



Australian Government

UEE40720 Certificate IV in Electronics and Communications

Release 2

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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- Updated superseded imported elective units
- ICTPRG444 added to electives (see UEE Release 5.0 Companion Volume Implementation Guide for mapping of deleted UEE units to imported ICT units)

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

Qualification Description

This qualification covers competencies in audio/video, data systems and computer/network hardware, medical applications and communication aspects of electronic i.e. transmitters, communications medium/channel, receivers, attenuation and noise reduction. It includes detection/surveillance.

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 **1280 weighting points** comprising:

720 core weighting points listed below; plus

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

Choose a total of **560 weighting points** elective units from the list below, of which between **0 and 220 weighting points** can be taken from Group A; and between **0 and 360 weighting points** must be taken from Group B; and between **200 and 560 weighting points** must be taken from Group C; or all **560 weighting points** can be taken from Group C.

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
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
UEECD0019	Fabricate, assemble and dismantle utilities industry components*	40
UEECD0024	Implement and monitor energy sector WHS policies and procedures	20
UEECD0027	Participate in development and follow a personal competency development plan	20
UEECD0043	Solve problems in direct current circuits*	80
UEEEEC0028	Fault find and repair complex power supplies*	40
UEEEEC0060	Repairs basic electronic apparatus faults by replacement of components*	40
UEEEEC0063	Solve fundamental electronic communications system problems*	40
UEEEEC0066	Troubleshoot amplifiers in an electronic apparatus*	80
UEEEEC0067	Troubleshoot basic amplifier circuits*	40
UEEEEC0069	Troubleshoot digital sub-systems*	80
UEEEEC0074	Troubleshoot resonance circuits in an electronic apparatus*	80
UEEEEC0075	Troubleshoot single phase input d.c power supplies*	40
UEERE0015	Implement and monitor energy sector environmental and	20

sustainable policies and procedures

Group A: Imported and common elective units		Weighting Points
BSBOPS203	Deliver a service to customers	20
ICTICT214	Operate application software packages	20
ICTTEN312	Install telecommunications network equipment	40
MSS402003	Apply competitive systems and practices	20
MSS402022	Apply quick changeover procedures	20
MSS402023	Apply Just in Time procedures	20
MSS402042	Apply 5S procedures	20
MSS402084	Undertake root cause analysis	20
MSS402085	Contribute to the application of a proactive maintenance strategy	20
UEECD0011	Comply with scheduled and preventative maintenance program processes	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
UEEAS0001	Assemble electronic components*	40
UEEAS0002	Conduct quality and functional tests on assembled electronic apparatus*	20
UEEAS0003	Modify electronic sub-assemblies*	40
UEEAS0004	Select electronic components for assembly*	20
UEEAS0005	Set up and check electronic component assembly machines*	40
UEEAS0006	Use lead-free soldering techniques*	40

UEECD0008	Carry out preparatory energy sector work activities*	60
UEECD0020	Fix and secure electrotechnology equipment*	20
UEECD0021	Identify and select components, accessories and materials for energy sector work activities*	20
UEECD0025	Lay wiring/cablings and terminate accessories for extra-low voltage (ELV) circuits*	40
UEECD0028	Plan an integrated cabling installation system*	40
UEECD0040	Solve basic problems electronic and digital equipment and circuits*	80
UEECD0051	Use drawings, diagrams, schedules, standards, codes and specifications*	40
UEECS0003	Assemble, set up and test computing devices*	80
UEECS0018	Develop web pages for engineering applications	40
UEECS0022	Install and configure a client computer operating system and software	40
UEECS0028	Select, install, configure and test multimedia components	40
UEECS0029	Set up and configure basic local area network (LAN)*	80
UEECS0030	Set up, configure and test biometric devices	40
UEECS0032	Support computer hardware and software for engineering applications	120
UEECS0033	Use engineering applications software on personal computers	40
UEEDV0004	Install and connect data and voice communication equipment*	40
UEEDV0005	Install and maintain cabling for multiple access to telecommunication services*	80
UEEDV0006	Install and modify optical fibre performance data communication cabling*	40
UEEDV0008	Install, modify and verify coaxial and structured communication copper cabling*	40
UEEDV0009	Select and arrange data and voice equipment for local	40

