Australian Government

UEECS0032 Support computer hardware and software for engineering applications

Release: 1

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Modification History

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

Application

This unit involves the skills and knowledge required to support computer hardware and software for engineering applications.

It includes applying safe working practices, installing and testing the upgrading components, locating faults in hardware components, replacing faulty sub-systems, installing and testing the operating system and application software, testing functionality, rectifying malfunctions, following work instructions and completing documentation.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable

Competency Field

Computer Systems

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1 Prepare to upgrade and maintain computer hardware and software	1.1 Work health and safety (WHS)/occupational health and safety (OHS) requirements and workplace procedures for a given work area are identified, obtained and applied

	1.2	Scope of computer and/or peripheral hardware/software upgrade or maintenance is determined in consultation with relevant person/s
	1.3	Relevant person/s is consulted to ensure work is coordinated effectively with others in accordance with workplace procedures
	1.4	Hardware sub-systems required to upgrade and/or maintain computers and peripherals are obtained in accordance with workplace procedures and job requirements
	1.5	Software versions are installed in accordance with workplace procedures and job requirements
2 Upgrade computer hardware and software	**2.1**	Computers are checked and isolated in accordance with WHS/OHS and workplace procedures
	2.2	Computers and/or peripherals are dismantled, as required, for upgrading and parts stored to prevent loss or damage in accordance with manufacturer instructions and/or relevant industry standards
	2.3	Upgrading components are fitted and computer/peripheral apparatus is reassembled in accordance with manufacturer instructions and/or relevant industry standards
	2.4	Upgrading software components are installed in accordance with manufacturer instructions and/or relevant industry standards
	2.5	Operating system, device drivers and application software are tested for return to service/customer in accordance with workplace procedures
	2.6	Computer/peripheral apparatus is tested and prepared for return to customer
3 Maintain operation of computer hardware and software	**3.1**	Need to test and measure live work is determined in accordance with WHS/OHS and workplace procedures
	3.2	Computers are checked and isolated in accordance with WHS/OHS and workplace procedures
	3.3	Computers and/or peripherals are dismantled, as required, to find and rectify faults and parts stored to

		prevent loss or damage in accordance with manufacturer instructions and relevant industry standards
	3.4	Faults are identified using tests and measured values of operating parameters of computer/peripheral hardware components in accordance with workplace procedures
	3.5	Faulty components are re-checked and fault status confirmed
	3.6	Operating system malfunctions are identified using tests of operating system configuration requirements in accordance with workplace procedures
	3.7	Device driver malfunctions are identified using test of device driver software configuration requirements in accordance with workplace procedures
	3.8	Application software malfunctions are identified and tests of software configuration requirements conducted in accordance with workplace procedures
	3.9	Malfunctions are rectified using latest software versions, incremental updates and bug and security patches in accordance with workplace procedures
	3.10	Computer hardware/peripheral device, operating system device drivers and application software are tested for return to service/customer in accordance with workplace procedures
	3.11	Redundant files are removed and disposed or archived in accordance with workplace procedures
	3.12	Methods for dealing with unplanned situations are selected in accordance with WHS/OHS and workplace procedures
	3.13	Maintenance is carried out efficiently without waste of materials and energy or damage to apparatus, the surrounding environment or relevant services
4 Complete and report upgrade and maintenance activities	4.1	Work area is cleaned and made safe in accordance with workplace procedures
	4.2	Written justification is produced for hardware software upgrade and maintenance

4.3 Upgrade and maintenance are documented and relevant person/s notified in accordance with workplace procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the UEE Electrotechnology Training Package Companion Volume Implementation Guide.

Maintaining and upgrading the operating system and device drivers must include at least the following:	• two engineering application software types for a client device (e.g. computer, mobile device, embedded system) and server
Maintaining a computer and peripheral devices must include at least the following:	• one computer • two external peripheral devices

Unit Mapping Information

This unit replaces and is equivalent to UEENEED112A Support computer hardware and software for engineering applications.

Links

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