



**Australian Government**

# **UEE42720 Certificate IV in Air Conditioning and Refrigeration Servicing**

**Release 1**

# UEE42720 Certificate IV in Air Conditioning and Refrigeration Servicing

## Modification History

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

## Qualification Description

This qualification covers 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.

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 **1350 weighting points** comprising:

**1170 core weighting points** listed below; **plus**

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

Choose a total of **180 weighting points** elective units from the list below, of which between 0 and 90 **weighting points** can be taken from Group A; and between 0 and 90 **weighting points** must be taken from Group B; and between 90 and 180 **weighting points** must be taken from Group C; or all electives units of 180 **weighting points** can be taken from Group C.

**Up to 90 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               |
| UEECD0024  | Implement and monitor energy sector WHS policies and procedures                          | 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  |
| UEERA0031 | Diagnose and rectify faults in air conditioning and refrigeration control systems*        | 60  |
| UEERA0032 | Diagnose and rectify faults in complex air conditioning/refrigeration systems*            | 100 |
| UEERA0035 | Establish the basic operating conditions of air conditioning systems*                     | 20  |
| UEERA0036 | Establish the basic operating conditions of vapour compression systems*                   | 60  |
| 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  |
| UEERE0015 | Implement and monitor energy sector environmental and sustainable policies and procedures | 20  |

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|-----------|--|----|
| 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**

|             |  |    |
|-------------|--|----|
| BSBCUS201   | Deliver a service to customers                                       | 20 |
| CPCCWHS1001 | Prepare to work safely in the construction industry                  | 10 |
| HLTAID001   | Provide cardiopulmonary resuscitation                                | 10 |
| ICTICT203   | Operate application software packages                                | 20 |
| UEECD0011   | Comply with scheduled and preventative maintenance program processes | 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**

|           |   |    |
|-----------|---|----|
| UEEIC0002 | Assemble, enter and verify operating instructions in microprocessor equipped devices* | 20 |
| UEEIC0013 | Develop, enter and verify discrete control programs for programmable controllers*     | 60 |
| UEERA0005 | Apply safety awareness and legal requirements for ammonia refrigerant                 | 10 |
| UEERA0006 | Apply safety awareness and legal requirements for                                     | 10 |

|           |   |    |
|-----------|---|----|
|           | carbon dioxide refrigerant  |    |
| 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 |

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| UEERA0084 | Service and repair self-contained flammable refrigerants air conditioning and refrigeration systems* | 20 |
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**Group C: Qualification elective units.****Weighting Points**

|           |  |    |
|-----------|--|----|
| UEECD0013 | Develop and implement energy sector maintenance programs   | 60 |
| UEEIC0014 | Develop, enter and verify programs in supervisory control and data acquisition systems*          | 60 |
| UEEIC0015 | Develop, enter and verify word and analogue control programs for programmable logic controllers* | 60 |
| UEERA0010 | Commission complex heating, ventilation and air conditioning (HVAC) systems*                     | 80 |
| UEERA0011 | Commission complex refrigeration systems and equipment*  | 80 |
| UEERA0012 | Commission complex refrigeration/air conditioning control systems*                               | 40 |
| UEERA0013 | Commission refrigeration/air conditioning hydronic systems*                                      | 80 |
| UEERA0033 | Diagnose faults in complex HVAC/refrigeration control systems*                                   | 80 |
| UEERA0056 | Monitor and adjust refrigeration energy management systems*                                      | 40 |

## Qualification Mapping Information

This qualification replaces and is equivalent to UEE42711 Certificate IV in Air-conditioning and Refrigeration Servicing

## Links

Companion Volume implementation guides are found in VETNet - -

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