



Australian Government

UEE40711 Certificate IV in Electronics and Communications

Release 4

UEE40711 Certificate IV in Electronics and Communications

Modification History

| Release | Action | Core/Elective | Details | Points |
|---------|--------|---------------|---|--------|
| 2 | Add | Group B | UEENEEP024A Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply | 20 |
| 2 | Add | Group B | UEENEEI150A Develop, enter and verify discrete control programs for programmable controllers | 60 |
| 2 | Edit | | Edit Name to reflect correct Unit title UEENEEI104A Use engineering applications software on personal computers | 40 |
| 2 | Edit | | Edit Name to Reflect correct Unit Title UEENEEI124A Fault find and repair analogue circuits and components in electronic control systems | |
| 2 | Update | Group A | MSS402001A Apply competitive systems and practices | 20 |
| 2 | Update | Group A | MSS402021A Apply Just in Time procedures | 20 |
| 2 | Update | Group A | MSS402080A Undertake root cause analysis | 20 |
| 2 | Update | Group A | MSS402081A Contribute to the application of a proactive maintenance strategy | 20 |
| 2 | Update | Group A | MSS402040A Apply 5S procedures | 20 |
| 2 | Update | Group A | MSS402020A Apply quick changeover procedures | 20 |
| 3 | Add | Group B | UEENEEP025A Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply | 20 |
| 4 | Remove | Group C | UEENEEH189A Design electronic printed circuit boards | 40 |

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|---|------|------|--|----|
| 4 | Edit | Core | Correct title of UEENEEK145A - Implement and monitor energy sector environmental and sustainable policies and procedures | 20 |
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Description

Scope

This qualification provides 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, noise reduction. It includes detection/surveillance.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

Not applicable.

Packaging Rules

Completion requirements

The requirements for granting this qualification will be met when competency is demonstrated and achieved for:

- All the Core competency standard units, defined in the Core Competency Standard Units table below and
- A combination of Elective competency standard units to achieve a total weighting of 560 points in accordance with the Elective Competency Standard Units table below.

| Core Competency Standard Units All Core competency standard units to be achieved | | Weighting Points |
|---|---|------------------|
| UEENEEE038B | Participate in development and follow a personal competency development plan | 20 |
| UEENEEE101A | Apply Occupational Health and Safety regulations, codes and practices in the workplace | 20 |
| UEENEEE102A | Fabricate, assemble and dismantle utilities industry components | 40 |
| UEENEEE104A | Solve problems in d.c. circuits | 80 |
| UEENEEE117A | Implement and monitor energy sector OHS policies and procedures | 20 |
| UEENEEE124A | Compile and produce an energy sector detailed report | 60 |
| UEENEEE137A | Document and apply measures to control OHS risks associated with electrotechnology work | 20 |
| UEENEEH102A | Repairs basic electronic apparatus faults by replacement of components | 40 |
| UEENEEH111A | Troubleshoot single phase input d.c. power supplies | 40 |
| UEENEEH112A | Troubleshoot digital sub-systems | 80 |
| UEENEEH113A | Troubleshoot amplifiers in an electronic apparatus | 80 |
| UEENEEH114A | Troubleshoot resonance circuits in an electronic apparatus | 80 |
| UEENEEH138A | Fault find and repair complex power supplies | 40 |

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| UEENEEH139A | Troubleshoot basic amplifier circuits | 40 |
| UEENEEH146A | Solve fundamental electronic communications system problems | 40 |
| UEENEEK145A | Implement and monitor energy sector environmental and sustainable policies and procedures | 20 |
| Total points in core | | 720 |

Elective Competency Standard Units

Complete Elective units to achieve a total of weighting of 560 points from the following groups:

| Group | | Minimum points | Maximum points |
|----------|--|----------------|----------------|
| A | Imported and Common Elective Units Imported units from other training packages and/or state accredited courses can be added to this group, but they must be selected from qualifications where the unit is first packaged at AQF level 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points. | 0 | 220 |
| B | Qualification Elective Units | 0 | 360 |
| C | Qualification Elective Units You may select all your elective units from this Group | 200 | 560 |

| Group A – Imported and Common Elective Units | | Weighting Points |
|--|---|------------------|
| You may complete units to a maximum weighting of 220 | | |
| UEENEEC001B | Maintain documentation | 20 |
| UEENEEC002B | Source and purchase material/parts for installation or service jobs | 20 |
| UEENEEC003B | Provide quotations for installation or service jobs | 20 |
| UEENEEC010B | Deliver a service to customers | 20 |
| UEENEEC101A | Use computer applications relevant to a workplace | 20 |

