

1 Module Details	
Module Name	Electronic Systems Safety
Nominal duration	It is expected that students with the appropriate entry knowledge and skills will successfully complete this module in 18 to 20hours.
Module code	NUE506
Discipline code	0703230
2 Module purpose	This module provides methods and criteria for ensuring a person has achieved levels of performance in the critical skills related to the installation, maintenance, repair, fault finding, testing and commissioning of electronic systems and equipment.
3 Prerequisites	<p>This module shall be undertaken only after work performance reports for all competency units in:</p> <p>Certificate III Electrotechnology Communications (UTE30499) or Certificate III Electrotechnology Entertainment and Servicing (UTE30799) or Certificate III Electrotechnology Scanning (UTE31099)</p> <p>to indicate that relevant work is routinely being carried out autonomously and to requirements.</p>
4 Relationship to competency standards	<p>This module assesses part of the critical knowledge and skills supporting the achievement of competency in units:</p> <p>NES105gA Install and terminate wiring systems - cabling/wiring support and protection</p> <p>NES105iA Install and terminate wiring systems - power and control - extra low voltage</p> <p>NES106cA Install electrical/electronic apparatus - electronics</p> <p>NES206cA Maintain and repair apparatus and associated circuits – electronics</p> <p>NES301cA Undertake commissioning procedures of apparatus and associated circuits – electronics</p> <p>NES402cA Test apparatus and circuits – electronics</p> <p>NES501cA Diagnose and rectify faults in apparatus and associated circuits – electronics</p>
5 Content	<ol style="list-style-type: none"> 1. Working safely on an electronic system 2. Safe operation of an electronic system 3. Selecting equipment

	4. Ensuring electronic protection systems operate
6 Assessment strategy Assessment methods Conditions of assessment	<p>Assessment should be progressive reflecting a holistic approach to ensure the module purpose is met. To assist in ensuring validity, reliability and fairness assessment instruments should include practical exercises, assignments and written tests consisting of a number of item types, such as multiple choice, short answer and problem solving.</p> <p>Learning and assessment will take place in a simulated workplace environment.</p>
7 Learning Outcome Details Learning Outcome 1 Assessment criteria Learning Outcome 2 Assessment criteria Learning Outcome 3 Assessment criteria Learning Outcome 4 Assessment criteria	<p>Demonstrate knowledge and skills for working safely with electronic systems.</p> <p>1.1 State the safety procedures to work on electronic systems, circuits and apparatus. 1.2 Demonstrate and apply safe working practices.</p> <p>Demonstrate knowledge and skills for ensuring an electronic system or circuits are safe to use.</p> <p>2.1 State methods for ensuring electronic systems, circuits and apparatus are safe to use. 2.2 Describe the minimum requirement for the design, construction and testing of electronic systems.</p> <p>Demonstrate knowledge and skills for selecting appropriate electronic apparatus, components, accessories and cables.</p> <p>3.1 Apply methods for selecting equipment for an electronic system.</p> <p>Demonstrate knowledge and skills for ensuring electronic fault protection devices will operate as intended.</p> <p>4.1 Explain the features and characteristics of electronic overload and fault protection systems 4.2 Apply a method for ensuring electronic fault protection systems will operate under overload and fault conditions.</p>
8 Delivery of module Delivery strategy	<p>Delivery strategies must be suitable for learning both theoretical and practical aspects described in the module purpose. It is considered that the most effective way to achieve this is by integration of theory and practice where students learn by experimentation, research and reports. It is recommended that learning and assessment be facilitated in a holistic manner that may require learning outcome sequence other than that indicated in the module.</p>

Resource requirements

Resources should be sufficient to carry out learning activities on an individual basis.

Useful references include:

Jennson, J. R. Electrical Principles for Electrical Trades

Boylestad, Robert L. , Nashelsky Louis Electronic Devices and Circuit Theory

Floyd Thomas L. Electronic Devices

Bogart, Theodore F. Electronic Devices and Circuits

Occupational Health and Safety Requirements

A safe and healthy environment will be provided for students and teachers as well as the particular safety procedures followed as part of the learning / teaching content.