

1. Module details	
Module name	Data Systems Safety
Suggested structured learning time	It is expected that students with the appropriate entry skills will successfully complete this module in 6-8 hours.
Module code	NUE 503
Discipline code	0703520 Electrotechnology
2. Module purpose	This module provides the criteria for attributing competence to a learner through the assessment of knowledge and skills critical to work associated with electrical installations in the capacity of installing, maintaining, repairing, fault finding, testing and commissioning as required by National Electrotechnology Training Package.
3. Prerequisite modules	NUE503B Data Communications Systems – Monitoring Competency Development
4. Relationship to competency standards	This module provides a third source of evidence of competency related to the critical aspects underpinning knowledge and skills as detailed in the “Evidence Guide” of units in the National Electrotechnology Training Package UTE99 for Certificate III in Electrotechnology Data Communications Systems. The module provides similar support for equivalent units where they have formally mapped an agreed to by respective National ITABs in respective National Training Package qualifications, and as approved by the electrical regulator and industry.
5. Content	<ul style="list-style-type: none"> • Work safely with data communications systems • Ensure data communications systems are safe and comply with standards. • Select equipment that complies with standards. • Ensure communications protection systems operate in compliance with standards.
6. Assessment strategy	

Assessment scope	<p>Assessment shall reflect a holistic approach to ensure all the critical aspects of electrical work as specified in learning outcomes one to four are clearly demonstrated and achieved. To assist in ensuring validity, reliability and fairness assessment instruments should include practical exercises, assignments and written oral and tests. These include:</p> <p>Multiple choice, short answers, graphical, diagrammatic, calculation and problem solving, and</p> <p>Set-up, installation, connection, measurement, data gathering, testing, observation and interpretation.</p>
Conditions of assessment	<p>Assessment shall be under supervision of a qualified assessor and will take place in a simulated or appropriate workplace environment.</p>
Event structure of assessment	<p>The assessment event shall be structured to integrate practical, written and oral test components based on real world scenarios in a simulated or appropriate workplace environment. A variety of assessment item types/approaches shall be included in the overall assessment.</p>
Setting and evaluation	<p>The assessment for competency may be set and evaluated by the RTO, and be in accordance with the industry approved competency development plan/training model.</p>
Conducting assessment	<p>The assessment shall ensure the authenticity of candidates work and where possible the assessor ought not be the primary person in the delivery of training.</p>
7. Learning outcome details	
Learning outcome 1	<p>Demonstrate knowledge and skills for working safely with electricity.</p>
Assessment criteria	<p>1.1 State the procedures to safely work electrically operated systems, circuits and/or apparatus</p> <p>1.2 Demonstrate safe working practices as a normal part of carrying out data communications work (ie. integrated with other practical assessment activities)</p>
Learning outcome 2	<p>Demonstrate knowledge and skills for ensuring a data communications system is both safe and functional.</p>

Assessment criteria

2.1 Conduct all relevant tests and complete all relevant documentation.

This includes:

Conduct tests required

Identify non-compliance from test results

Locate/identify non-compliance faults

Make recommendations to rectify non-compliant faults

Complete mandatory documentation

2.2 Apply the safety requirements in the designing/planning of single and multiphase data communications installations. This includes:

System requirements

System configuration

External influence

Justification of design

Learning outcome 3

Demonstrate knowledge and skills for selecting appropriate network apparatus, components, accessories and cables

Assessment criteria

3.1 Apply methods for selecting equipment for a data communications installation. This includes:

Cable systems to suit given requirements and environments

Maximum cable length

Protection and function earthing

3.2 Demonstrate ability to produce evidence that data communications equipment complies with requirements:

Source of evidence

Identification of compliant markings

3.3 Identify actions/conditions that would void the compliant status of given item(s) of equipment

8. Delivery of the module

Delivery scope

This module contains components related to ensuring a learner achieves the required level of competency as specified in the National Electrotechnology Training Package qualification Certificate III in Data Communications Systems. That is, assessment of knowledge and skills critical to safety and security of work associated with data communications installations.

Delivery strategies

Assessment component: refer to item 6 Assessment Strategy

Guidance component: Refer to NUE505B Electrical Safety Systems – Monitoring Competency Development

Resource requirements

Minimum teacher qualifications:

Certificate IV Assessment & Workplace Training

Qualifications in the electrical/electronic discipline and a demonstrated high level of competency in data systems safety. This would normally be achieved by relevant workplace experience in this field.

Non human resources:

Resources and materials sufficient for students to carry out the assessment on an individual basis both for written and practical tests.

Simulated installation for compliance testing with mechanisms for introducing faults, which cause non - compliance.

A suitable range of tools and testing equipment.

Relevant communications equipment catalogues, specifications, technical manuals and the like.

A range of communications equipment for compliant identification.

Learner/candidate to provide:

Relevant Technical Standards, which may include personal marginal notations,

Writing and free hand drawing instruments.

**Occupational health
and safety
requirements**

In relation to electrical licensing assessment transcripts/reports/tests to the independent evaluator(s) as designated by the electrical regulator and industry.

References include:

Relevant Technical Standards

User Guides

Where this module is used in an approved Traineeship or Apprenticeship program students should be advised to obtain, where available, respective EEQSBA¹ *User Guides* (*these outline in detail what training and work performance the student is required to undertake for the program*).

A safe and healthy environment will be provided for students and teachers as well as safety procedure with regard to learning/teaching activity

¹ EEQSBA - ElectroComms and EnergyUtilities Qualifications Standards Body of Australia Ltd