

Training Package	Electrotechnology (UEE07)		HSC Requirements and Advice
Unit title	Set up and configure basic local area network		HSC Indicative Hours
Unit code	UEENEED046B	Competency field	40
		Computer Systems	

Unit descriptor	<p>This unit covers setting up, configuring and maintaining operation of a basic local area network (LAN) of up to 20 connected devices. It encompasses safe working practices, installing network hardware, installing and configuring network software, establish user accounts, configure shared Internet connection and documenting set up parameters and LAN topology.</p> <p>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.</p>
Application of the unit	This unit is intended for competency development entry-level employment-based programs incorporated in approved contracts of training.
Employability skills	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 Skills requirements.
Prerequisite unit(s)	<p>Competencies</p> <p>Granting competency in this unit shall be made only after competency in the following unit(s) has/have been confirmed:</p> <ul style="list-style-type: none"> • UEENEED002B Assemble, set-up and test personal computers. <p>For the full prerequisite chain details for this unit please refer to Table 2 in Volume 1, Part 2 [of UEE07 Training Package].</p> <p>Literacy and numeracy skills</p> <p>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 <i>Appendix 1</i> of this Syllabus.</p> <p>Reading 3 Writing 3 Numeracy 3</p>
Licence to practise	The skills and knowledge described in this unit do not require a licence to practise in the workplace. 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.

Required Skills and Knowledge

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 and to setting up and configuring a basic local area network.

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

The extent of the essential knowledge and associated skills (EKAS) required is given in *Appendix 2* of this Syllabus. It forms an integral part of this unit.

2.4.25.1 Local area network fundamentals

2.18.1 Occupational Health and Safety principles.

Evidence Guide

This provides essential advice for assessment of the unit. It must be read in conjunction with the Performance Criteria and the Range Statement of the unit and the Training Package Assessment Guidelines. All Knowledge and skills detailed in this unit should be contextualised to current industry practices and technologies.

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

Overview of assessment	Critical aspects of evidence required to demonstrate competency in this unit
<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>	<p>Before the critical aspects of evidence are considered all prerequisites must be met.</p> <p>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 – UEE07'. Evidence shall also comprise:</p> <ul style="list-style-type: none"> • a representative body of performance criteria 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: <ul style="list-style-type: none"> - 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, policies and workplace procedures • demonstrated consistent performance across a representative range of contexts from the prescribed items below: <ul style="list-style-type: none"> - set up and configure basic local area network as described in the Range Statement and including: <ul style="list-style-type: none"> ▪ establishing the extent of work accurately ▪ obtaining specified hardware and software ▪ laying out network appropriately ▪ installing hardware as specified ▪ installing and configuring software to requirements ▪ identifying and correcting anomalies ▪ diagnosing and rectifying the cause of malfunctions effectively ▪ documenting network activities ▪ 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.

Evidence Guide cont/d

Context of and specific resources for assessment	Method of assessment	Concurrent assessment and relationship with other units
<p>This unit should be assessed as it relates to normal work practice using procedures, information and resources typical of a workplace.</p> <p>This should include:</p> <ul style="list-style-type: none"> • OHS policy and work procedures and instructions • suitable work environment, facilities, equipment and materials to undertake actual work as prescribed in this unit. <p>These should be used in the formal learning/assessment environment.</p> <p>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.</p> <p>The resources used for assessment should reflect current industry practices in relation to setting up and configuring basic local area network.</p>	<p>This unit shall be assessed by methods given in <i>Appendix 3</i> of this Syllabus.</p> <p>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.</p>	<p>There are no concurrent assessment recommendations for this unit.</p>

Element	Performance Criteria	Range Statement
1 Prepare to set up and configure basic local area network	1.1 OHS processes and procedures for a given work area are identified, obtained and understood.	<p>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.</p> <p>This unit shall be demonstrated in relation to setting up and configuring basic local area network that include at least:</p> <ul style="list-style-type: none"> • 3 personal computers/work stations • 1 server • 1 hub or switch or router • 1 input or output device <p>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 <i>Appendix 4</i> of the Syllabus.</p> <p>Notes:</p> <ol style="list-style-type: none"> 1. Examples of hardware are network card, server, router, hub. 2. Examples of configuration are network protocols, user accounts and permissions, shared devices and security.
	1.2 The extent of set-up and configuration work is determined from job specifications and in consultation with appropriate person(s).	
	1.3 Appropriate personnel are consulted to ensure the work is coordinated effectively with others involved on the work site.	
	1.4 Hardware and software needed for the work is obtained in accordance with established procedures and checked against job requirements.	
	1.5 Preparatory work is checked to ensure no damage has occurred and complies with requirements.	
2 Set up, configure and maintain basic local area network	2.1 OHS risk control measures and procedures for carrying out the work are followed.	
	2.2 Layout of network hardware, cabling and outlets is determined from job specifications or in consultation with appropriate person(s).	
	2.3 Hardware is installed in accordance with network requirements. (See Note 1)	
	2.4 Network software is installed and configured in accordance with network requirements. (See Note 2)	
	2.5 Network operations are tested and anomalies identified and corrected.	
	2.6 Reported network failures and faults are responded to and appropriate tools and methods are used	

Element	Performance Criteria	Range Statement
	2.7 Identified causes of reported problems are rectified and network is tested in accordance with established procedures.	
	2.8 Unexpected situations are dealt with safely and with the approval of an authorised person.	
	2.9 Set-up configuration and maintenance are carried out efficiently without waste of materials or damage to apparatus and the surrounding environment or services and using sustainable energy practices.	
3 Complete work and document activities	3.1 OHS risk control work completion measures and procedures are followed.	
	3.2 Work site is cleaned and made safe in accordance with established procedures.	
	3.3 Network configuration and maintenance records are maintained in accordance with established procedures.	
	3.4 Service report is completed and forwarded to appropriate person(s) in accordance with established procedures.	