



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **UEENEEA102A Select electronic components for assembly**

**Release: 1**

## **UEENEEA102A Select electronic components for assembly**

### **Modification History**

Not applicable.

### **Unit Descriptor**

#### **Unit Descriptor**

#### **1) Scope:**

##### **1.1) Descriptor**

This unit covers identifying and selecting electronic components for assembly from job specifications. It encompasses working safely, interpreting job specifications, identifying components by colour code and markings and following quality procedures and work instructions.

### **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.

### **Licensing/Regulatory Information**

#### **License to practice    3)**

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.

## 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 Prepare to select electronic components. | 1.1 OHS procedures for a given work area are identified, obtained and understood.                                                |
|                                            | 1.2 Established OHS risk control measures for work preparation are followed.                                                     |
|                                            | 1.3 Work instructions are obtained and understood.                                                                               |
|                                            | 1.4 Advice is sought from the work supervisor to ensure the work is co-ordinated effectively with others.                        |
|                                            | 1.5 Materials required for the work are obtained in accordance with established routines and procedures.                         |
|                                            | 1.6 Tools, equipment and testing devices needed to carry out the work are obtained and checked for correct operation and safety. |
| 2 Select electronic components.            | 2.1 Established OHS risk control work measures are followed.                                                                     |
|                                            | 2.2 Electronic components are selected, sorted and placed in accordance with work instructions and established routines.         |
|                                            | 2.3 Prescribed solutions are used to resolve issues with supply of component.                                                    |
|                                            | 2.4 Routine quality checks are conducted to ensure components comply with enterprise / industry standards.                       |

| ELEMENT                 | PERFORMANCE CRITERIA                                                                      |
|-------------------------|-------------------------------------------------------------------------------------------|
| 3 Complete work report. | 2.5 Work is completed in acceptable timeframe given environment and workplace conditions. |
|                         | 3.1 Established OHS risk control measures for work completion are followed.               |
|                         | 3.2 Work report forms/data sheets on components are completed accurately.                 |

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

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

Evidence must show that knowledge has been acquired of safe working practices and the selection of electronic components.

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

#### **KS01-EA102A Electronic component basics and selection**

Evidence shall show an understanding of selecting electronic components, applying safe working practices and relevant Standards, Codes and Regulations to an extent indicated by the following aspects:

T1. Types of components encompassing:

- resistors, inductors, capacitors, diodes, transistor, integrated circuits, printed circuit boards, sub-assemblies, and mounting/enclosing, connection and termination hardware.

T2. The physical features and primary characteristic of components encompassing:

- features include shape, size and connections
- characteristics include parameter and power ratings and polarity.
- methods of identifying and marking of component ratings.
- identifying and handling static sensitive components.
- selection of components

## Evidence Guide

### EVIDENCE GUIDE

**9)** 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.

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 accord 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 every day 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 must be met.

Evidence for competence in this unit must 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, policies and workplace procedures
- Demonstrated consistent performance across a representative range of contexts from the prescribed items below:
  - Select electronic components as described in 8) and including:

- |   |                                           |
|---|-------------------------------------------|
| A | Following job specifications              |
| B | Identifying and selecting components      |
| C | Handling components without damaging them |
| D | Adhering to quality procedures            |

- E Dealing with unplanned events by drawing on essential knowledge and skills to provide appropriate solutions incorporated in the holistic assessment with the above listed items

**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 it must ensure that the conditions for assessment are authentic and as far as possible reproduce and replicate the workplace and is consistent with the approved industry simulation policy.

The resources used for assessment should reflect current industry practices in relation to the selection of electronic components.

**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)**

For optimisation of training and assessment effort, competency development in this unit may be arranged concurrently with unit:

UEENEEA 101A Assemble electronic components

UEENEEE1 02A Fabricate, dismantle, assemble of utilities industry components

## **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.

This unit must be demonstrated by selecting components for at least two different electronic apparatus consisting of a chassis, printed circuit board, adjustment components and interconnections in an environment designed specifically for the purpose.

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)**

Assembly

