



**Australian Government**

# **UEE61220 Advanced Diploma of Engineering - Explosion protection**

**Release 1**

# UEE61220 Advanced Diploma of Engineering - Explosion protection

## Modification History

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

## Qualification Description

This qualification covers competencies to assess and manage risk associated with hazardous areas, design and validate/evaluate explosion-protection aspects of electrical and instrument systems, audit explosion-protected installations and provide explosion-protection technical advice/sales.

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

## Entry Requirements

The entry requirement for this qualification is:

- UEE30820 Certificate III in Electrotechnology Electrician

OR

- a current 'Unrestricted Electricians Licence' or its equivalent issued in an Australian state or territory.

## Packaging Rules

A total of **1220 weighting points** comprising:

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

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

Choose a total of **380 weighting points** elective units from the list below, of which between 0 and 170 **weighting points** can be taken from Group A; between 0 and 60 **weighting points** can be taken from Group B; between 0 and 80 **weighting points** can be taken from Group C; between 0 and 60 **weighting points** can be taken from Group D; and between 160 and 380 **weighting points** can be taken from Group E (or all elective **weighting points** can be taken from Group E).

**Up to 170 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.

<b>Core units</b>		<b>Weighting Points</b>
UEECD0003	Apply industry and community standards to engineering activities	20
UEECD0004	Apply material science to solving electrotechnology engineering problems	60
UEECD0005	Apply physics to solving electrotechnology engineering problems	60
UEECD0010	Compile and produce an energy sector detailed report	60
UEECD0014	Develop design briefs for electrotechnology projects	40
UEECD0017	Establish and follow a competency development plan in an electrotechnology engineering discipline	120
UEECD0024	Implement and monitor energy sector WHS policies and procedures	20
UEECD0026	Manage risk in electrotechnology activities	60
UEECD0036	Provide engineering solutions for problems in complex multiple path circuits	60
UEECD0039	Provide solutions to basic engineering computational problems*	60
UEECD0056	Apply methods to maintain currency of industry developments	20
UEECD0059	Write specifications for electrical engineering projects	40
UEECS0033	Use engineering applications software on personal computers	40

UEEEL0015	Manage large electrical projects*	40
UEEEL0058	Plan large electrical projects*	60
UEEEL0062	Provide engineering solutions to problems in complex polyphase power circuits*	60
UEERE0013	Develop strategies to address environmental and sustainability issues in the energy sector	20

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

BSBINM501	Manage an information or knowledge management system	50
BSBINN502	Build and sustain an innovative work environment	50
BSBMGT502	Manage people performance	70
BSBMGT516	Facilitate continuous improvement	60
BSBWOR502	Lead and manage team effectiveness	60
PMASUP410	Develop plant documentation	30

**Group B: General elective units** **Weighting Points**

UEEHA0001	Conduct detailed inspection of electrical installations for hazardous areas*	40
UEEHA0003	Determine the explosion-protection requirements to meet a specified classified hazardous area*	40
UEEHA0005	Install explosion-protected equipment and associated apparatus and wiring systems*	60
UEEHA0006	Maintain equipment associated with hazardous areas*	60

**Group C: General elective units** **Weighting Points**

UEECO0001	Estimate electrotechnology projects	40
UEEHA0001	Conduct detailed inspection of electrical installations for hazardous areas*	40
UEEHA0002	Conduct visual and close inspection of electrical	40

installations for hazardous areas\*

UEEHA0003	Determine the explosion-protection requirements to meet a specified classified hazardous area*	40
UEEHA0006	Maintain equipment associated with hazardous areas*	60
UEEHA0009	Develop and manage periodic electrical inspection and maintenance programs for hazardous areas*	20

#### **Group D: General elective units**

#### **Weighting Points**

UEECD0013	Develop and implement energy sector maintenance programs	60
UEECO0014	Prepare tender submissions for electrotechnology projects*	60
UEEEL0006	Develop detailed and complex drawings for electrical systems using CAD systems*	60
UEEEL0011	Evaluate performance of low voltage electrical apparatus*	40
UEEHA0007	Plan electrical installations for hazardous areas*	20

#### **Group E: General elective units**

#### **Weighting Points**

UEECD0001	Analyse materials for suitability in electrical equipment*	80
UEECD0002	Analyse static and dynamic parameters of electrical equipment	80
UEECD0012	Contribute to risk management in electrotechnology systems	20
UEECD0037	Provide engineering solutions for uses of materials and thermodynamic effects	80
UEECD0049	Use advanced computational processes to provide solutions to energy sector engineering problems*	80
UEECO0003	Manage contract variations	40
UEEEL0041	Develop engineering solution for synchronous machine and control problems*	60

UEEEL0042	Develop engineering solutions for d.c. machine and control problems*	60
UEEEL0043	Develop engineering solutions for induction machine and control problems*	60
UEEHA0008	Design gas detection systems	20
UEEHA0010	Supervise repair and overhaul of explosion-protected equipment type Group III ('t')*	60
UEEHA0011	Supervise repair and overhaul of explosion-protected equipment type flameproof (Ex d)*	60
UEEHA0012	Supervise repair and overhaul of explosion-protected equipment type increased safety (Ex e)*	60
UEEHA0013	Supervise repair and overhaul of explosion-protected equipment type intrinsically safe (Ex i)*	60
UEEHA0014	Supervise repair and overhaul of explosion-protected equipment type pressurised (Ex p)*	60
UEEHA0015	Supervise repair and overhaul of explosion-protected rotating machines*	60

## Qualification Mapping Information

This qualification replaces and is not equivalent to UEE61211 Advanced Diploma of Engineering - Explosion protection

## Links

Companion Volume implementation guides are found in VETNet - -

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