



**Australian Government**

# **UEE61222 Advanced Diploma of Engineering - Explosion protection**

**Release 1**

# UEE61222 Advanced Diploma of Engineering - Explosion protection

## Modification History

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

This qualification replaces and is not equivalent to UEE61220 Advanced Diploma of Engineering - Explosion protection.

Modifications in this release include:

- Total weighting points increased from 1220 to 1320
- Core weighting points increased from 840 to 1080
- Elective weighting points reduced from 480 to 240
- UEEHA0022, UEEHA0004, UEEHA0017, UEEHA0018 and UEEHA0027 added to core.
- UEEHA0022 removed from Group B.
- UEEHA0020 removed from Group C.
- UEEHA0028, UEEHA0016 and UEEHA0019 added to Group D.
- UEEHA0021 added to Group E.
- Codes of superseded units updated.

## 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:

- 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 **1320 weighting points** comprising:

**1080 core weighting points** listed below; **plus**

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

Choose a total of 240 **weighting points** elective units from the list below, of which between 0 and 100 **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 140 and 240 **weighting points** can be taken from Group E (or all elective **weighting points** can be taken from Group E).

**Up to 100 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
UEEHA0004	Enter a classified hazardous area to undertake work related to electrical equipment	40
UEEHA0017	Classify areas where a combustible dust hazard may arise	60
UEEHA0018	Classify areas where flammable gas or vapour hazards may arise	60
UEEHA0022	Determine the explosion-protection requirements to meet a specified classified hazardous area*	40
UEEHA0027	Manage continuous supervision inspection of electrical installations for hazardous areas*	40
UEERE0013	Develop strategies to address environmental and sustainability issues in the energy sector	20
<b>Group A: Imported and common elective units</b>		<b>Weighting Points</b>
BSBINS501	Implement information and knowledge management systems	50
BSBLDR522	Manage people performance	70

BSBSTR501	Establish innovative work environments	50
BSBSTR502	Facilitate continuous improvement	60
BSBTWK502	Manage team effectiveness	60
PMASUP410	Develop plant documentation	30
<b>Group B: General elective units</b>		<b>Weighting Points</b>
UEEHA0020	Conduct detailed inspection of electrical installations for hazardous areas*	40
UEEHA0025	Install explosion-protected equipment and associated apparatus and wiring systems*	60
UEEHA0026	Maintain equipment associated with hazardous areas*	60
<b>Group C: General elective units</b>		<b>Weighting Points</b>
UEECO0001	Estimate electrotechnology projects	40
UEEHA0023	Develop and manage periodic electrical inspection and maintenance programs for hazardous areas*	20
UEEHA0038	Conduct visual and close inspection of electrical installations for hazardous areas*	40
<b>Group D: General elective units</b>		<b>Weighting Points</b>
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
UEEHA0016	Assess the fitness-for-purpose of explosion-protected equipment *	60

UEEHA0019	Conduct a conformity assessment review of explosion-protected equipment *	40
UEEHA0028	Perform compliance audits of hazardous areas and related electrical installation *	60
UEEHA0029	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
UEEHA0021	Design explosion-protected of electrical systems and installations	60
UEEHA0031	Supervise repair and overhaul of explosion-protected equipment type flameproof (Ex d)*	60
UEEHA0032	Supervise repair and overhaul of explosion-protected equipment type increased	60

	safety (Ex e)*	
UEEHA0033	Supervise repair and overhaul of explosion-protected equipment type intrinsically safe (Ex i)*	60
UEEHA0034	Supervise repair and overhaul of explosion-protected equipment type pressurised (Ex p)*	60
UEEHA0035	Supervise repair and overhaul of explosion-protected rotating machines*	60
UEEHA0039	Supervise repair and overhaul of explosion-protected equipment type Group III ('t')*	60

## Qualification Mapping Information

This qualification replaces and is not equivalent to UEE61220 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>