



Australian Government

**UEE51120 Diploma of Engineering
Technology - Refrigeration and Air
Conditioning**

Release 3

UEE51120 Diploma of Engineering Technology - Refrigeration and Air Conditioning

Modification History

Release 3. Updated superseded imported elective units.

Release 2. Updated superseded imported elective units.

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

Qualification Description

This qualification covers competencies to develop systems and select equipment for heating, ventilation, air conditioning and/or refrigeration systems.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification

Packaging Rules

A total of **1600 weighting points** comprising:

920 core weighting points listed below; plus

680 general elective weighting points from the general elective units listed below.

Choose a total of **680 weighting points** elective units from the list below, of which between **0 and 270 weighting points** can be taken from Group A; and between **0 and 100 weighting points** must be taken from Group B; and between **60 and 170 weighting points** must be taken from Group C; and between **270 and 620 weighting points** must be taken from Group D.

Up to **270 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 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 |
| UEECD0022 | Identify building techniques, methods and materials used in energy sector work activities* | 40 |
| UEECD0027 | Participate in development and follow a personal competency development plan | 20 |
| UEECD0039 | Provide solutions to basic engineering computational problems* | 60 |
| UEECD0051 | Use drawings, diagrams, schedules, standards, codes and specifications* | 40 |
| UEERA0001 | Analyse the operation of HVAC air and hydronic systems* | 80 |
| UEERA0002 | Analyse the psychrometric performance of HVAC/R systems* | 50 |
| UEERA0003 | Analyse the thermodynamic performance of HVAC/R systems | 50 |
| UEERA0028 | Determine noise and vibration encountered in HVAC/R applications* | 80 |
| UEERA0034 | Establish heat loads for commercial refrigeration and/or air conditioning applications* | 80 |
| UEERA0038 | Establish the thermodynamic parameters of refrigeration and air conditioning systems* | 80 |

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| UEERA0042 | Evaluate thermodynamic and fluid parameters of refrigeration systems* | 100 |
| UEERA0061 | Produce HVAC/R system design drawings* | 80 |
| UEERE0013 | Develop strategies to address environmental and sustainability issues in the energy sector | 20 |
| Group A: Imported and common elective units | | Weighting Points |
| BSBOPS203 | Deliver a service to customers | 20 |
| CPCWHS1001 | Prepare to work safely in the construction industry | 10 |
| CPPBDN6106 | Produce building information modelling for building design projects | 100 |
| HLTAID009 | Provide cardiopulmonary resuscitation | 10 |
| ICTICT214 | Operate application software packages | 20 |
| MEM16006 | Organise and communicate information* | 20 |
| MEM16008 | Interact with computing technology* | 20 |
| MEM30031A | Operate computer-aided design (CAD) system to produce basic drawing elements | 40 |
| MEM30032A | Produce basic engineering drawings | 80 |
| MEM30033A | Use computer-aided design (CAD) to create and display 3-D models* | 40 |
| 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 |
| UEECS0033 | Use engineering applications software on | 40 |

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| | personal computers | |
| 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 |
| UEERA0036 | Establish the basic operating conditions of vapour compression systems* | 60 |
| UEERA0081 | Select refrigerant piping, accessories and associated controls* | 40 |
| Group C: Qualification elective units | | Weighting Points |
| UEECO0001 | Estimate electrotechnology projects | 40 |
| UEERA0060 | Produce HVAC/R control system diagrams* | 40 |
| UEERA0080 | Select basic commercial refrigeration system equipment, components and accessories* | 40 |
| UEERA0082 | Select residential air conditioning system equipment, components and accessories* | 40 |
| UEERE0015 | Implement and monitor energy sector environmental and sustainable policies and procedures | 20 |
| Group D: Qualification elective units | | Weighting Points |
| UEECD0041 | Solve electrotechnical engineering problems | 60 |
| UEECD0048 | Undertake computations in an energy sector environment | 120 |
| UEECO0014 | Prepare tender submissions for electrotechnology projects* | 60 |
| UEERA0014 | Design ammonia refrigerated systems* | 40 |
| UEERA0015 | Design carbon dioxide refrigerated systems* | 40 |
| UEERA0016 | Design commercial refrigeration systems | 80 |

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| | and select components* | |
| UEERA0021 | Design control systems for refrigeration or heating, ventilation and air conditioning systems* | 80 |
| UEERA0022 | Design heating, ventilation and air conditioning (HVAC) systems and select components* | 60 |
| UEERA0023 | Design hydrocarbon refrigerated systems* | 40 |
| UEERA0025 | Design industrial refrigeration systems and select components* | 80 |
| UEERA0027 | Design secondary refrigerant systems* | 40 |
| UEERA0039 | Evaluate and report on building services energy management systems* | 80 |
| UEERA0040 | Evaluate and report on the indoor air quality of buildings* | 40 |
| UEERE0066 | Develop effective engineering strategies for energy reduction in buildings* | 60 |

Qualification Mapping Information

This qualification replaces and is equivalent to UEE51111 Diploma of Engineering Technology - Refrigeration and Air-conditioning

Links

Companion Volume Implementation Guides are found in VETNet -

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