

Electrotechnology Curriculum Framework

Sample Assessment Ideas

It is preferable that assessment be integrated with training delivery.

The performance criteria to be assessed by the sample tasks will *depend on the teacher's interpretation, development and delivery* of each task.

Work placement activities and journal

Students complete a number of activities during work placement and document their work placement experiences.

Option: encourage the students to document any industry visits and general learning and activities undertaken during class.

Items to document could include:

- workplace policy and/or procedures for:
 - code of conduct
 - risk management in the workplace
 - reporting equipment faults
 - OHS monitoring and reporting
 - dealing with emergencies
 - prevention of discrimination and harassment in the workplace
 - quality assurance
- employment conditions
- workplace flow chart (hierarchical structure)
- emerging/current technology
- clean-up procedures (work area, tools and equipment)
- interview of an employee about general aspects of working in the industry and their career path to date, as well as future ambitions
- current issues of concern to the electrotechnology industry
- how a workplace plans and prepares for different workplace activities
- opportunities to:
 - use tools and equipment
 - plan for routine tasks
 - read and interpret electrotechnology documentation
 - work with others
 - undertake workplace tasks.

Newspaper scrapbook

Each student is assigned one week in the school term. During that week they are required to purchase a major city newspaper (daily) as well as obtain their local paper and locate articles identifying information and/or issues for the electrotechnology industry. Students may also choose to use the internet to source information. Each student provides a summary of discovery at the conclusion of their week.

OHS written test

Students undertake a written assessment to test their ‘*required knowledge*’ (ie the theory underpinning OHS).

OHS induction

Develop an OHS induction package for a new employee.

Workplace inspection – risk assessment

Using school-developed workplace inspection procedures, students work in pairs or small groups to carry out a workplace inspection in one area of the school.

The inspection must follow a risk management approach including:

- identify hazards
- assess associated risks
- control measures to eliminate or minimise risks
- monitor and review control measures.

In consultation with their teacher, students are to assess using a risk assessment matrix, apply hierarchy of control and establish monitoring procedures.

Alternatively (or in addition), this task could be undertaken on work placement in consultation with the student’s supervisor.

Scenario – dealing with an emergency

Students are to demonstrate their ability to follow emergency procedures for a given scenario. The scenario should be appropriate to an electrotechnology work environment, for example, an electrical fire.

This includes:

- developing an evacuation map for the workplace
- designing a chart identifying responsibilities of key personnel
- displaying appropriate behaviour to take in an emergency situation
- contacting appropriate personnel and emergency services and reporting the emergency situation
- evacuating the site through simulated response to an emergency complying with workplace/ enterprise procedures.

Industry presentation

A written report and verbal presentation to the class. Each student is to be allocated a different sector of the electrotechnology industry as the focus of their discussion. It should include an explanation of scope, employment and economic importance to the electrotechnology industry, as well as the main role and service/s.

Research project

With a focus on the required knowledge and skills of UEENEEE048B *Carry out routine work activities in an electrotechnology environment*, research the environment of at least one electrotechnology workplace/enterprise.

Extended response – legislation

Written task – students will give an extended response to a question (preparation and practice for HSC examination) to cover the impact of legislation on the electrotechnology employee and their work in the industry.

Extended response – training and environment

Written task – extended response question (preparation and practice for HSC examination) to cover:

- strategies for the minimisation of potential negative environmental impacts
- importance of training in safe work practices and emergency procedures to meet occupational health and safety (OHS) and environmental requirements.

Role-plays and case studies

For example:

- communicating effectively with colleagues and customers, including those with special needs, across a range of contexts
- establishing contact with customers
- delivering a service to customers
- handling complaints and resolving conflict
- cross-cultural communication and dealing with misunderstandings
- understanding of reciprocal rights and responsibilities of employers and employees in relation to antidiscrimination and EEO.

Written documentation

Students correctly and accurately complete a range of electrotechnology workplace documentation.

Emerging technology

Allocate a current/emerging technology to each student. Using at least two sources of current information, students prepare a brief written and verbal summary outlining what it is and does and the effect (advantages/disadvantages/impact) on current work practices/productivity, employment, market conditions/new markets and cost effectiveness.

Work schedule – individual and team tasks

Each student is to develop a work schedule. Duties are to be undertaken in a workplace over a one-month period. The schedule should include individual and team tasks.

