Australian Government

Department of Education, Employment and Workplace Relations

UEENEED102A Assemble, set-up and test computing devices

Release: 1

UEENEED102A Assemble, set-up and test computing devices

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

1) Scope:

1.1) Descriptor

This unit covers assembly, setting up and testing personal computers as directed in computer service manuals. It encompasses safe working practices, checking computer components, assembling components to form a basic personal computer, installing and testing basic operating system, drivers and application software, following written and oral instruction and applying customer relations procedures.

Note:

This unit applies to all aspects of Electrotechnology – engineering applications only. For general competencies related to Information Technologies refer to the latest endorsed IT Training Package.

Application of the Unit

Application of the Unit

2)

This unit is intended for competency development entry-level employment-based programs incorporated in approved contracts of training. It may be used to augment formally-acquired competencies.

Licensing/Regulatory Information

License to practice

3)

The skills and knowledge described in this unit may require a license to practice in the workplace subject to

License to practice	3)

regulations for undertaking electrical work. However, practice in this unit is subject to regulations directly related to occupational health and safety and where applicable contracts of training such as apprenticeships.

Pre-Requisites

Prerequisite Unit(s)	4)

Competencies	4.1)

Granting competency in this unit shall be made only after competency in the following unit(s) has/have been confirmed.

UEENEEE1 01A	Apply Occupational Health Safety regulations, codes and practices in the workplace

Literacy and numeracy skills	4.2)

Participants are best equipped to achieve competency in this unit if they have reading, writing and numeracy skills indicated by the following scales. Description of each scale is given in Volume 2, Part 3 'Literacy and Numeracy'

Reading   3   Writing   3   Numeracy   3

Employability Skills Information

Employability Skills	5)

The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary of the qualification in which this unit of competency is packaged will assist in identifying Employability Skill requirements.

Elements and Performance Criteria Pre-Content

6) Elements describe the essential outcomes of a competency standard unit

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA	
1 Assemble computing devices.	1.1	OHS procedures for a given work area are identified, obtained and understood through established routines and procedures.
	1.2	Established OHS risk control measures and procedures in relation to computer and keyboard use are followed.
	1.3	Advice is sought from the work supervisor to ensure the work is co-ordinated effectively with others.
	1.4	Computer, components, operating system and application software are obtained in accordance with established routines and checked as meeting requirements.
	1.5	Computer components are assembled and connected in accordance with manufacturer's instructions.
	1.6	Routine quality checks are carried out in accordance with work instructions.
	1.7	Procedures are followed for referring non-routine events to immediate supervisor for directions.

EE-Oz Training Standards

ELEMENT		**PERFORMANCE CRITERIA**	
2	Install operating system and application software.	2.1	Established OHS risk control measures and procedures for carrying out the work are followed.
		2.2	Minimum hardware requirements are established that are appropriate for the operating system that will be installed.
		2.3	Computer is started up and on-screen instructions for the installation of the operating system to default configuration are followed, including drivers and network interfaces.
		2.4	Application software is installed to default configuration following on-screen installation instruction.
		2.5	Ensure authentication and data security and integrity is implemented on a computing device which may include antivirus and logins.
		2.6	Computer shutdown procedures are followed and computer switched off.
		2.7	Routine quality checks are carried out in accordance with work instructions.
		2.8	Procedures for referring non-routine events to immediate supervisor for directions are followed.
3	Test computer operation.	3.1	Established OHS risk control measures and procedures for carrying out the work are followed.
		3.2	Computer is switched on and start-up procedures are followed and checked.
		3.3	Operating system and application programs are checked to be opening and operating correctly.
		3.4	Faults are identified as being the result of faulty hardware or software.
		3.5	The need to test or measure live is determined in strict accordance with OHS requirements and when necessary conducted within established

ELEMENT		PERFORMANCE CRITERIA	
			safety procedures.
		3.6	Faults are rectified in accordance with computer hardware, operating system and application instructions.
		3.7	Procedures for referring non-routine events to immediate supervisor for directions are followed.
		3.8	Computer shutdown procedures are followed and computer switched off.
		3.9	Work is carried out efficiently without waste of materials or damage to apparatus, circuits, the surrounding environment or services and using sustainable energy principles.
4	Complete work and report.	4.1	OHS risk control work completion measures and procedures are followed.
		4.2	Work area is cleaned and made safe in accordance with established procedures.
		4.3	Work supervisor is notified of the completion of the work in accordance with established procedures.

EE-Oz Training Standards

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

8) This describes the essential skills and knowledge and their level, required for this unit.

Evidence shall show that knowledge has been acquired of safe working practices, assembling, setting-up and testing personal computers.

All knowledge and skills detailed in this unit should be contextualised to current industry practices and technologies.

KS01-ED102A   Computing device servicing

Evidence shall show an understanding of computing devices' hardware structure to an extent indicated by the following aspects:

T1   Sub-assemblies architecture and their function

Note: Examples include motherboards, memory modules, video modules, connecting   buses, storage devices and other components.

T2   Assembling and dismantling techniques

T3   Hardware faults and troubleshooting techniques

Note: Confined to subsystem level eg. PCI –E Cards or similar,

T4   Basic network hardware and components

T5   Connection of network media

T6   Set up of standard network configuration

T7   Sub-assemblies faults and troubleshooting techniques

T8   Repair techniques

T9   Operating systems in use.

T10   Operating System installation and configuration

T11   Basic authentication and file and directory security

T12   Occupational health and safety fundamentals as they relate to computing deviceassembly/disassembly.

