

# UEE50122 Diploma of Computer Systems Engineering

## Modification History

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

This qualification replaces and is not equivalent to UEE50120 Diploma of Computer Systems Engineering. Modifications include:

- Replaced UEECS0004 with ICTTEN409 in core
- Replaced UEECS0025 with ICTPRG534 in core
- Replaced BSBCUS201 with BSBOPS203 in Group A
- Replaced BSBINM501 with BSBINS501 in Group A
- Replaced BSBINN502 with BSBSTR501 in Group A
- Replaced BSBMGT502 with BSBLDR522 in Group A
- Replaced BSBMGT516 with BSBSTR502 in Group A
- Replaced BSBWOR502 with BSBTWK502 in Group A
- Replaced ICTICT203 with ICTICT214 in Group A
- Moved ICTTEN420 from in Group A to group C
- Replaced UEECS0002 with ICTPRG444 in Group C
- Replaced UEECS0014 with ICTNWK426 in Group C
- Replaced UEECS0021 with ICTNWK309 in Group C
- Replaced UEECS0023 with ICTTEN420 in Group C
- Replaced UEECS0031 with ICTWEB447 in Group C
- Deleted UEECS0024 from Group C (covered in ICTNWK309)
- Replaced UEECS0001 with ICTNWK307 in Group D
- Replaced UEECS0007 with ICTNWK625 in Group D
- Replaced UEECS0017 with ICTPRG534 in Group D
- Replaced UEECS0019 with ICTPRG549 in Group D
- Replaced UEECS0027 with ICTPRG440 in Group D
- Deleted UEECS0016 from Group D (covered in ICTNWK426)

## Qualification Description

This qualification covers competencies to develop, select, install, commission and maintain computer equipment and systems.

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 **1600 weighting points** comprising:

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

**1460 general elective weighting points** from the general elective units listed below.

Choose a total of **1460 weighting points** elective units from the list below, of which between 0 and **270 weighting points** can be taken from Group A; and between 0 and **880 weighting points** must be taken from Group B; and between 0 and **580 weighting points** must be taken from Group C; and between 580 and **1040 weighting points** must be taken from Group D.

**Up to 270 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.

<b>Core units</b>		<b>Weighting Points</b>
ICTPRG534	Deploy applications to production environments	40
ICTTEN409	Commission an electronic system	50
UEECD0007	Apply work health and safety regulations, codes and practices in the workplace	20
UEECD0016	Document and apply measures to control WHS risks associated with electrotechnology work*	20
UEECD0024	Implement and monitor energy sector WHS policies and procedures	20
UEECD0027	Participate in development and follow a personal competency development plan	20

UEERE0015	Implement and monitor energy sector environmental and sustainable policies and procedures	20
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**Group A: Imported and common elective units.****Weighting Points**

BSBINS501	Implement information and knowledge management systems	50
BSBLDR522	Manage people performance	70
BSBOPS203	Deliver a service to customers	20
BSBSTR501	Establish innovative work environments	50
BSBSTR502	Facilitate continuous improvement	60
BSBTWK502	Manage team effectiveness	60
ICTICT214	Operate application software packages	20
ICTTEN419	Implement and troubleshoot enterprise routers and switches	100
ICTTEN421	Apply advanced routing protocols to network design	80
ICTTEN422	Configure and troubleshoot advanced network switching	80
ICTTEN423	Install and maintain a wide area network	80
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
UEEAS0003	Modify electronic sub-assemblies*	40
UEEAS0004	Select electronic components for assembly*	20
UEEAS0006	Use lead-free soldering techniques*	40
UEECD0019	Fabricate, assemble and dismantle utilities industry components*	40
UEECD0020	Fix and secure electrotechnology equipment*	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
UEECD0043	Solve problems in direct current circuits*	80
UEECD0045	Solve problems in multiple path extra-low voltage (ELV) a.c. circuits*	40
UEECD0051	Use drawings, diagrams, schedules, standards, codes and specifications*	40
UEECD0021	Identify and select components, accessories and materials for energy sector work activities*	20
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 area networks*	40
UEEDV0010	Select and arrange equipment for wireless communication networks*	40
UEEDV0012	Set up and configure the wireless capabilities of communications and data storage devices	40
UEEEC0003	Assemble and set up basic security systems*	80
UEEEC0019	Develop software solutions for microcontroller-based systems*	60
UEEEC0027	Enter instructions and test wired and wireless security systems*	40
UEEEC0042	Install large security systems*	100
UEEEC0055	Repair basic computer equipment faults by replacement of modules/sub-assemblies*	40
UEEEC0059	Repair routine business equipment faults*	120
UEEEC0060	Repairs basic electronic apparatus faults by replacement of components*	40
UEEEC0065	Solve problems in basic electronic circuits*	100
UEEEC0066	Troubleshoot amplifiers in an electronic apparatus*	80
UEEEC0067	Troubleshoot basic amplifier circuits*	40

UEEEEC0069	Troubleshoot digital sub-systems*	80
UEEEEC0072	Troubleshoot microcontroller-based hardware systems	40
UEEEEC0074	Troubleshoot resonance circuits in an electronic apparatus*	80
UEEEEC0075	Troubleshoot single phase input d.c power supplies*	40
UEEIC0002	Assemble, enter and verify operating instructions in microprocessor equipped devices*	20
UEEIC0047	Use instrumentation drawings, specifications, standards and equipment manuals*	40

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

ICTNWK309	Configure and administer network operating systems	70
ICTNWK426	Install and configure client-server applications and services	60
ICTPRG444	Analyse software requirements	60
ICTTEN420	Design, install and configure an internetwork	100
ICTWEB447	Build basic website using development software and ICT tools	20
UEECD0010	Compile and produce an energy sector detailed report	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

UEECS0020	Evaluate and modify object-oriented code programs	40
UEEIC0005	Configure and maintain industrial control system networks*	60
UEEIC0012	Develop structured programs to control external devices*	40
UEEIC0020	Fault find and repair analogue circuits and components in electronic control systems*	60

**Group D: Qualification elective units.**

**Weighting Points**

ICTNWK307	Provide network systems administration	60
ICTNWK426	Install and configure client-server applications and services	60
ICTNWK625	Plan and configure advanced internetwork switching solutions	120
ICTPRG534	Deploy applications to production environments	40
ICTPRG549	Apply intermediate object-oriented language skills	60
ICTPRG440	Apply introductory programming skills in different languages	60
UEECD0014	Develop design briefs for electrotechnology projects	40
UEECD0036	Provide engineering solutions for problems in complex multiple path circuits	60
UEECD0039	Provide solutions to basic engineering computational problems*	60
UEECD0053	Write specifications for computer systems engineering projects	40
UEECO0014	Prepare tender submissions for electrotechnology projects*	60
UEEEEC0001	Analyse the performance of wireless-based electronic communication systems*	40

UEEEEC0010	Design and develop advanced digital systems	40
UEEEEC0013	Design electronic printed circuit boards*	40
UEEEEC0015	Develop basic plans for integrating security systems*	40
UEEEEC0017	Develop engineering solutions to analogue electronic problems*	80
UEEIC0006	Design and configure human-machine interface (HMI) networks	60
UEEIC0010	Develop and test code for microcontroller devices	60

## Qualification Mapping Information

This qualification replaces and is not equivalent to UEE50120 Diploma of Computer Systems Engineering

## Links

UEE - Electrotechnology Training Package Companion Volume Implementation Guide at:  
[sector webpage link here]