

<b>Title</b>	<b>Investigate and analyse well-defined electrical engineering problems</b>		
<b>Level</b>	<b>6</b>	<b>Credits</b>	<b>15</b>

<b>Purpose</b>	People credited with this unit standard are able to investigate and analyse well-defined electrical engineering problems.
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<b>Classification</b>	Electrical Engineering > Electrotechnology
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 The following legislation and requirements apply to this unit standard:

Health and Safety at Work Act 2015;

Resource Management Act 1991;

Electricity Act 1992;

Current New Zealand jurisdiction requirements and regulatory framework including but not limited to: compliance regimes covered by statute or local body by-laws, design specifications, conditions of contract (including applicable registered standards and approved codes of practice), and public consultation procedures.

Client and/or company specifications and standards;

The ethical codes and standards relevant to professional bodies such as Engineering New Zealand, the Institute of Refrigeration, Heating and Air Conditioning Engineers of New Zealand Inc (IRHACE), and Electrical Engineering Association (EEA), relative to the discipline being practiced.

Any legislation or other requirement superseding any of the above will apply, pending review of this unit standard.

- 2 Definitions

*Accepted procedures and methodologies* are the procedures and methodologies required by the candidate's engineering sector and which meet applicable legal and code requirements, registered standards, organisational policies and procedures, and manufacturers' specifications.

*Well-defined electrical engineering problems* are problems that include some or all of the following:

- Several issues, but only a few that result in conflicting constraints.
- Can be solved using a systematic approach.
- Resolved with limited theory but extensive practical knowledge.
- Frequently encountered and so familiar to most practitioners in the practice area.
- Covered by standards and/or documented codes of practice.
- Limited range of stakeholders with differing needs.
- Consequences that are important locally but aren't far-reaching.
- Discrete components of engineering systems.

Electrical engineering problems may also include telecommunications, data communications, electronic or electricity supply problems.

### 3 Assessment

Assessment against this unit standard must be based on evidence from the practice area the candidate is engaged in. The practice area for the candidate may include but is not limited to: engineering consultancy, maintenance or asset management, design, manufacturing, installation, production engineering, technical sales and customer service, draughting services, construction, or contracting in the electrical engineering discipline.

All outcomes and performance criteria in this standard must be demonstrated in accordance with accepted procedures and methodologies.

Evidence of two problems is required.

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## Outcomes and performance criteria

### Outcome 1

Investigate and analyse well-defined electrical engineering problems.

#### Performance criteria

- 1.1 The scope of the problems is defined.
- 1.2 Information relevant to the problems is investigated and an analysis of the information is carried out using routinely applied techniques.
- 1.3 Analysis is evaluated against empirical data and/or established engineering references.
- 1.4 If necessary, testing is carried out in order to confirm the findings of the analysis.

<b>Planned review date</b>	31 December 2025
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#### Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	17 November 2011	31 December 2018
Review	2	16 June 2016	31 December 2023
Review	3	24 June 2021	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0234
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

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**Comments on this unit standard**

Please contact The Skills Organisation [reviewcomments@skills.org.nz](mailto:reviewcomments@skills.org.nz) if you wish to suggest changes to the content of this unit standard.