



Australian Government

Department of Education, Employment and Workplace Relations

ICASAS306A Maintain equipment and software

Release: 1

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Modification History

Version	Comments
ICASAS306A	This version first released with <i>ICA11 Information and Communications Technology Training Package version 1.0</i>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to carry out maintenance and fault repair according to organisational procedures, in order to keep equipment and software operating.

Application of the Unit

This unit applies to frontline technical support personnel who are required to apply preventative maintenance as well as repairing computer systems and equipment to keep them functioning.

Computer hardware and systems fall into disrepair often. This can be prevented by applying a system of preventative maintenance, which can include cleaning, applying service packs, and running malware detection and removal software.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement but users should confirm requirements with the relevant federal, state or territory authority.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>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.</i>

Elements and Performance Criteria

1. Determine and undertake required equipment maintenance	1.1 Examine and review specified equipment and maintenance procedures, in order to determine those procedures that can be handled internally 1.2 Organise and undertake internal maintenance, as specified in the maintenance procedures 1.3 Report problems promptly to appropriate person
2. Diagnose and repair faults	2.1 Assess an existing problem situation and identify the main problem area 2.2 Test the suspected faulty equipment or software for possible failures or performance degradation, using available technology 2.3 Analyse the test results 2.4 Review historical fault data for information of relevance to existing faults 2.5 Develop plans, with prioritised tasks and contingency arrangements, for the repair or replacement of faulty equipment or software, with minimum disruption to client 2.6 Liaise with appropriate person to obtain approval for the plans 2.7 Obtain necessary components and repair the equipment or software in a timely, organised manner, following OHS standards
3. Update documentation and make recommendations for future maintenance	3.1 Record maintenance and fault data and equipment modifications, according to organisational standards 3.2 Identify and report instances where preventative measures are needed 3.3 Review and update maintenance and fault data and report outcomes periodically to appropriate person

Required Skills and Knowledge

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

Required skills

- basic analytical skills to:
 - analyse historical fault data for information of relevance to existing faults
 - analyse test results
 - assess an existing problem and identify the main problem area
 - determine which equipment and maintenance procedures can be handled internally
- communication skills to:
 - follow up with client
 - liaise with technical team members
 - provide assistance according to organisational guidelines
 - provide clear and precise advice when logging calls from help-desk support staff
- literacy skills to:
 - document initial problem and recommendations to solve problem
 - prepare maintenance report in line with organisational guidelines and support agreements
 - read and interpret technical manuals
 - record maintenance and fault data and equipment modifications, according to organisational standards
- planning and organisational skills to:
 - balance competing and complex demands
 - make contingency arrangements
 - minimise disruption to client
 - organise maintenance
- problem-solving skills to:
 - determine problems based on diagnostic tests
 - solve unknown problems in a range of contexts
- technical skills to:
 - repair equipment or software in a timely, organised manner
 - test suspected faulty equipment or software
 - undertake diagnostic and maintenance tasks
 - use current industry-accepted hardware and software testing and diagnostic tools.

Required knowledge

- equipment and software maintenance practices
- help-desk response level escalation procedures
- operation and purpose of specified equipment
- operation of technical diagnostic tools
- quality assurance practices
- relevant service level agreements (SLAs) to determine the conditions of the SLA cover
- client warranty claims, repair or replacement procedures
- system's current functionality.

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 ability to: • undertake maintenance according to maintenance procedures • resolve a defined range of equipment and software problems • maintain accurate records according to organisational guidelines.
Context of and specific resources for assessment	Assessment must ensure access to: • maintenance procedures • technical environment with a variety of operational equipment, software and tools • technical manuals, records and documentation • appropriate learning and assessment support when required • modified equipment for people with special needs.
Method of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: • direct observation of candidate testing suspected faulty equipment or software for possible failures or performance degradation and then analysing the test results • review of candidate's plans for the repair or replacement of faulty equipment or software developed • review of maintenance records and fault data maintained and updated.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, where appropriate. Assessment processes and techniques must be culturally appropriate, and suitable to the communication skill level, language, literacy and numeracy capacity of the candidate and the work being performed. Indigenous people and other people from a non-English speaking background may need additional support. In cases where practical assessment is used it should be combined with targeted questioning to assess required knowledge.

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.

<i>Equipment</i> may include:	• hard drives • hubs or switches • modems or other connectivity devices • monitors • other peripheral devices • personal computers (PCs) • personal digital assistants (PDAs) • printers • switches • tablet PC • workstations.
<i>Maintenance</i> may include:	• on-site response • remote diagnostics • return to depot.
<i>Appropriate person</i> may include:	• authorised business representative • client • supervisor • system administrator.
<i>Software</i> may include:	• application: • database • internet browser • spreadsheet • word-processing • commercial • customised • in-house • programming software: • assembler • C++, VB, Visual Fox Pro • compiler • development tools • system: • computer security

	• device drivers • operating system.
Client may include:	• employee • external organisation • individual • internal department.
Components may include:	• CD and DVD drives • central processing unit (CPU) • complementary metal oxide semiconductor (CMOS) battery • fax or modem cards • interface cards • motherboards • power supply • random access memory (RAM).
OHS standards may include:	• correct posture • electrical safety • safe lifting methods.

Unit Sector(s)

Systems administration and support