



Australian Government

UEE50920 Diploma of Industrial Electronics and Control Engineering

Release 2

UEE50920 Diploma of Industrial Electronics and Control Engineering

Modification History

Release 2. This is the second release of this qualification in the UEE Electrotechnology Training Package. Modifications include:

- Updated superseded imported elective units
- The following units added to electives (see UEE Release 5.0 Companion Volume Implementation Guide for mapping of deleted UEE units to imported ICT units):
 - ICTNWK426
 - ICTTEN409
 - ICTPRG549
 - CTPRG534
 - ICTWEB447.

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

Qualification Description

This qualification covers competencies to develop, select, commission, maintain and diagnose faults/malfunctions of equipment and systems for the monitoring and control of plant, machines and processes.

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 **760 weighting points** comprising:

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

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

Choose a total of 480 **weighting points** elective units from the list below, of which between 0 and 220 **weighting points** can be taken from Group A; between 0 and 100 **weighting points** can be taken from Group B; between 0 and 120 **weighting points** can be taken from Group C; and between 260 and 480 **weighting points** can be taken from Group D (or all minimum 480 **weighting points** can be taken from Group D).

Up to 220 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
UEECD0010	Compile and produce an energy sector detailed report	60
UEECD0024	Implement and monitor energy sector WHS policies and procedures	20
UEECD0027	Participate in development and follow a personal competency development plan	20
UEECD0055	Write specifications for industrial electronics and control projects	40
UEEIC0018	Diagnose and rectify faults in digital controls systems*	60
UEEIC0020	Fault find and repair analogue circuits and components in electronic control systems*	60
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

BSBLDR522	Manage people performance	70
BSBSTR502	Facilitate continuous improvement	60
BSBTWK502	Manage team effectiveness	60
ICTICT214	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
UEECO0015	Provide quotations for installation or service jobs	20
UEECO0017	Source and purchase material/parts for installation or service jobs	20

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

UEECS0033	Use engineering applications software on personal computers	40
UEEEEC0003	Assemble and set up basic security systems*	80
UEEEEC0060	Repairs basic electronic apparatus faults by replacement of components*	40
UEEEEC0075	Troubleshoot single phase input d.c power supplies*	40
UEEEL0004	Carry out basic repairs to electrical components and equipment*	40
UEEEL0045	Diagnose and rectify faults in traction lift systems*	80
UEEEL0046	Find and repair faults in LV d.c. electrical apparatus and circuits*	60
UEEEL0049	Install and maintain emergency safety systems*	60
UEEEL0053	Maintain operation of electrical marine equipment and systems*	60
UEEEL0054	Maintain operation of electrical mining equipment and systems*	60
UEEEL0055	Overhaul and repair major switchgear and control gear*	60
UEEIC0002	Assemble, enter and verify operating instructions in	20

	microprocessor equipped devices*	
UEEIC0013	Develop, enter and verify discrete control programs for programmable controllers*	60
UEEIC0038	Solve problems in density/level measurement components and systems*	40
UEEIC0039	Solve problems in flow measurement components and systems*	40
UEEIC0041	Solve problems in pressure measurement components and systems*	40
UEEIC0043	Solve problems in temperature measurement components and systems*	40
UEEIC0047	Use instrumentation drawings, specifications, standards and equipment manuals*	40
Group C: General elective units		Weighting Points
ICTNWK426	Install and configure client-server applications and services	60
UEECO0001	Estimate electrotechnology projects	40
UEECS0014	Develop computer network services*	120
UEEEL0007	Develop detailed electrical drawings*	60
UEEEL0027	Carry out low voltage electrical field testing and report findings*	60
UEEIC0012	Develop structured programs to control external devices*	40
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
UEEIC0026	Provide solutions to fluid circuit operations*	60
UEEIC0027	Provide solutions to pneumatic-hydraulic system operations*	80
UEEIC0028	Provide solutions to problems in industrial control systems*	60

UEEIC0034	Set up industrial field control devices*	60
UEEIC0040	Solve problems in polyphase electronic power control circuits*	60
UEEIC0042	Solve problems in single phase electronic power control circuits*	60

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

ICTTEN409	Commission an electronic system	50
ICTPRG549	Apply intermediate object-oriented language skills	60
ICTPRG534	Deploy applications to production environments	40
ICTWEB447	Build basic website using development software and ICT tools	20
UEECS0004	Commission industrial computer systems*	20
UEECS0019	Develop, implement and test object-oriented code*	140
UEECS0025	Modify/redesign industrial computer systems*	20
UEECS0031	Set up, create and implement content for a web server*	120
UEEEL0006	Develop detailed and complex drawings for electrical systems using CAD systems*	60
UEEEL0011	Evaluate performance of low voltage electrical apparatus*	40
UEEIC0005	Configure and maintain industrial control system networks*	60
UEEIC0010	Develop and test code for microcontroller devices	60
UEEIC0016	Diagnose and rectify faults in a.c. motor drive systems*	60
UEEIC0017	Diagnose and rectify faults in d.c. motor drive systems*	60
UEEIC0019	Diagnose and rectify faults in servo drive systems*	60

Qualification Mapping Information

This qualification replaces and is not equivalent to UEE50911 Diploma of Industrial Electronics and Control Engineering

Links

Companion Volume implementation guides are found in VETNet - -

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