



Australian Government

**UEE62420 Advanced Diploma of
Engineering Technology - Air Conditioning
and Refrigeration**

Release 2

UEE62420 Advanced Diploma of Engineering Technology - Air Conditioning and Refrigeration

Modification History

Release 2. Updated superseded elective units.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 design and validate/evaluate refrigeration and air conditioning equipment and systems and provide technical advice/sales.

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 **2160 weighting points** comprising:

1360 core weighting points listed below; **plus**

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

Choose a total of **800 weighting points** elective units from the list below, of which between 0 and **350 weighting points** can be taken from Group A; and between 0 and **100 weighting points** must be taken from Group B; and between **120 and 320 weighting points** must be taken from Group C; and between **200 and 360 weighting points** must be taken from Group D; and between **360 and 480 weighting points** must be taken from Group E.

Up to 350 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
UEECD0003	Apply industry and community standards to engineering activities	20
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
UEECD0017	Establish and follow a competency development plan in an electrotechnology engineering discipline	120
UEECD0019	Fabricate, assemble and dismantle utilities industry components*	40
UEECD0023	Identify effects of energy on machinery and materials in an energy sector environment	120
UEECD0039	Provide solutions to basic engineering computational problems*	60
UEECD0041	Solve electrotechnical engineering problems	60
UEECD0049	Use advanced computational processes to provide solutions to energy sector engineering problems*	80
UEECD0051	Use drawings, diagrams, schedules, standards, codes and specifications*	40
UEECS0033	Use engineering applications software on personal computers	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
UEERA0004	Analyse vibration and noise in refrigeration and air	80

	conditioning systems*	
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
UEERA0042	Evaluate thermodynamic and fluid parameters of refrigeration systems*	100
UEERA0058	Plan refrigeration and air conditioning projects	60
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
BSBINS501	Implement information and knowledge management systems	50
BSBSTR501	Establish innovative work environments	50
CPPBDN6106	Produce building information modelling for building design projects	100
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
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

UEECO0014	Prepare tender submissions for electrotechnology projects*	60
UEECD0048	Undertake computations in an energy sector environment	120
UEERA0014	Design ammonia refrigerated systems*	40
UEERA0015	Design carbon dioxide refrigerated systems*	40
UEERA0016	Design commercial refrigeration systems and select components*	80
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
Group E: Qualification elective units.		Weighting Points
UEECO0003	Manage contract variations	40
UEERA0017	Design complex air conditioning systems and select equipment*	120
UEERA0018	Design complex commercial refrigeration systems and select equipment*	40
UEERA0019	Design complex control systems for refrigeration or heating, ventilation, air conditioning systems*	80
UEERA0020	Design complex industrial refrigeration systems and select equipment*	40
UEERA0024	Design hydronic systems and select equipment*	80
UEERA0026	Design mechanical ventilation/exhaust systems and select equipment*	40
UEERA0029	Develop heat exchanger design specifications*	80
UEERA0030	Develop specifications and prepare drawings for HVAC/R projects*	60
UEERA0041	Evaluate new and alternative technologies applicable to electrotechnology applications	40

Qualification Mapping Information

This qualification replaces and is equivalent to UEE62411 Advanced Diploma of Engineering Technology - Air-conditioning and Refrigeration

Links

Companion Volume implementation guides are found in VETNet - -

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