

**1. Module details****Module name****Electrotech Industry – Overview & Practices****Module duration**

It is expected that students with the appropriate entry knowledge and skills will successfully complete this module in 36 - 40 hours.

**Module code**

NUE070

**Discipline code**

0703110

**2. Module purpose**

This module will provide the student with the knowledge of the various electrotechnology vocations, their career paths and how training take place. It also introduces the student to regulations, policies and practices used in the electrotechnology industry to ensure workers safety and well being.

**3. Prerequisites****4. Relationship to competency standards**

This module provides part of the underpinning knowledge and skills in the ‘Evidence Guide’ of specific units of competency in the National Electrotechnology Training Package and provides similar support, where mapped, to equivalent units in the National Metals and Engineering Competency Standards. For details refer to the module to unit maps, available from EEQSBA (formerly NUEITAB).

**5. Content****1. Electrotechnology Vocations**

- Electrical
- Electronics – including communications
- Computer Systems
- Data Communication
- Refrigeration and Air Conditioning
- Instrumentation and Control
- Lifts

**2. Career Paths in Electrotechnology**

- Australian Qualification Framework (AQF)
- Qualifications/Classifications
- Scope of work-installation, maintenance and servicing

**3. Training in Electrotechnology Vocations**

- Traineeships, apprenticeships
- Licensed Electrician minimum requirements
- Career advancements
- Registration requirements – communications
- Australian and international Standards

**4. Industry Organisations**

- Employers
- Employee – Trade union group (CEPU, ETU)
- Government - ITABs, TAFE, RTO, ERAC, NACs
- Private providers

**5. Qualification Requirements**

- Unit of competency
- Competency standards
- Training and assessment
- National Training Packages
- Training Models
  - on-job component
  - off-job component
- Qualification requirements and assessments

**6. Policies and Practices in Electrotechnology Industry**

- Licensing and/or registration requirements and/or codes of practices
- OH&S requirements including roles and responsibilities of employers and employees
- Awards, Industrial agreements and enterprise bargaining

**7. Job Application**

- Research – employer organisations, trade unions, career advisers, job agencies, newspapers/magazines, personal contacts, industry training advisory boards (ITABs)
- Writing – formal, content, handwritten/word processor, presentation
- Method of application – mail, fax, telephone, internet

**8. Job Interview**

- Preparation – dress code, timekeeping, what to take to the interview
- Presentation – appearance, introduction, mannerisms, strategies, techniques (questions/responses)
- Evaluation – performance (appraisal/improvements)

**Assessment methods**

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.

**Conditions of assessment**

Learning and assessment will take place in an environment that is conducive to a learner's development.

## 7. Learning outcome details

### Learning outcome 1

**Demonstrate knowledge of the seven electrotechnology vocations**

#### Assessment criteria

- 1.1 State the work function of each vocation group.
- 1.2 State the typical work environment of each vocation group.
- 1.3 State the current demand of each vocation and the average income level.

### Learning outcome 2

**Describe the linkage between the Australian Qualification Framework and a variety of Industry Classifications**

#### Assessment criteria

- 2.1 List the industry sectors that currently utilise Electrotechnology Trades personnel.
- 2.2 State the qualification levels prescribed within:
  - The Australian Qualifications Framework
    - Include a variety of industry award classifications.
- 2.3 Describe the relevance of the Australian Qualifications Framework and their linkage to a variety of electrotechnology industry award classifications.
- 2.4 Describe the scope of work for electrotechnology trade personnel for installation, maintenance and servicing.

### Learning outcome 3

**Describe the academic and practical requirements and career pathway options for persons working within Electrotechnology industry**

#### Assessment criteria

- 3.1 State the preferred entry level requirements for those embarking traineeships and apprenticeships.
- 3.2 Identify the practical and academic skills and knowledge which need to be attained in order to be ascertained as competent within the electrotechnology industry.
- 3.3 State the minimum requirements of the Licensed Electrician and its importance to the Electrical Trades industry worker and the Capstone Assessment NUE505 Part A & B.
- 3.4 Describe the areas in which electrical workers can improve their skills and knowledge through course articulation and career advancement.