	area networks*	
UEEDV0010	Select and arrange equipment for wireless communication networks*	40
UEEDV0011	Set up and configure basic data communication systems*	40
UEEDV0012	Set up and configure the wireless capabilities of communications and data storage devices	40
UEEDV0013	Solve problems in voice and data communications circuits*	40
UEEDV0014	Test, report and rectify faults in data and voice installations*	40
UEEEC0002	Assemble and install reception antennae and signal distribution equipment*	60
UEEEC0003	Assemble and set up basic security systems*	80
UEEEC0004	Assemble and set up fixed video/audio components and systems in buildings and premises*	120
UEEEC0006	Carry out repairs of predictable faults in video and audio replay/recording apparatus*	120
UEEEC0008	Commission large fire protection systems*	40
UEEEC0019	Develop software solutions for microcontroller-based systems*	60
UEEEC0026	Enter and verify programs for fire protection systems*	40
UEEEC0027	Enter instructions and test wired and wireless security systems*	40
UEEEC0029	Fault find and repair electronic apparatus*	40
UEEEC0032	Fault find and repair high-volume office equipment*	120
UEEEC0038	Find and repair microwave amplifier section faults in electronic apparatus*	40
UEEEC0039	Install and test microwave antennae and waveguides*	60
UEEEC0040	Install commercial video/audio system components*	120
UEEEC0041	Install fire detection and warning system apparatus*	40

UEEEEC0042	Install large security systems*	100
UEEEEC0046	Operate and maintain amateur radio communication stations*	40
UEEEEC0048	Program and commission commercial access control security systems*	60
UEEEEC0049	Program and commission commercial security closed-circuit television systems*	60
UEEEEC0050	Program and commission commercial security systems*	60
UEEEEC0055	Repair basic computer equipment faults by replacement of modules/sub-assemblies*	40
UEEEEC0056	Repair predictable faults in audio components*	40
UEEEEC0057	Repair predictable faults in general electronic apparatus*	40
UEEEEC0058	Repair predictable faults in television receivers*	120
UEEEEC0059	Repair routine business equipment faults*	120
UEEEEC0061	Set up and adjust commercial radio frequency (RF) transmission and reception systems*	60
UEEEEC0062	Set up and test residential video/audio equipment*	40
UEEEEC0064	Solve oscillator problems*	40
UEEEEC0065	Solve problems in basic electronic circuits*	100
UEEEEC0068	Troubleshoot communication systems*	80
UEEEEC0070	Troubleshoot faults in television receivers*	120
UEEEEC0071	Troubleshoot fire protection systems*	40
UEEEEC0072	Troubleshoot microcontroller-based hardware systems	40
UEEEEC0073	Troubleshoot professional audio reproduction components*	120
UEEEEC0076	Verify compliance and functionality of fire protection system installations*	60
UEEEEC0077	Verify functionality and compliance of custom electronic installations*	40

UEEIC0002	Assemble, enter and verify operating instructions in microprocessor equipped devices*	20
UEEIC0013	Develop, enter and verify discrete control programs for programmable controllers*	60
UEERL0001	Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply*	20
UEERL0002	Attach cords, cables and plugs to electrical equipment for connection to 1000 V a.c. or 1500 V d.c.*	20

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

ICTPRG444	Analyse software requirements	60
UEECD0013	Develop and implement energy sector maintenance programs	60
UEECD0047	Supervise and coordinate energy sector work activities	40
UEECO0001	Estimate electrotechnology projects	40
UEECO0013	Prepare specifications for the supply of materials and equipment for electrotechnology projects	40
UEECS0002	Analyse and implement biometric measuring techniques and applications	120
UEECS0020	Evaluate and modify object-oriented code programs	40
UEEEEC0009	Commission satellite and microwave communication systems*	40
UEEEEC0012	Design custom electronic equipment installations*	120
UEEEEC0015	Develop basic plans for integrating security systems*	40
UEEEEC0022	Diagnose and rectify faults in camera circuits and equipment*	60
UEEEEC0023	Diagnose and rectify faults in digital transmission circuits and systems*	80
UEEEEC0024	Diagnose and rectify faults in electronic display circuits*	60
UEEEEC0025	Diagnose and rectify faults in recording and replay equipment	60
UEEEEC0030	Fault find and repair electronic medical equipment*	120

UEEEEC0031	Fault find and repair global positioning systems*	60
UEEEEC0033	Fault find and repair navigation systems*	60
UEEEEC0034	Fault find and repair radar apparatus and systems*	120
UEEEEC0035	Fault find and repair satellite-based surveillance and observation systems*	60
UEEEEC0036	Fault find and repair sonar apparatus and systems*	120
UEEEEC0037	Fault find and repair telecommunication apparatus and systems*	60
UEEEEC0051	Program and commission commercial video/audio systems*	40
UEEEEC0052	Program and test large security systems*	120
UEEIC0012	Develop structured programs to control external devices*	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
UEEIC0028	Provide solutions to problems in industrial control systems*	60

Qualification Mapping Information

This qualification replaces and is equivalent to UEE40711 Certificate IV in Electronics and Communications

Links

Companion Volume Implementation Guides are found in VETNet -

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