration systems*	20
UEERA0066	Repair and service carbon dioxide refrigeration systems*	20
UEERA0067	Repair and service secondary refrigeration systems*	20
UEERA0068	Repair and service self-contained carbon dioxide refrigeration and heat pump systems*	20
UEERA0069	Resolve problems in beverage dispensers*	40
UEERA0070	Resolve problems in central plant air conditioning systems*	40
UEERA0072	Resolve problems in hydronic systems*	40
UEERA0073	Resolve problems in ice making systems*	20
UEERA0074	Resolve problems in industrial refrigeration systems*	20
UEERA0075	Resolve problems in post-mix refrigeration systems*	20
UEERA0076	Resolve problems in refrigerated beverage vending cabinets*	20
UEERA0077	Resolve problems in transport refrigeration systems*	20
UEERA0078	Resolve problems in ultra-low temperature refrigeration systems*	20

UEERA0084	Service and repair self-contained flammable refrigerants air conditioning and refrigeration systems*	20
UEERA0097	Install, commission, service and maintain variable refrigerant flow air conditioning systems*	40
UEERA0096	Inspect, test and repair fire and smoke control features of mechanical services systems*	40
Group C: Qualification elective units.		Weighting Points
UEECO0001	Estimate electrotechnology projects	40
UEERA0080	Select basic commercial refrigeration system equipment, components and accessories*	40
UEERA0082	Select residential air conditioning system equipment, components and accessories*	40

## Qualification Mapping Information

This qualification replaces and is equivalent to UEE42911 Certificate IV in Refrigeration and Air-conditioning Systems

## Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>