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| UEENEEE009B | Comply with scheduled and preventative maintenance program processes | 20 |
| UEENEEE020B | Provide basic instruction in the use of electrotechnology apparatus | 20 |
| ICTTEN3056A | Install telecommunications network equipment | 40 |
| MSS402001A | Apply competitive systems and practices | 20 |
| MSS402020A | Apply quick changeover procedures | 20 |
| MSS402021A | Apply Just in Time procedures | 20 |
| MSS402040A | Apply 5S procedures | 20 |
| MSS402080A | Undertake root cause analysis | 20 |
| MSS402081A | Contribute to the application of a proactive maintenance strategy | 20 |
| | <p>Imported units from other training packages and/or state accredited courses can be added to this group, but they must be selected from qualifications where the unit is first packaged at AQF level 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.</p> <p>Note: For further information see Application of the NQC Flexibility Formula, UEE11 Electrotechnology Training Package, Version 1, Volume 1 Qualification Framework</p> | Up to 220 points |

| Group B – Qualification Elective Units | | Weighting Points |
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| You may complete units to a maximum weighting of 360 | | |
| UEENEEA101A | Assemble electronic components | 40 |
| UEENEEA102A | Select electronic components for assembly | 20 |
| UEENEEA103A | Set up and check electronic component assembly machines | 40 |
| UEENEEA104A | Modify electronic sub assemblies | 40 |
| UEENEEA105A | Conduct quality and functional tests on assembled electronic apparatus | 20 |
| UEENEEA106A | Use lead-free soldering techniques | 40 |
| UEENEEB101A | Operate and maintain amateur radio communication stations | 40 |
| UEENEEED102A | Assemble, set-up and test computing devices | 80 |
| UEENEEED104A | Use engineering applications software on personal computers | 40 |
| UEENEEED112A | Support computer hardware and software for engineering applications | 120 |
| UEENEEED129A | Develop web pages for engineering applications | 40 |
| UEENEEED130A | Select, install, configure and test multimedia components | 40 |
| UEENEEED143A | Install and configure a client computer operating system and software | 40 |
| UEENEEED146A | Set up and configure basic local area network (LAN) | 80 |
| UEENEEED153A | Set up, configure and test biometric devices | 40 |
| UEENEEEE105A | Fix and secure electrotechnology equipment | 20 |
| UEENEEEE107A | Use drawings, diagrams, schedules, standards, codes and specifications | 40 |
| UEENEEEE108A | Lay wiring/cabling and terminate accessories for | 40 |

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| | extra-low voltage (ELV) circuits | |
| UEENEEE121A | Plan an integrated cabling installation system | 40 |
| UEENEEE122A | Carry out preparatory energy sector work activities | 60 |
| UEENEEE123A | Solve basic problems electronic and digital equipment and circuits | 80 |
| UEENEEE179A | Identify and select components, accessories and materials for energy sector work activities | 20 |
| UEENEEF102A | Install and maintain cabling for multiple access to telecommunication services | 120 |
| UEENEEF104A | Install and modify performance data communication copper cabling | 40 |
| UEENEEF105A | Install and modify optical fibre performance data communication cabling | 40 |
| UEENEEF106A | Solve problems in voice and data communications circuits | 40 |
| UEENEEF107A | Set up and configure the wireless capabilities of communications and data storage devices | 40 |
| UEENEEF108A | Select and arrange equipment for wireless communication networks | 40 |
| UEENEEF109A | Install and connect data and voice communication equipment | 40 |
| UEENEEF110A | Select and arrange data and voice equipment for local area networks | 40 |
| UEENEEF111A | Test, report and rectify faults in data and voice installations | 40 |
| UEENEEF114A | Set up and configure basic data communication systems | 40 |
| UEENEEH101A | Repair basic computer equipment faults by replacement of modules/sub-assemblies | 40 |
| UEENEEH103A | Repair routine business equipment faults | 120 |
| UEENEEH104A | Set up and test residential video/audio equipment | 40 |

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| UEENEEH105A | Verify functionality and compliance of custom electronic installations | 40 |
| UEENEEH106A | Assemble and set up fixed video/audio components and systems in buildings and premises | 120 |
| UEENEEH107A | Repair predictable faults in general electronic apparatus | 40 |
| UEENEEH108A | Assemble and install reception antennae and signal distribution equipment | 60 |
| UEENEEH109A | Set up and test gaming and game equipment | 60 |
| UEENEEH110A | Install commercial video/audio system components | 120 |
| UEENEEH115A | Develop software solutions for microcontroller based systems | 60 |
| UEENEEH116A | Find and repair microwave amplifier section faults in electronic apparatus | 40 |
| UEENEEH117A | Carry out repairs of predictable faults in video and audio replay/recording apparatus | 120 |
| UEENEEH118A | Fault find and repair electronic apparatus | 40 |
| UEENEEH119A | Repair predictable faults in television receivers | 120 |
| UEENEEH120A | Fault find and repair gaming and games equipment | 80 |
| UEENEEH121A | Fault find and repair high volume office equipment | 120 |
| UEENEEH122A | Fault find and repair remote control apparatus | 60 |
| UEENEEH123A | Fault find and repair microwave heating apparatus | 40 |
| UEENEEH124A | Repair predictable faults in audio components | 40 |
| UEENEEH127A | Set up and adjust commercial radio frequency (RF) transmission and reception systems | 60 |
| UEENEEH128A | Install and test microwave antennae and waveguides | 60 |
| UEENEEH142A | Solve oscillator problems | 40 |
| UEENEEH150A | Assemble and set up basic security systems | 80 |
| UEENEEH151A | Install large security systems | 100 |