	3.5	State the minimum requirements for Registration for communications cabling as per the Australian Communications Authority requirements.
	3.6	Describe the use of Australian and International Standards in the Electrotechnology industry
<b>Learning outcome 4</b>		<b>Identify the scope of work undertaken by Electrotechnology workers and describe the function of Employer/Employee organisations and government bodies</b>
<b>Assessment criteria</b>	4.1	List a variety of equipment an Electrotechnology worker would typically install, maintain, test, diagnose, and service.
	4.2	State the Trade vocations, which would typically undertake the installation, maintenance, and servicing of Electrotechnology equipment, for example electrical.
	4.3	State the Employer/Employee groups which represent the Electrotechnology industry and its workers.
	4.4	Describe the role that Employer/Employee groups perform for the Electrotechnology industry and its workers.
	4.6	Describe the role of Government in vocational, education and training and in particular traineeships and apprenticeships
	4.5	Describe the role of both national and state ITABs, RTOs, TAFEs, ANTA, STAs, NACs and private providers
<b>Learning outcome 5</b>		<b>Describe the electrotechnology industry qualification structure</b>
<b>Assessment criteria</b>	5.1	Describe what competency standards are.
	5.2	Describe a unit of competency in terms of plan, do, and complete.
	5.3	Describe how learners may be trained and assessed against units of competency
	5.4	Describe the purpose of a National Training Package and in particular the National Electrotechnology Training Package and related qualification titles

	5.5	Explain the Training Model preferred by the Electrotechnology industry in terms of the on-job and off-job components as measured against units of competency.
<b>Learning outcome 6</b>		<b>Demonstrate a knowledge of electrotechnology licensing requirements, OH&amp;S and awards</b>
<b>Assessment criteria</b>	6.1	List the various licensing and/or registration requirements and/or codes of practices that apply to the Electrotechnology industry.
	6.2	Outline the OH&S requirements for electrotechnology workers, including roles and responsibilities of employers and employees.
	6.3	Describe the purpose of awards, industrial agreements, and enterprise bargaining agreements, which cover workers in the Electrotechnology industry.
<b>Learning outcome 7</b>		<b>Produce a resume suitable for making application for employment in the electrotechnology industry</b>
<b>Assessment criteria</b>	7.1	List the areas from which research may be gathered for information relating to job opportunities within the electrotechnology industry.
	7.2	List a number of electrotechnology industry employers to which a job application can be submitted.
	7.3	State the essential features necessary for producing a resume, with due regard for information relating to <ul style="list-style-type: none"> <li>– age</li> <li>– sex</li> <li>– ability</li> <li>– school history/achievements</li> <li>– hobbies/interests</li> <li>– experiences of or within the electrotechnology industry</li> </ul>
	7.4	Produce a clear, concise and informative resume suitable for making application for employment in the electrotechnology industry.

<b>Learning outcome 8</b>	<p>7.5 Write a personal job advertisement suitable for display in electrotechnology industry retail outlets, details of which may include:</p> <ul style="list-style-type: none"> <li>– personal information</li> <li>– current/previous academic studies</li> <li>– career aspirations</li> <li>– contact information</li> </ul>
<b>Assessment criteria</b>	<p><b>Demonstrate an ability to undergo an interview for employment in the electrotechnology industry</b></p> <p>8.1 Describe the essential requirements necessary for presenting one’s self for a job interview.</p> <p>8.2 List the personal presentation criteria that should be considered in preparation for a job interview.</p> <p>8.3 Undergo a face to face interview with the aim of obtaining a job in the electrotechnology industry.</p> <p>8.4 Identify and evaluate the strengths and weaknesses of a completed face to face job interview.</p>
<b>8. Delivery of the module</b>	<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 method 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>
<b>Delivery strategy</b>	
<b>Resource requirements</b>	<p>Resources should be sufficient for students to carry out learning activities on an individual basis.</p> <p><i>Suggested Learning Resource:</i></p> <ul style="list-style-type: none"> <li>• Vocational and Career Path Pamphlets</li> <li>• Licensing and Registration promotional materials</li> <li>• Traineeship and apprenticeship brochures and pamphlets</li> <li>• Australian Standards – samples</li> <li>• Employer (association) and employee (union) materials/presentations</li> <li>• National Electrotechnology Training Package; National</li> </ul>

**Occupational health  
and safety requirements**

Electrotechnology Training Package Handbook; National Electrotechnology Training Package User Guides; career pamphlets and brochures

- Sample awards, agreements and codes of practice
- Job application and interview exemplars

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 activity and content.