Australian Government

# UEE40920 Certificate IV in Industrial Electronics and Control

**Release 3**

# UEE40920 Certificate IV in Industrial Electronics and Control

## Modification History

Release 3. Updated superseded HLT, BSB and ICT elective units.

Release 2. This minor update is the second release of this qualification in the UEE Electrotechnology Training Package.

One unit added to general electives.

Imported elective units updated.

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

## Qualification Description

This qualification covers competencies to select, install, commission, fault find and maintain equipment and systems for the 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 **440 weighting points** comprising:

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

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

Choose a total of 200 **weighting points** elective units from the list below, of which between 0 and 100 **weighting points** can be taken from Group A; and between 0 and 100 **weighting points** can be taken from Group B; and between 100 and 200 **weighting points** can be taken from Group C (or all minimum 200 **weighting points** can be taken from Group C).

**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.

| **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 |
| UEEIC0018 | Diagnose and rectify faults in digital controls systems* | 60 |
| UEEIC0020 | Fault find and repair analogue circuits and components in electronic control systems* | 60 |
| UEERE0015 | Implement and monitor energy sector environmental and sustainable policies and procedures | 20 |

| **Group A: Imported and common elective units** | | **Weighting Points** |
|---|---|---|
| BSBOPS203 | Deliver a service to customers | 20 |
| CPCCWHS1001 | Prepare to work safely in the construction industry | 10 |
| HLTAID009 | Provide cardiopulmonary resuscitation | 10 |
| ICTICT214 | Operate application software packages | 20 |
| UEECD0011 | Comply with scheduled and preventative maintenance program processes | 20 |
| UEECD0035 | Provide basic instruction in the use of | 20 |

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|---|---|---|
| | electrotechnology apparatus | |
| 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: General elective units** | | **Weighting Points** |
|---|---|---|
| UEECD0030 | Prepare electrotechnology/utilities drawings using manual drafting and CAD equipment and software* | 60 |
| UEECD0031 | Prepare engineering drawings using manual drafting and CAD for electrotechnology applications* | 60 |
| UEECD0032 | Produce detailed electrotechnology/utilities drawings using CAD equipment and software* | 60 |
| UEECD0050 | Use and maintain the integrity of a portable gas detection device* | 20 |
| UEECS0033 | Use engineering applications software on personal computers | 40 |
| UEEDV0005 | Install and maintain cabling for multiple access to telecommunication services* | 80 |
| UEEDV0008 | Install, modify and verify coaxial and structured communication copper cabling* | 40 |
| UEEEC0003 | Assemble and set up basic security systems* | 80 |
| UEEEC0060 | Repairs basic electronic apparatus faults by replacement of components* | 40 |
| UEEEC0075 | Troubleshoot single phase input d.c power supplies* | 40 |
| UEEEL0046 | Find and repair faults in LV d.c. electrical apparatus and circuits* | 60 |
| UEEEL0053 | Maintain operation of electrical marine equipment and systems* | 60 |

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| UEEEL0054 | Maintain operation of electrical mining equipment and systems* | 60 |
| UEEHA0003 | Determine the explosion-protection requirements to meet a specified classified hazardous area* | 40 |
| UEEHA0004 | Enter a classified hazardous area to undertake work related to electrical equipment | 40 |
| UEEHA0005 | Install explosion-protected equipment and associated apparatus and wiring systems* | 60 |
| UEEHA0006 | Maintain equipment associated with hazardous areas* | 60 |
| UEEIC0002 | Assemble, enter and verify operating instructions in microprocessor equipped devices* | 20 |
| 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 |
| UEERE0050 | Identify and isolate multiple supply systems* | 20 |

| **Group C: General elective units** | | **Weighting Points** |
|---|---|---|
| UEECO0001 | Estimate electrotechnology projects | 40 |
| 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 |

## Qualification Mapping Information

This qualification replaces and is equivalent to UEE40911 Certificate IV in Industrial Electronics and Control

## Links

Companion Volume Implementation Guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6