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| UEENEEH152A | Enter instructions and test wired and wireless security systems | 40 |
| UEENEEH154A | Program and commission commercial security systems | 60 |
| UEENEEH155A | Program and commission commercial access control security systems | 60 |
| UEENEEH156A | Program and commission commercial security closed circuit television systems | 60 |
| UEENEEH161A | Install fire detection and warning system apparatus | 40 |
| UEENEEH162A | Verify compliance and functionality of fire protection system installations | 60 |
| UEENEEH163A | Enter and verify programs for fire protection systems | 40 |
| UEENEEH164A | Commission large fire protection systems | 40 |
| UEENEEH165A | Troubleshoot fire protection systems | 40 |
| UEENEEH166A | Troubleshoot microcontroller based hardware systems | 40 |
| UEENEEH169A | Solve problems in basic electronic circuits | 100 |
| UEENEEH171A | Troubleshoot faults in television receivers | 120 |
| UEENEEH172A | Troubleshoot communication systems | 80 |
| UEENEEH173A | Troubleshoot professional audio reproduction components | 120 |
| UEENEEI116A | Assemble, enter and verify operating instructions in microprocessor equipped devices | 20 |
| UEENEEI150A | Develop, enter and verify discrete control programs for programmable controllers | 60 |
| UEENEEP024A | Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply | 20 |
| UEENEEP025A | Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply | 20 |

| Group C – Qualification Elective Units You must complete units to a minimum weighting of 200 You may select all your elective units from this Group | | Weighting Points |
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| UEENEEC004B | Prepare specifications for the supply of materials and equipment for electrotechnology projects | 40 |
| UEENEEC005B | Estimate electrotechnology projects | 40 |
| UEENEEED103A | Evaluate and modify object oriented code programs | 40 |
| UEENEEED154A | Analyse and implement biometric measuring techniques and applications | 120 |
| UEENEEEE110A | Develop and implement energy sector maintenance programs | 60 |
| UEENEEEE114A | Supervise and coordinate energy sector work activities | 40 |
| UEENEEEH129A | Fault find and repair navigation systems | 60 |
| UEENEEEH130A | Fault find and repair satellite-based surveillance and observation systems | 60 |
| UEENEEEH131A | Fault find and repair radar apparatus and systems | 120 |
| UEENEEEH132A | Fault find and repair global positioning systems | 60 |
| UEENEEEH133A | Fault find and repair telecommunication apparatus and systems | 60 |
| UEENEEEH134A | Fault find and repair electronic medical equipment | 120 |
| UEENEEEH135A | Design custom electronic equipment installations | 120 |
| UEENEEEH136A | Design commercial video/audio installations | 120 |
| UEENEEEH137A | Program and commission commercial video/audio systems | 40 |
| UEENEEEH140A | Fault find and repair sonar apparatus and systems | 120 |
| UEENEEEH153A | Program and test large security systems | 120 |
| UEENEEEH157A | Develop basic plans for integrating security systems | 40 |

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| UEENEEH175A | Troubleshooting in security system installations | 60 |
| UEENEEH176A | Diagnose and rectify faults in electronic display circuits | 60 |
| UEENEEH177A | Diagnose and rectify faults in recording and replay equipment | 60 |
| UEENEEH178A | Diagnose and rectify faults in camera circuits and equipment | 60 |
| UEENEEH179A | Diagnose and rectify faults in digital television circuits and apparatus | 80 |
| UEENEEH180A | Diagnose and rectify faults in digital transmission circuits and systems | 80 |
| UEENEEH186A | Commission satellite and microwave communication systems | 40 |
| UEENEEI120A | Provide solutions to problems in industrial control systems | 60 |
| UEENEEI124A | Fault find and repair analogue circuits and components in electronic control systems | 60 |
| UEENEEI139A | Diagnose and rectify faults in digital controls systems | 60 |
| UEENEEI155A | Develop structured programs to control external devices | 40 |

Note:

1. Pre-requisite pathways shall be identified and met for all elective units selected.
2. In selecting elective units considerations to career planning advice should be given to units that form part of a pre-requisite pathway for the progression to achieve particular competencies or qualification at a higher level.

END OF QUALIFICATION**Custom Content Section**

Not applicable.