



Australian Government

UEE42920 Certificate IV in Refrigeration and Air Conditioning Systems

Release 3

UEE42920 Certificate IV in Refrigeration and Air Conditioning Systems

Modification History

Release 3. Updated superseded elective unit.

Release 2. 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 |

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| 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 controls* | 40 |
| UEERA0094 | Verify functionality and compliance of refrigeration and air conditioning installations* | 40 |

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| 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**

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| BSBOPS203 | Deliver a service to customers | 20 |
| CPCWHS1001 | 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**

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|-----------|--|----|
| UEERA0005 | Apply safety awareness and legal requirements for ammonia refrigerant | 10 |
| 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, | 20 |

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| | components and associated equipment* | |
| 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 |
| UEERA0098 | Inspect, test and repair fire and smoke control features of mechanical services systems* | 80 |

| 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>