

1. Module details**Module name****Low Voltage Switching****Module duration**

It is expected that students with the appropriate entry knowledge and skills will successfully complete this module in 18 – 20 hours.

Module code

NUE201

Discipline code

0703130

2. Module purpose

This module provides knowledge and skills for electricity supply industry workers to safely and correctly carry out low voltage switching. However, successful completion of this module alone may not necessarily allow a person to carry out low voltage switching. This module covers procedure for applying for switching, system diagrams interpretation, switching operation, earthing procedures, permit issue and testing procedures, all carried out to industry rules and regulations.

3. Prerequisites

NE162 Electrical Principles 3.
NUE207 Powerline Safety Practices.

4. Relationship to competency standards

This module addresses Units 3.5, 3.8 and 3.9 of the E.S.I. National Competency Standards for Overhead Line Work and Cable Jointing.

5. Content**Applications for switching and system diagrams**

Interpretation

Analysis

Switching

Operation procedure

Earthing procedures

Electrical apparatus

Types

Characteristics

Capabilities

Permits

Electrical access permits

Contractors authorities

Specialist tools and testing equipment

Characteristics

Capabilities

Uses

6. Assessment strategy

Assessment methods

Short answer questions (written, oral or graphic or computer based).
 Suitable practical exercises which assess the skills required of the module purpose.

Conditions of assessment

Theory room for written tests and practical field observation.

7. Learning outcome details

Learning outcome 1

Plan and prepare for low voltage switching operations.

Assessment criteria

- 1.1 Obtain, analyse and interpret application for low voltage switching in accordance with electricity supply industry standards and procedures.
- 1.2 Identify the procedure for writing low voltage switching instructions in accordance with electricity supply industry standards and procedures.
- 1.3 Write low voltage switching instructions in accordance with the request for switching and electricity supply industry standards and procedures.
- 1.4 Identify the resources required, including personnel, plant, equipment, tools and transport to ensure the task can be completed in accordance with electricity supply industry standards and procedures.

Learning outcome 2

Conduct low voltage switching operations.

Assessment criteria

- 2.1 Identify the procedure/s for switching low voltage electrical apparatus in accordance with electricity supply industry standards and procedures.
- 2.2 Switch low voltage electrical apparatus in accordance with electricity supply industry standards and procedures.
- 2.3 Identify the procedures for making a low voltage line safe to work in accordance with electricity supply industry procedures.
- 2.4 Write and issue relevant low voltage electrical permit/s in accordance with switching instructions and electricity supply industry standards and procedures.

8. Delivery of the module

Delivery strategy

Delivery strategies must be suitable for both theoretical and/or practical learning and module purpose. It is recommended that learning and assessment be facilitated in a holistic manner which may require a learning sequence other than indicated in the body of this module descriptor.

Resource requirements

Field switching apparatus.
Live testing and earthing equipment.
Enterprise work manuals and standing instructions.

Occupational health and safety requirements

Students should be made aware of Occupational Health and Safety issues in all situations and be expected to demonstrate safe working practices at all times. Electrical safety must be emphasised.