



Australian Government

UEE61820 Advanced Diploma of Engineering Technology - Computer Systems

Release 1

UEE61820 Advanced Diploma of Engineering Technology - Computer Systems

Modification History

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

Qualification Description

This qualification covers competencies to design, install/validate/evaluate and administer computer and network-based systems and provide technical advice/sales.

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 **2160 weighting points** comprising:

1160 core weighting points listed below; **plus**

1000 general elective weighting points from the general elective units listed below.

Choose a total of 1000 **weighting points** elective units from the list below, of which between 0 and 360 **weighting points** can be taken from Group A; and between 0 and 200 **weighting points** must be taken from Group B; and between 0 and 200 **weighting points** must be taken from Group C; and between 0 and 300 **weighting points** must be taken from Group D; and between 280 and 1000 **weighting points** must be taken from Group E; or all 1000 weighting points can be taken from Group E.

Up to 360 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 |
|------------|--|------------------|
| UEECD0004 | Apply material science to solving electrotechnology engineering problems | 60 |
| UEECD0005 | Apply physics to solving electrotechnology engineering problems | 60 |
| UEECD0007 | Apply work health and safety regulations, codes and practices in the workplace | 20 |
| UEECD0010 | Compile and produce an energy sector detailed report | 60 |
| UEECD0014 | Develop design briefs for electrotechnology projects | 40 |
| 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 |
| UEECD0036 | Provide engineering solutions for problems in complex multiple path circuits | 60 |
| UEECD0039 | Provide solutions to basic engineering computational problems* | 60 |
| UEECD0043 | Solve problems in direct current circuits* | 80 |
| UEECD0051 | Use drawings, diagrams, schedules, standards, codes and specifications* | 40 |
| UEECS0003 | Assemble, set up and test computing devices* | 80 |
| UEECS0023 | Install and configure network systems for internetworking* | 120 |
| UEECS0032 | Support computer hardware and software for | 120 |

engineering applications

| | | |
|------------|--|----|
| UEECS0033 | Use engineering applications software on personal computers | 40 |
| UEEEEC0011 | Design and develop electronics/computer systems projects | 40 |
| UEEEEC0069 | Troubleshoot digital sub-systems* | 80 |
| UEEEEC0074 | Troubleshoot resonance circuits in an electronic apparatus* | 80 |
| UEERE0013 | Develop strategies to address environmental and sustainability issues in the energy sector | 20 |

Group A: Imported and common elective units.**Weighting Points**

| | | |
|-----------|---|----|
| BSBCUS201 | Deliver a service to customers | 20 |
| BSBINM501 | Manage an information or knowledge management system | 50 |
| BSBINN502 | Build and sustain an innovative work environment | 50 |
| BSBMGT502 | Manage people performance | 70 |
| BSBWOR502 | Lead and manage team effectiveness | 60 |
| BSBMGT516 | Facilitate continuous improvement | 60 |
| ICTICT203 | Operate application software packages | 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 |
|-----------|---------------------------------|----|

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|-----------|--|----|
| UEEAS0003 | Modify electronic sub-assemblies* | 40 |
| UEEAS0004 | Select electronic components for assembly* | 20 |
| UEEAS0006 | Use lead-free soldering techniques* | 40 |
| UEECD0020 | Fix and secure electrotechnology equipment* | 20 |
| UEECD0021 | Identify and select components, accessories and materials for energy sector work activities* | 20 |
| UEECD0025 | Lay wiring/cabling and terminate accessories for extra-low voltage (ELV) circuits* | 40 |
| UEECD0040 | Solve basic problems electronic and digital equipment and circuits* | 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 |
| 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 area networks* | 40 |
| UEEDV0010 | Select and arrange equipment for wireless communication networks* | 40 |