The work schedule should:

- be clear and logically presented
- ensure tasks are ordered in an efficient sequence
- identify material, tools and equipment requirements
- outline specific techniques to be used (if required)
- indicate a completion timeframe for the various tasks
- incorporate quality assurance checks.

Self evaluation and peer evaluation

At regular intervals during a project, or as team members finish working in a designated role, complete a peer and self-evaluation sheet on their performance and how their performance has impacted on the production of the project. The self-evaluation sheet could address:

- time management
- work sequencing
- meeting quality requirements
- OHS concerns/issues
- tools, equipment and techniques used
- skills developed or improved
- teamwork.

Assistant

On a rotational basis each month, allocate the responsibility of ‘assistant’ to a team of two or three students. These students will assist the teacher with housekeeping in the workshop.

Students should display an understanding of OHS, environmental awareness, storage requirements and ease of access for materials and cleaning and maintenance and storage of tools and equipment.

Team leader

On a rotational basis each fortnight, allocate the responsibility of ‘team leader’ (in partnership with the teacher) to a student. This student is responsible for ensuring the work environment clean-up procedures occur. This includes allocation of cleaning duties to each student in the class, as well as safe storage of student work, return of materials and equipment to correct location, and reporting of any equipment requiring maintenance or repair.

Material Safety Data Sheet (MSDS)

Allocate to each student one material that will typically be used in an electrotechnology environment. They are to contact the supplier/manufacturer (by telephone, letter, website, etc) to obtain the MSDS. Each student will provide the class with a copy of the MSDS and brief the other students on the main points and safe use.

Workplace/company manual

Each student is to progressively develop a manual for a fictitious electrotechnology workplace/organisation.

The manual will be updated after the completion of class work relevant to the specific component of the manual. The manual may include:

- workplace/enterprise name
- table of contents
- personal presentation
- working safely
- staff communication
- customer service
- organising and maintaining work areas
- using technology.

Tools and equipment

Each student is allocated a different tool or piece of equipment commonly used in the electrotechnology industry. Students produce a computer-generated:

- information sheet (maximum one A4 page) with the following information:
 - name
 - sketch/diagram/photo
 - characteristics
 - purpose (use and limitations)
 - OHS requirements (hazard controls and PPE and for equipment only – responsibilities of the supplier/hire firm and operator)
 - training/qualifications required (school and industry expectations)
- pre-operational checklist.

Each student ‘delivers’ an induction course to the other students (in partnership with the teacher) for their allocated tool or piece of equipment.

Students are to be given several opportunities throughout the electrotechnology course to safely use and maintain a range of electrotechnology tools and equipment, as well as to check for serviceability and rectify or report any faults. These opportunities can arise during practical tasks/projects and/or may be demonstrated during work placement, field trips or industry visits.

Personal development needs

Each student is required to:

- develop a curriculum vitae
- locate and ‘apply’ for an entry level position in the electrotechnology industry (from the newspaper, internet or alternative)
- identify a position to which they aspire and conduct a knowledge/skills gap analysis
- develop a personal development needs plan to help achieve career aspirations
- begin compiling evidence of learning (portfolio of learning).

Job application

Students are to ‘apply’ for an advertised position in an electrotechnology industry environment. Students are required to:

- write a letter of application
- develop a curriculum vitae
- prepare for and undertake a simulated job interview.

The interviews could be undertaken by a number of personnel including the teacher themselves and/or other school staff, a parent or employer.

It should be a formal process that includes:

- communication via the telephone to arrange interview times
- appropriate dress standards
- prepared interview questions
- opportunity for feedback to each student as well as general comments to the class.

Industry-specific class projects

All class members are required to take an active role in the class projects – working together to achieve a common purpose. The projects could be undertaken in partnership with a local electrotechnology workplace, as part of a community project or within school environment/ activities.

The projects should include:

- identifying roles and responsibilities of individuals and others in the workgroup
- planning activities such as setting common goals, objectives and task requirements, as well as determining and agreeing on individual tasks
- undertaking the project with members of the work group
- monitoring the progress of the workgroup.

Associated activities are to include safe working practices, organising and completing daily work activities, interacting and communicating with colleagues and customers, participating in environmentally sustainable work practices, using technology and processing and maintaining workplace information.

Examinations

- Year 11 half-yearly examination
- Year 11 yearly examination
- Year 12 half-yearly examination
- Year 12 trial HSC examination.