

Title	Demonstrate and apply knowledge of theory and practice for registration of electrical workers (stage 1)		
Level	4	Credits	2

Purpose	<p>This unit standard is for people who are completing an electrical licence and want to become registered and licenced with the Electrical Workers Registration Board.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> – carry out health and safety practices in an electrical workplace; – demonstrate and apply knowledge of single-phase leads, fittings, and accessories; – select and test electrical protection equipment; – design, install, and terminate energy regulators; – apply knowledge of soldering; – demonstrate and apply knowledge to disconnect, test, and reconnect wired appliances or equipment; and – demonstrate and apply knowledge of single-phase and three-phase motors.
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Classification	Electrical Engineering > Electrical Standards and Statutes
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Available grade	Achieved
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Entry information	
Critical health and safety prerequisites	<i>New Zealand Certificate in Electrical Engineering Theory</i> [Ref: 3287], or demonstrate equivalent knowledge and skills.

Explanatory notes

- 1 This unit standard may be used for learning and assessment off-job.
- 2 Under the Electricity Act 1992 the Electrical Workers Registration Board (EWRB) has a responsibility to set registration criteria for electrical workers and ensure that all persons applying for electrical registration are competent.

- 3 As part of the process to be eligible for registration as electrical workers, candidates must complete and pass a Stage 1 EWRB approved assessment which is based on the requirements of the EWRB *Teaching Guidelines*. Electricians, Electrical Engineers, Electrical Installers must also pass the EWRB Regulations examination.

The EWRB Stage 1 examination is the assessment tool for this unit standard, and credit for this unit standard may only be granted on evidence of passing this examination.

However, in terms of meeting the above requirement, candidates who have been awarded recognition of equivalent knowledge and skills from another Regulatory Body may gain exemption from the EWRB Stage 1 examination.

- 4 References
AS/NZS 3000:2007, *Electrical Installations (known as the Australian/New Zealand Wiring Rules)*;
Electricity Act 1992;
Electricity (Safety) Regulations 2010;
EWRB *Teaching Guidelines* available at [EWRB - Publications](#);
The New Zealand Electrical Codes of Practice, available from [WorkSafe New Zealand](#);
and all subsequent amendments and replacements.

- 5 Definitions
DOL – Direct On Line.
Industry practice – those practices that competent practitioners within the industry recognise as current industry best practice.

- 6 Range
- Candidates must refer to current legislation and Standards during assessment.
 - Material required for EWRB examinations is available at [EWRB - Training and Examinations](#).
 - All evidence presented for assessment against this unit standard must be in accordance with:
 - legislation;
 - policies and procedures;
 - ethical codes;
 - Standards – may include but are not limited to those listed in Schedule 2 of the Electricity (Safety) Regulations 2010;
 - applicable site, enterprise, and industry practice; and
 - where appropriate, manufacturers' instructions, specifications, and data sheets.

Outcomes and evidence requirements

Outcome 1

Carry out health and safety practices in an electrical workplace.

Evidence requirements

- 1.1 Explain cardio pulmonary resuscitation.

1.2 Carry out safe working practices and procedures in an electrical workplace.

Outcome 2

Demonstrate and apply knowledge of single-phase leads, fittings, and accessories.

Evidence requirements

- 2.1 Identify 10 flexible cords and cable types and specify an application for each type.
- 2.2 Identify 10 electrical fittings and accessories and state an application for each.
- 2.3 Describe cord connectors, single-phase leads, and flexible cord termination.
- 2.4 Terminate flexible cords, cables, and conductors.
- 2.5 Describe three-phase plugs and cord connection sockets.
- 2.6 Terminate three-phase plugs and cord connection sockets.

Outcome 3

Select and test electrical protection equipment.

Evidence requirements

- 3.1 Select and replace rewirable and high rupturing capacity fuses.

Outcome 4

Design, install, and terminate energy regulators.

Evidence requirements

- 4.1 Design, install, and terminate a three-heat switch.
- 4.2 Design, install, and terminate simmerstat switch.

Outcome 5

Apply knowledge of soldering.

Evidence requirements

- 5.1 Solder and de-solder components on a printed circuit board.
- 5.2 Solder and de-solder wiring tags.

Outcome 6

Demonstrate and apply knowledge to disconnect, test, and reconnect wired appliances or equipment.

Evidence requirements

- 6.1 Describe lockout and tag out procedures, isolation, and disconnections of supply methods.
- 6.2 Connect, disconnect, and reconnect electrical appliances and equipment.
- 6.3 Test and tag three Class I and Class II second hand and repaired appliances.
- Range evidence of two Class I appliances and one Class II appliances are required.

Outcome 7

Demonstrate and apply knowledge of single-phase and three-phase motors.

Evidence requirements

- 7.1 Describe single-phase induction motor and DOL motor starters.
- 7.2 Install a single-phase induction motor and DOL motor starter, test for safety, connect to the supply, test run, isolate, and change the motor connections to reverse direction of rotation and test run.
- 7.3 Describe three-phase induction motor and DOL motor starters.
- 7.4 Install a three-phase induction motor and DOL motor starter, test for safety, connect to the supply, test run, isolate, and change the motor connections to change direction of rotation and test run.

Planned review date	31 December 2021
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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 2016	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>.

Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMRs). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact The Skills Organisation reviewcomments@skills.org.nz if you wish to suggest changes to the content of this unit standard.