Training Package	Electrotechnology (UEE07)			HSC Requirements and Advice
Unit title	**Identify and select components/accessories/materials for electrotechnology work activities**			HSC Indicative Hours
Unit code	**UEENEEE040B**	Competency field	Electrotechnology	**15**

Unit descriptor	This unit covers undertaking a schedule of work for selecting appropriately identified components, accessories or materials in an agreed time, to a quality standard and with a minimum of waste, using appropriate technology mediums where required.
Application of the unit	This unit shall apply to persons entering work in electrotechnology and may be used in school-based vocational programs.
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)	**Competencies** There are no prerequisite competencies for this unit.
	Literacy and numeracy skills 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 *Appendix 1* of this Syllabus. Reading 3 Writing 3 Numeracy 3
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 contracts of training such as new apprenticeships. Note: 1. Compliance with permits may be required in various jurisdictions and typically relates to the operation of plant, machinery and equipment such as elevating work platforms, powder operated fixing tools, power operated tools, vehicles, road signage and traffic control, lifting equipment. Permits may also be required for some work environments such as confined spaces, working aloft, near live electrical apparatus and site rehabilitation. 2. Compliance may be required in various jurisdictions relating to currency in First Aid, confined space, lifting and risk safety measures.

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 identifying and selecting components/accessories/materials for electrotechnology work activities.

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.

2.2.40	Electrotechnology Industry organisations and practices
2.8.1.2	Fundamental electrical principles
2.8.2.1	Direct current circuit principles
2.8.13	Parts and components selection
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
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.	Before the critical aspects of evidence are considered all prerequisites must 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 – UEE07'. Evidence shall also comprise: • 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: - 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: - identify and select components/accessories/materials for electrotechnology work activities as described in the Range Statement and including: ▪ understanding work instruction ▪ obtaining and checking tools and equipment ▪ following work schedules ▪ returning tools and surplus resources as required ▪ updating work records ▪ 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
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 identifying and selecting components/ accessories/materials for electrotechnology activities.	This unit shall be assessed by methods given in *Appendix 3* of this Syllabus. Note: Competent performance with inherent safe working practices is expected in the Industry to which this unit applies. This requires that the specified essential knowledge and associated skills are assessed 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.	There are no concurrent assessment recommendations for this unit.

Element	Performance Criteria	Range Statement
1 Prepare to identify components, accessories and materials	1.1 Instructions for preparing components, accessories or materials identification is communicated and confirmed to ensure clear understanding.	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. This unit shall be demonstrated in relation to identifying and selecting components/accessories/materials for electrotechnology work activities in any of the following disciplines: • appliances • business equipment • computers • data communications • electrical • electrical machines • electronics • fire protection • instrumentation • refrigeration and air conditioning • renewable/sustainable energy, and • security technology. 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 *Appendix 4* of this Syllabus.
	1.2 OHS policies and procedures are communicated and confirmed to ensure they are understood as they apply in the carrying out of the work.	
	1.3 Necessary tools, equipment and personal protective equipment are identified, scheduled and checked to ensure they work correctly as intended and are safe to use in accordance with established procedures.	
	1.4 Appropriate personnel are consulted to ensure the work is coordinated effectively with others involved.	
	1.5 Resources and materials needed to do the work are confirmed, scheduled and obtained in accordance with established procedures.	
	1.6 Schedule(s) for identifying components, accessories or materials including practices for working safely are confirmed in accordance with instructions and requirements.	
2 Select components, accessories and materials	2.1 OHS policies and procedures and safe work practices are followed.	
	2.2 Schedule for selecting components, accessories or materials is followed to ensure work is completed in an agreed time, to a quality standard and with a minimum of waste, using appropriate technology.	
	2.3 Further instructions are sought from appropriate personnel in the event of unplanned happenings or conditions.	
	2.4 Ongoing checks of work quality are undertaken in accordance with instructions and requirements.	

Element	Performance Criteria	Range Statement
3 Confirm selection of components, accessories and materials	3.1 Final checks are made to ensure selection of components, accessories or materials conforms with instructions.	
	3.2 Appropriate personnel are notified of completion of the selection process.	
	3.3 Tools, equipment and any surplus resources and materials are, where appropriate, cleaned, checked and returned to storage in accordance with established procedures.	
	3.4 Work area is cleaned up and made safe and sustainable energy practices are followed.	
	3.5 Appropriate records are updated in accordance with instructions and established procedures.	