Australian Government

Department of Education, Employment and Workplace Relations

ICAS3234B Care for computer hardware

Release: 1

ICAS3234B Care for computer hardware

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit defines the competency required to manage the selection, maintenance and location of hardware. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Application of the Unit

Application of the unit	

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish safe work practices	1.1. Determine, record and apply relevant legal requirements and ***OH&S standards*** to the installation and maintenance of computer ***hardware*** 1.2. Determine, record and apply requirements specified by ***hardware*** manufacturers 1.3. Determine, record and apply ***safe work practices***, taking into account legal and manufacturer requirements
2. Establish location requirements for hardware and peripherals	2.1. Determine and apply suitable ***environmental conditions*** for hardware and peripherals 2.2. Determine and apply ***system protection devices*** 2.3. Determine and apply requirements when moving ***hardware*** 2.4. Determine and apply suitable storage principles for ***hardware*** and associated ***peripherals*** and media
3. Establish maintenance practices	3.1. Determine maintenance requirements specified by the ***equipment*** manufacturer 3.2. Produce ***maintenance*** schedules, including removal of dust and grease build-up 3.3. Perform diagnostic functions, including replacing suspect ***components*** with other serviceable ***components*** and reloading of associated ***software*** 3.4. Determine whether unserviceable ***components*** are replaceable through warranty, replacement or upgrade 3.5. Perform diagnostic functions using the ***operating system*** and third-party diagnostic tools
4. Determine appropriate hardware quality standards	4.1. Consider and apply ***business requirements*** in respect of hardware matters 4.2. Determine and apply quality standards to the selection of appropriate ***hardware*** and associated ***peripherals***

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Diagnosis of hardware problems
- Ability to work safely, in respect of the specific hardware
- Selection of appropriate hardware for a given situation
- Problem solving skills
- Communication and comprehension of basic workplace documents
- Clear and precise communication
- Ability to set up and maintain hardware
- Interpretation of user manuals and help functions

Required knowledge

- General OH&S principles and responsibilities
- OH&S principles specific to equipment powered by mains electricity
- Viruses, worms and other security issues
- System hardware and associated peripherals functions
- Potential environmental effects of common types of hardware
- Importance of maintenance
- Handling of high-impedance devices
- Span of quality levels in common hardware
- Software related to hardware operations

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the following is essential: • Assessment must ensure the ability to establish safe work practices, establish siting requirements for system hardware and associated peripheral devices, establish maintenance practices and determine appropriate hardware quality standards. To demonstrate competency in this unit the learner will require access to: • Hardware • Software and diagnostic tools • Records and reports
Context of and specific resources for assessment	Hardware encompasses all the physical connections that allow electronic communication to take place. Hardware is intertwined with software and this unit addresses software/hardware connections. The breadth, depth and complexity of knowledge and skills in this competency would cover selecting, adapting and transferring skills and knowledge to new environments and providing technical advice and some leadership in resolution of specified problems. This would be applied across a range of roles in a variety of contexts with some complexity in the extent and choice of options available. Assessment must ensure: • Performance of a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the section of equipment, services or contingency measures and within known time constraints would

EVIDENCE GUIDE	
	be characteristic. • Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.
Method of assessment	The purpose of this unit is to define the standard of performance to be achieved in the workplace. In undertaking training and assessment activities related to this unit, consideration should be given to the implementation of appropriate diversity and accessibility practices in order to accommodate people who may have special needs. Additional guidance on these and related matters is provided in ICA05 Section 1. • Competency in this unit should be assessed using summative assessment to ensure consistency of performance in a range of contexts. This unit can be assessed either in the workplace or in a simulated environment. However, simulated activities must closely reflect the workplace to enable full demonstration of competency. • Assessment will usually include observation of real or simulated work processes and procedures and/or performance in a project context as well as questioning on underpinning knowledge and skills. The questioning of team members, supervisors, subordinates, peers and clients where appropriate may provide valuable input to the assessment process. The interdependence of units for assessment purposes may vary with the particular project or scenario.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. An individual demonstrating this competency would be able to: • Understand hardware related issues for safe and secure operation of electronic components • Demonstrate basic theoretical knowledge of hardware and software interoperability

EVIDENCE GUIDE	
	• Safely remove and replace hardware components • Conduct maintenance on hardware parts Additionally, an individual demonstrating this competency would be able to: • Demonstrate some relevant theoretical knowledge • Apply a range of well-developed skills • Apply known solutions to a variety of predictable problems • Perform processes that require a range of well-developed skills where some discretion and judgement is required • Interpret available information, using discretion and judgement • Take responsibility for own outputs in work and learning • Communicate with team members to clarify job requirements • Take limited responsibility for the output of others • Maintain knowledge of industry products and services

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
OH&S standards may include:	• correct posture • lighting • type of desk • type of monitor • style of chair • typing position • repetitive strain injury prevention

RANGE STATEMENT	
	• ventilation • light position • correct lifting method • electrical safety • monitor time • exposure
Hardware may include but is not limited to:	• workstations • personal computers • modems or other connectivity devices • networks • DSL modems • remote sites • servers
Environmental conditions may consist of but is not limited to:	• dust • heat • extreme cold • temperature stability • air circulation • moisture
Business requirements may include:	• cost and quality • robustness • industry standard components • capability for further system upgrades
Equipment may include but is not limited to:	• workstations • personal computers • modems or other connectivity devices • printers • hard drives • DSL modems • monitors • switches • hubs • personal digital assistant (PDA) • other peripheral devices
Components may include:	• motherboards • CMOS battery • central processing unit (CPU) • CD and DVD drives • interface cards

RANGE STATEMENT	
	• drives • fax/modem cards • RAM upgrades • CPU upgrades
Software may include but is not limited to:	• commercial, in-house, packaged or customised software
Safe work practices may include but are not limited to:	• handling of mains electricity • handling of high-impedance devices • handling of hazardous material
System protection devices may include but are not limited to:	• surge protection • uninterruptible power supplies
Peripherals may include but are not limited to:	• Printers, scanners, tape cartridges • Speakers, multimedia equipment • Personal computer fax/modems • Input equipment may include mouse, touch pad, keyboard, pens • Mobile phones, palmtops and personal digital assistants (PDAs), laptops and desktop computers • Bluetooth devices, universal serial bus (USB), Firewire (IEEE 1394)
Maintenance may include:	• on-site response • remote diagnostics • return to depot
Operating system may include but is not limited to:	• Linux 6.0 or above • Windows 98 or above • Apple OS 8 or above

Unit Sector(s)

Unit sector	Support

Co-requisite units

Co-requisite units		

Competency field

Competency field	