



Australian Government

ICTSAS311 Maintain computer hardware

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with the Information and Communications Technology Training Package Version 8.0. Supersedes and is equivalent to ICTSAS303 Care for computer hardware.

Application

This unit describes the skills and knowledge required to conduct preventative maintenance on physical computing components. It includes identifying methods to enable optimal operating system functionality, security protection, and performance levels, by producing maintenance plans and applying safe working practices.

The unit applies to individuals who may work in supervised technical support roles with some responsibility to maintain organisational hardware, using a wide range of information and communications technology (ICT) skills and knowledge.

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

Unit Sector

Systems administration and support

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to maintain computer hardware	1.1 Confirm work brief relating to work tasks, hardware and peripheral quality standards, work health and safety (WHS) standards, and organisational policies and procedures 1.2 Confirm and review hardware manufacturer specifications 1.3 Check and confirm that safe working environment is compliant for hardware maintenance activities
2. Review computer hardware	2.1 Select and source required computer hardware diagnostic technologies and inspect computer hardware according to

ELEMENT	PERFORMANCE CRITERIA
	manufacturer specifications 2.2 Identify components requiring maintenance according to organisational policies and procedures 2.3 Document identified components requiring maintenance 2.4 Store necessary component document in required location and distribute to required personnel
3. Develop maintenance plan	3.1 Determine maintenance requirements according to manufacturer specifications 3.2 Document maintenance requirements in required format 3.3 Record explicit references to computer vulnerabilities and maintenance procedures in required format 3.4 Present maintenance plan information to required personnel 3.5 Seek and implement feedback on maintenance plan from required personnel
4. Apply maintenance plan	4.1 Prepare identified computer hardware components for maintenance according to maintenance plan 4.2 Fix identified computer hardware components according to maintenance plan 4.3 Report on any maintenance issues within scope of own role, or escalate as required 4.4 Seek sign-off from required personnel according to organisational policies and procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Oral communication	- Presents factual information in a clear manner, using specific and required language - Responds to questions and feedback in a constructive manner
Reading	Researches and interprets a range of routine texts to identify requirements and standards
Writing	Uses simple vocabulary to record key information in a sequential manner
Initiative and enterprise	Makes low-impact decisions in familiar situations, based on a range of predefined or routine solutions and evaluates the effectiveness of the outcome

Skill	Description
Planning and organising	Plans and implements routine tasks and workload, making limited decisions on sequencing, timing and collaboration
Problem solving	- Responds to predictable routine problems and implements standard and logical solutions - Compares technical specifications, and identifies solutions to new and emerging issues
Self-management	Takes some personal responsibility for following organisational procedures and establishing safe work practices

Unit Mapping Information

Supersedes and is equivalent to ICTSAS303 Care for computer hardware.

Links

Companion Volume Implementation Guide is found on VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTSAS311 Maintain computer hardware

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- maintain at least two different types of computer hardware
- create a separate maintenance plan for each of the above types of hardware that sets out maintenance requirements.

In the course of the above, the candidate must:

- use diagnostic computer hardware technologies
- establish location requirements for system hardware and associated peripheral devices
- follow required work health and safety (WHS) standards, organisational policies and procedures, and safe work practices.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- key functions and applications of computing hardware architecture and components, including:
 - central processing units
 - security patches and random access memory (RAM)
 - input devices
 - output devices
 - hardware drivers
 - processing devices
 - disk space and hard disk drives

- motherboards
- graphics cards
- network interface controllers
- types of preventative measures and typical maintenance periods for optimal computer hardware functionality
- hardware and peripheral storage principles and quality standards
- key sources and types of computing threats, including:
 - human
 - physical and structural
 - environmental
- techniques for identifying computer vulnerabilities
- equipment maintenance requirements
- computing serviceability specifications
- industry-recognised tools and techniques to replace suspect components
- tools and techniques to test computer speed, operating systems and security functions
- types of hardware and associated peripherals
- organisational formats for documentation
- WHS standards, organisational policies and procedures relating to work tasks.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- computer hardware, maintenance software, tools and equipment
- computing maintenance, warranty, replacement and upgrade records and reports
- vendor documentation and equipment specifications
- opportunities for interaction with others
- WHS standards, and organisational policies and procedures required to demonstrate the performance evidence.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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