

## 1. Module details

**Module name**

**Test apparatus and circuits - *Electrical* work performance**

**Module duration**

The time taken to complete this module will vary depending on the opportunities in the work place for student's to develop their skills and the method used to obtain evidence of competent performance. Where evidence is obtained through formalised assessment event(s) under simulated conditions it would normally take a student 4 hours to successfully complete the module.

**Module code**

**NEWP402b v4**

**Discipline code**

## 2. Module purpose

This module provides methods and criteria for gathering evidence that shows a person has achieved the levels of performance specified in Unit “NES402b Test Apparatus and Circuits - *Electrical*”.

## 3. Prerequisites

This module shall be undertaken in conjunction with modules that provide the knowledge and skills underpinning performance.

## 4. Relationship to competency standards

This module supports Unit “NES402b Test Apparatus and Circuits - *Electrical*” of the Electrotechnology Competency Standard

**ERAC<sup>1</sup> Essential Capabilities - alignment**

The essential capabilities that apply in relation to this module, are:

11; 18; 34; 38; 40; 46; 49; 56; 63.

The reference documents that have been used to affirm the alignment are:

1. *Competency Standard Units incorporating the essential capabilities required of a Licensed Electrician, and*
2. *Summary of learning strategies supporting the achievement of essential capabilities required of a Licensed Electrician:*

Both documents are available from the EE-Oz Training Standards (EEQSBA).

<sup>1</sup> ERAC - Electrical Regulatory Authorities Council. ERAC has established the specific requirements in relation electrical licensing for Electricians. This requirement is included in the ERAC enunciated policy of 1<sup>st</sup> July 2001 which incorporates the following; “*Essential Performance Capability Requirements for Electricians*” and “*Capstone Assessment Test*”. RTOs are to confirm the presence of the requirements for those undertaking an approved training program, within a National Training Package, that is intended to lead to an electrical licensed outcome. For further information refer to ERAC's Policy.

## 5. Assessment strategy

### Assessment methods

Evidence of competent performance may be gathered from real work activities, which are recorded by the use of work reports, logbooks, profiles or portfolios. The student's immediate supervisor shall confirm the accuracy of the evidence the student presents in this way. The supervisor must be competent in the area.

Alternatively, evidence may be obtained through formalised assessment events that simulate relevant work activities.

### Conditions of assessment

Evidence of competent performance can be gathered from the workplace or a simulated work environment. A simulated environment would necessarily include equipment and wiring systems similar to those encountered in a real workplace. As well as the generic aspects of competency, assessment should take into account variations between particular industry sectors and different enterprises. For example equipment used in process industry will be different in some respects to that used in mining.

### Assessment criteria

In judging work performance it is essential that evidence regarding the following aspects of competency is considered.

- performance is autonomous to requirements and occurs **on at least 2 occasions for each of the following elements:**
  - Plan and prepare for testing
  - Conduct testing
  - Notify completion of test
- **for each of the following tests:**

Insulation resistance of wiring; Polarity of consumers mains, submains, final subcircuits and associated equipment; Continuity (resistance) of the main earthing conductor, protective earthing conductor and bonding conductors; Correct circuit connections; Isolation.
- **and at least 2 of the following tests:**

Fault-loop impedance of final subcircuits; Apparatus calibration (eg RCD sensitivity); Load current of single and three phase lighting, heating and rotational current-using equipment; Leakage current of final subcircuits and associated current using equipment ; Performance characteristics of single and three phase lighting, heating and rotational current-using equipment.

- applying **safety procedures, techniques, information and resources** relevant to performance.

Judgement should be made on evidence gathered from a number of events and over a period showing the development of competent work performance, and which shall include confirmation of the relevant ERAC *Essential Performance Capability Requirements for Electricians* as detailed under Section 4 of this module - ERAC Essential Capabilities – alignment.

Note: The EE-Oz Training Standards (EEQSBA) Profiling system incorporates the Essential Performance Capability Requirements for Electricians in its evidence collection as it directly aligns with the evidence required in this module.

**Resource requirements**

Resources should be sufficient for participants to carry out activities, from which evidence may be gathered, on an individual basis. This will include access to tools, equipment, standards and other documents that are necessary to perform the activities required.

**Occupational health and safety requirements**

A safe and healthy environment will be provided for participants and assessors as well as safety procedure with regard to assessment activity.