Evidence Guide

EVIDENCE GUIDE

9) This provides essential advice for assessment of the unit and must be read in conjunction with the performance criteria and the range statement of the unit and the Training Package Assessment Guidelines.

The Evidence Guide forms an integral part of this unit. It must be used in conjunction with all parts of this unit and performed in accordance with the Assessment Guidelines of this Training Package.

Overview of Assessment	**9.1)**

Longitudinal competency development approaches to assessment, such as Profiling, require data to be reliably gathered in a form that can be consistently interpreted over time. This approach is best utilised in Apprenticeship programs and reduces assessment intervention. It is the industry-preferred model for apprenticeships. However, where summative (or final) assessment is used it is to include the application of the competency in the normal work environment or, at a minimum, the application of the competency in a realistically simulated work environment. It is recognised that, in some circumstances, assessment in part or full can occur outside the workplace. However, it must be in accordance with industry and regulatory policy.

Methods chosen for a particular assessment will be influenced by various factors. These include the extent of the assessment, the most effective locations for the assessment activities to take place, access to physical resources, additional safety measures that may be required and the critical nature of the competencies being assessed.

The critical safety nature of working with electricity, electrical equipment, gas or any other hazardous substance/material carries risk in deeming a person competent. Sources of evidence need to be 'rich' in nature to minimise error in judgment.

Activities associated with normal everyday work have a bearing on the decision as to how much and how detailed the data gathered will contribute to its 'richness'. Some skills are more critical to safety and operational requirements while the same skills may be more or less frequently practised. These points are raised for the assessors to consider when choosing an assessment method and developing assessment instruments. Sample assessment instruments are included for Assessors in the Assessment Guidelines of this Training Package.

Critical aspects of evidence required to demonstrate competency in this unit	9.2)

Before the critical aspects of evidence are considered all prerequisites shall be met.

Evidence for competence in this unit shall be considered holistically.   Each element and associated performance criteria shall be demonstrated on at least two occasions in accordance with the 'Assessment Guidelines – UEE11'.   Evidence shall also comprise:

- A representative body of work performance demonstrated within the timeframes typically expected of the discipline, work function and industrial environment. In particular this shall incorporate evidence that shows a candidate is able to:
    - Implement Occupational Health and Safety workplace procedures and practices, including the use of risk control measures as specified in the performance criteria and range statement
    - Apply sustainable energy principles and practices as specified in the performance criteria and range statement
    - Demonstrate an understanding of the essential knowledge and associated skills as described in this unit.   It may be required by some jurisdictions that RTOs provide a percentile graded result for the purpose of regulatory or licensing requirements.
    - Demonstrate an appropriate level of skills enabling employment
    - Conduct work observing the relevant Anti Discrimination legislation, regulations, polices and workplace procedures
- Demonstrated consistent performance across a representative range of contexts from the prescribed items below:
    - Assemble, set up and test computing device as described in 8) and including:

A	Correctly connecting computing devices components and peripherals.
B	Installing a basic operating system for single user and network operation.
C	Installing application software to default

configuration.

D	Testing computer network operation.
E	Identifying and rectifying interconnection faults.
F	Shutting down a computer correctly.
G	Dealing with unplanned events by drawing on essential knowledge and skills to provide appropriate solutions incorporated in a holistic assessment with the above listed items.
H	Document procedures involved in performing tasks A to E.

Note:
Successful completion of relevant vendor training may be used to contribute to evidence on which competency is deemed. In these cases the alignment of outcomes of vendor training with performance criteria and critical aspects of evidence shall be clearly identified.

Context of and specific resources for assessment	**9.3)**

This unit should be assessed as it relates to normal work practice using procedures, information and resources typical of a workplace. This should include:

- OHS policy and work procedures and instructions.
- Suitable work environment, facilities, equipment and materials to undertake actual work as prescribed in this unit.

These should be used in the formal learning/assessment environment.

Note:

Where simulation is considered a suitable strategy for assessment, conditions for assessment must be authentic and as far as possible reproduce and replicate the workplace and be consistent with the approved industry simulation policy.

The resources used for assessment should reflect current industry practices in relation to assembling, setting up and testing personal computers.

Method of assessment	**9.4)**

This unit shall be assessed by methods given in Volume 1, Part 3 'Assessment Guidelines'.

Note:

Competent performance with inherent safe working practices is expected in the Industry to which this unit applies. This requires assessment in a structured environment which is primarily intended for learning/assessment and incorporates all necessary equipment and facilities for learners to develop and demonstrate the essential knowledge and skills described in this unit.

Concurrent assessment and relationship with other units	**9.5)**

Nil

Range Statement

RANGE STATEMENT

10)   This relates to the unit as a whole providing the range of contexts and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

A computing device could be a desktop, laptop, tablet, PDA, Smartphone or other device.

This unit shall be demonstrated in relation to assembling, setting-up, test and rectifying faults in a personal computer that can be connected to a simple local area network. Hardware fault rectification is confined to replacement of subassemblies and interconnections. Software fault rectification is confined to resetting default configuration and standard optimisation.

Generic terms used throughout this Vocational Standard shall be regarded as part of the Range Statement in which competency is demonstrated. The definition of these and other terms that apply are given in Volume 2, Part 2.1.

Unit Sector(s)

Not applicable.

Competency Field

Competency Field   **11)**

         Computer Systems

       EE-Oz Training Standards