

Title	Enhance workplace safety and mitigate environmental impacts in an electrotechnology or telecommunications environment		
Level	4	Credits	10

Purpose	<p>This unit standard covers knowledge, principles, and techniques to maintain workplace safety practices and mitigate environmental impacts for technicians working in an electrotechnology or telecommunications environment.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> – demonstrate and apply knowledge of the requirements and associated responsibilities of Acts, Regulations, Standards, Codes of Practice, and local Bylaws that impact on electrotechnology or telecommunications workplaces; – implement and maintain safety management practices for workplace hazards in an electrotechnology or telecommunications environment; – implement and maintain a risk assessment strategy in an electrotechnology or telecommunications environment; – implement and maintain procedures to mitigate environmental impacts in an electrotechnology or telecommunications environment; and – investigate industry relevant incidents.
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Classification	Electrical Engineering > Electrotechnology
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Available grade	Achieved
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Guidance Information

- 1 This unit standard has been developed for learning and assessment on-job.
- 2 References
 Accident Compensation Act 2001;
 Electricity (Safety) Regulations 2010;
 Electricity Act 1992;
 Environmental Protection Authority Act 2011;
 Hazardous Substances and New Organisms Act 1996;
 Health and Safety at Work Act 2015;
 Resource Management Act 1991;
 Resource Management Amendment Act 2020;
 Local Authority Bylaws;
 AS/NZS 4836:2011, Safe working on or near low-voltage electrical installations and equipment;

AS/NZS 60479.1:2022, Effects of current on human beings and livestock, Part 1: General aspects;

Electrical Workers Registration Board – Guideline, *Supervision Procedures for Trainees* available at:

<http://www.ewrb.govt.nz/news-and-resources/teaching-and-supervision-guidelines/>

and all subsequent amendments and replacements.

3 Definitions

Current regulations and standards – in this unit standard this term is used to refer to the requirements of the above references.

EWRB – Electrical Workers Registration Board.

PPE – Personal Protective Equipment.

EME – electromagnetic emissions (NIR only) – see also EMR.

EMR – electromagnetic radiation – see also EME.

Industry practice – practices that competent practitioners within the industry recognise as current industry best practice.

4 Range

- a All evidence provided for assessment against this unit standard must reflect compliance with best practice health and safety considerations, including safe working practices, climbing and protection from the harmful effects of EMR or EME in all outcomes.
- b All evidence provided for assessment against this unit standard must be in accordance with industry practice and, where appropriate, must reflect environmental conditions.

Outcomes and performance criteria

Outcome 1

Demonstrate and apply knowledge of the requirements and associated responsibilities of Acts, Regulations, Standards, Codes of Practice, and local Bylaws that impact on electrotechnology or telecommunications workplaces.

Performance criteria

- 1.1 Identify and briefly explain the purpose and intent of Acts, Regulations, Standards, Codes of Practice, and local Bylaws impacting on electrotechnology or telecommunications workplaces.

Range evidence of ten that are relevant to the learner workplace is required.

- 1.2 Explain the intent of selected sections of the Health and Safety at Work Act 2015.

Range responsible persons, all practicable steps, training and supervision, requirements at accident sites, right of an employee to refuse, duties in respect of inspectors, response to an issued improvement notice.

- 1.3 Explain the possible consequences of failure to comply with Acts, Regulations, Standards, Codes of Practice, and local Bylaws impacting on electrotechnology or telecommunications workplaces on individuals and organisations.

Outcome 2

Implement and maintain safety management practices for workplace hazards in an electrotechnology or telecommunications environment.

Range evidence from three worksites is required.

Performance criteria

- 2.1 Outline procedures to implement and maintain the application of health and safety practices that relate specifically to service delivery in accordance with legislative and industry practice.
- 2.2 Develop guidelines and supervise staff and contractors to ensure that PPE required for the service delivery role is worn correctly and any issues are actioned.
- 2.3 Monitor health and safety practices to ensure compliance during service delivery and that any issues are actioned.
- 2.4 Monitor and action accident and incident reports related to service delivery in accordance with industry and company practice.
- 2.5 Develop guidelines and ensure that staff and contractors are able to identify the need for all electrical work to be performed by competent personnel in accordance with current regulations and standards.

Outcome 3

Implement and maintain a risk assessment strategy in an electrotechnology or telecommunications environment.

Range may include but is not limited to – worker behaviour, good housekeeping practices, working at heights, PPE, special hazards, fire, site surveys; evidence from three worksites is required.

Performance criteria

- 3.1 Explain techniques of risk analysis and management that relate specifically to service delivery in accordance with legislative and best industry practice.

Range risk analysis techniques may include but are not limited to – hazard identification, assets at risk, impacts, hazard risk assessment matrix, risk assessment framework, risk control matrix, three step method; risk assessment – identifying hazards, assessing and prioritising risks, applying control measures; control measures – eliminate, isolate, minimise, personnel training.

3.2 Implement and maintain warning and reporting procedures of unsafe situations in the workplace in accordance with current regulations, standards, and industry practice.

Range hazard, incident, near miss.

3.3 Implement control measures to eliminate or minimise workplace hazards for given situations.

Range may include but is not limited to – system isolation, switching off, isolating supply, locking-off and tagging of isolators, disconnecting load side of isolator, proving supply is dead by testing, precautions when leaving unfinished work, precautions for working on live equipment, safety distances, emission level measurement, use of personal monitoring device, personnel training, follow safety rules, insulating area, access control, inspection and testing of tools and equipment, hazard control plans, inspection of PPE before use, use of observers;
evidence of all relevant control measures for given situations.

Outcome 4

Implement and maintain procedures to mitigate environmental impacts in an electrotechnology or telecommunications environment.

Range relevant environmental considerations may include but are not limited to – moisture ingress, insect and vermin ingress, corrosion, ventilation, equipment protection, cable protection, lightning protection, dust control, water and spoil management, fire stopping;
evidence required for all environmental considerations relevant to all worksites used for assessment.
evidence of three is required.

Performance criteria

4.1 Outline procedures to implement and maintain the application of practices to mitigate environmental impacts relating specifically to service delivery in accordance with legislative and industry practice.

4.2 Monitor procedures to ensure compliance with legislative and industry practice during service delivery and that any issues are remedied.

4.3 Monitor and action incident reporting related to service delivery.

Outcome 5

Investigate industry relevant incidents.

Range two case studies for both health and safety and environmental considerations relevant to the industry.

Performance criteria

- 5.1 Investigate an incident and draw conclusions as to the cause of the incident and the extent and nature of the damage resulting from the incident.
- 5.2 Evaluate errors and/or lack of compliance that led to the incident in terms of dangerous practices, testing procedures not followed, environmental considerations, and general safety measures not taken.
- 5.3 Prepare an incident report in accordance with current regulations, standards, and industry practice.

Range investigation findings, evaluation, outcomes, means of prevention and/or mitigation.

Planned review date	31 December 2027
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	16 July 2015	31 December 2024
Review	2	2 March 2023	N/A

Consent and Moderation Requirements (CMR) reference	0003
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Waihangara Ara Rau Construction and Infrastructure Workforce Development Council at qualifications@waihangaararau.nz if you wish to suggest changes to the content of this unit standard.