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|------------|---|-----|
| UEEDV0012 | Set up and configure the wireless capabilities of communications and data storage devices | 40 |
| UEEEEC0003 | Assemble and set up basic security systems* | 80 |
| UEEEEC0019 | Develop software solutions for microcontroller-based systems* | 60 |
| UEEEEC0027 | Enter instructions and test wired and wireless security systems* | 40 |
| UEEEEC0029 | Fault find and repair electronic apparatus* | 40 |
| UEEEEC0042 | Install large security systems* | 100 |
| UEEEEC0055 | Repair basic computer equipment faults by replacement of modules/sub-assemblies* | 40 |
| UEEEEC0059 | Repair routine business equipment faults* | 120 |
| UEEEEC0065 | Solve problems in basic electronic circuits* | 100 |
| UEEEEC0066 | Troubleshoot amplifiers in an electronic apparatus* | 80 |
| UEEEEC0067 | Troubleshoot basic amplifier circuits* | 40 |
| UEEEEC0072 | Troubleshoot microcontroller-based hardware systems | 40 |
| UEEEEC0075 | Troubleshoot single phase input d.c power supplies* | 40 |
| UEEIC0002 | Assemble, enter and verify operating instructions in microprocessor equipped devices* | 20 |

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

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|-----------|---|----|
| 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 |
| UEECS0001 | Administer computer networks | 80 |

| | | |
|-----------|---|-----|
| UEECS0002 | Analyse and implement biometric measuring techniques and applications | 120 |
| UEECS0020 | Evaluate and modify object-oriented code programs | 40 |
| UEECS0021 | Install and administer UNIX/LINUX-based networked computers | 80 |
| UEECS0024 | Integrate multiple computer operating systems on a client server local area network | 80 |
| UEERE0015 | Implement and monitor energy sector environmental and sustainable policies and procedures | 20 |

Group D: Qualification elective units.**Weighting Points**

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| UEECD0037 | Provide engineering solutions for uses of materials and thermodynamic effects | 80 |
| UEECD0053 | Write specifications for computer systems engineering projects | 40 |
| UEECO0014 | Prepare tender submissions for electrotechnology projects* | 60 |
| UEECS0013 | Develop and validate biometric equipment/systems installation | 120 |
| UEECS0014 | Develop computer network services* | 120 |
| UEECS0016 | Develop energy sector directory services* | 80 |
| UEECS0019 | Develop, implement and test object-oriented code* | 140 |
| UEECS0031 | Set up, create and implement content for a web server* | 120 |
| UEEEEC0001 | Analyse the performance of wireless-based electronic communication systems* | 40 |
| UEEEEC0013 | Design electronic printed circuit boards* | 40 |
| UEEEEC0017 | Develop engineering solutions to analogue electronic problems* | 80 |
| UEEEEC0054 | Provide gate array solutions for complex electronics systems* | 60 |

| Group E: Qualification elective units. | | Weighting Points |
|---|--|-------------------------|
| UEECD0015 | Develop engineering solutions to photonic system problems* | 80 |
| UEECD0049 | Use advanced computational processes to provide solutions to energy sector engineering problems* | 80 |
| UEECS0005 | Design and implement advanced routing for internetworking systems | 100 |
| UEECS0006 | Design and implement multi-layer switching for internetworking systems | 100 |
| UEECS0007 | Design and implement network systems for internetworking | 120 |
| UEECS0008 | Design and implement remote access for internetworking systems | 100 |
| UEECS0009 | Design and implement security for internetworking systems | 100 |
| UEECS0010 | Design and implement wireless LANs/WANs for internetworking systems | 100 |
| UEECS0011 | Design and manage enterprise computer networks | 80 |
| UEECS0012 | Design embedded controller control systems | 80 |
| UEECS0015 | Develop energy sector computer network applications infrastructure | 80 |
| UEECS0017 | Develop industrial control programs for microcomputer equipped devices | 60 |
| UEECS0026 | Plan industrial computer systems projects | 60 |
| UEECS0027 | Provide programming solution for computer systems engineering problems | 60 |
| UEEEEC0005 | Assess electronic apparatus compliance | 60 |
| UEEEEC0010 | Design and develop advanced digital systems | 40 |
| UEEEEC0014 | Design signal-conditioning sub-systems | 80 |

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| UEEEEC0045 | Modify digital signal processing (DSP) based sub-systems | 80 |
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Qualification Mapping Information

This qualification replaces and is equivalent to UEE61811 Advanced Diploma of Engineering Technology - Computer Systems

Links

Companion Volume implementation guides are found in VETNet - -

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