

National Certificate in Electrical Engineering (Electrical Appliance and Electronic Servicing) (Level 3)

Level 3

Credits 80

This qualification has been **reviewed**. The last date to meet the requirements is 31 December 2021.

Transition Arrangements

Version 3 of this qualification was republished in December 2018 to change the last date of assessment from 31 December 2022 to 31 December 2021.

Version 3 of this qualification was republished in December 2017 to extend its last date for entry into programmes from 31 December 2017 to 31 December 2018.

This qualification has been reviewed and, in conjunction with the National Certificate in Electronic Engineering (Level 3) [Ref: 1093], has been replaced by the New Zealand Certificate in Electrotechnology (Level 3) with strands in Installation, and Service [Ref: 2767].

This qualification contains expiring standards. For the purposes of this qualification, people who have gained credit for the expiring standards are exempt from the requirement to gain credit for the replacement standards – see below.

Credit for	Exempt from
29465	15851
29477	15856

For detailed information see [Review Summaries](#) on the NZQA website.

People working towards this qualification may complete its requirements or transfer their results to the replacement New Zealand qualification.

The last date for entry into programmes leading to this qualification is 31 December 2018.

The last date for assessments to take place for this qualification is 31 December 2021 when the qualification will be discontinued. From this date, no results can be reported against the qualification.

It is recommended that candidates currently enrolled in programmes leading to this qualification and unable to complete it by 31 December 2021 transfer their existing achievement to the replacement qualification.

Version 1 of this qualification contains standards that have expired and been replaced by other standards. For the purposes of this version of the qualification, people who have gained credit for the replacement standards are exempt from the requirement to gain credit for the expiring or replaced standards – see table below.

Credit for	Exempt from
25070, 25071, 25072	15843

This qualification contains standards that are expiring and have been replaced by other standards. For the purposes of this qualification, people who have gained credit for the replacement standards are exempt from the requirement to gain credit for the expiring or replaced standards – see table below.

Credit for	Exempt from
26552	6401
26551	6402

It is anticipated that no existing candidates will be disadvantaged by these transition arrangements. However, anyone who feels that they have been disadvantaged may appeal to The Skills Organisation at the address below. Appeals will be considered on a case-by-case basis.

NZQF National Qualification Registration Information

Process	Version	Date	Last Date for Assessment
Registration	1	November 2006	December 2019
Revision	2	March 2009	December 2019
Review	3	May 2015	December 2021
Republished	3	December 2017	December 2021
Republished	3	December 2018	December 2021

Standard Setting Body

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National Certificate in Electrical Engineering (Electrical Appliance and Electronic Servicing) (Level 3)

Level	3
Credits	80

Purpose

This qualification is for people engaged in the servicing of electrical appliances and electronic equipment and marks an intermediate stage in their training. It incorporates a variety of skills and underpinning knowledge to prepare technicians to competently and safely service a wide range of small appliances, electric tools and electronic equipment. The qualification also meets the legal requirements for registration with the Electrical Workers Registration Board (EWRB) as an Electrical Service Technician (EST) registration with a 230 volt limitation, including connection of single phase appliances to fixed outlets.

Typically this qualification is gained after approximately two years of training and work experience.

Holders of this qualification have knowledge and skills relating to:

- first aid and cardio-pulmonary resuscitation
- safe electrical work practices
- magnetism, electricity, and mains supply systems
- soldering and wiring skills
- selecting and connecting flexible leads
- electrical protection, isolation, and connection to the supply
- safety and operational testing of appliances
- single phase motor theory and replacement
- proper use of tools
- power supplies and semiconductor devices
- fault-finding techniques
- competence in practical servicing of electrical appliances that meets the requirements for EST registration with a 230 volt limitation, including connection of single phase appliances to fixed outlets
- theory requirements for EST registration with a 230 volt limitation, including connection of single phase appliances to fixed outlets
- maths and mechanics.

The qualification is one of the prerequisites for the National Certificate in Electrical Engineering (Electrical Appliance and Electronic Servicing) (Level 4) with strands in Commercial Electrical Appliances, Domestic Electrical Appliances, Electronic Consumer Goods, Office Equipment, and Portable Electrical Appliances and Power Tools [Ref: 1266]. It is a useful foundation for product-specific training.

Replacement Information

This qualification together with the National Certificate in Electrical Engineering (Electrical Appliance and Electronic Servicing) (Level 4) with strands in Commercial Electrical Appliances, Domestic Electrical Appliances, Electronic Consumer Goods, Office Equipment, and Portable Electrical Appliances and Power Tools [Ref: 1266] replaced the National Certificate in Electrical Appliance Servicing [Ref: 0827].

Special Notes

- 1 This qualification was created to rationalise the training and assessment of Electrical Appliance Servicing and Electronics Servicing Technicians. It was formed from part of the National Certificate in Electrical Appliance Servicing [Ref: 0827].
- 2 The National Certificate in Electrical Appliance Servicing [Ref: 0827] contained the standards required for registration with the EWRB as an EST registration with a 230 volt limitation, including connection of single phase appliances to fixed outlets. When a trainee completed the required standards that formed part of that qualification, ETITO issued a Certificate of Attainment, which confirmed that the trainee met the EWRB registration requirements. This qualification replaces the ETITO Certificate of Attainment.
- 3 Achievement of this qualification indicates competence in the skills required for registration with the EWRB as an EST registration with a 230 volt limitation, including connection of single phase appliances to fixed outlets. However, the Electricity Act 1992 requires that all trainees be subject to supervision by a Supervisor of Electrical Work until they gain registration with the EWRB.

Credit Range

Level 1 credits	1
Level 2 credits	37
Level 3 credits	25
Level 4 credits	17
Total	80

Requirements for Award of Qualification

Award of NZQF National Qualifications

Credit gained for a standard may be used only once to meet the requirements of this qualification.

Unit standards and achievement standards that are equivalent in outcome are mutually exclusive for the purpose of award. The table of mutually exclusive standards is provided on the New Zealand Qualifications Authority (NZQA) website: <http://www.nzqa.govt.nz/qualifications-standards/standards/standards-exclusion-list/>.

Reviewed standards that continue to recognise the same overall outcome are registered as new versions and retain their identification number (ID). Any version of a standard with the same ID may be used to meet qualification requirements that list the ID and/or that specify the past or current classification of the standard.

Summary of Requirements

- Compulsory standards

Detailed Requirements

Compulsory

The following standards are required

Engineering and Technology > Electrical Engineering > Core Electrical

ID	Title	Level	Credit
750	Demonstrate knowledge of electrical test instruments and take measurements	2	2
1178	Follow safe practices in an electrical workplace	2	3
15846	Demonstrate knowledge of capacitors and semiconductor diodes	2	3
15847	Demonstrate knowledge of mathematics and mechanics for electrical trades	2	4
15848	Demonstrate knowledge of safeguards for use with portable electrical appliances	2	2
15849	Perform manual soldering and de-soldering procedures for electrotechnology work	2	2
15851	Demonstrate knowledge of electrical safety and safe working practices for electrical workers	2	3
15856	Demonstrate knowledge of the New Zealand electricity supply system	3	2
16407	Use and maintain hand and power tools for electrical work	3	4
25070	Explain the properties of conductors, insulators, and semiconductors and their effect on electrical circuits	2	7
25071	Demonstrate knowledge of electromotive force (e.m.f.) production	2	3
25072	Demonstrate knowledge of electromagnetism theory	2	5

Engineering and Technology > Electrical Engineering > Electrical Appliance Servicing

ID	Title	Level	Credit
18082	Replace faulty motors in electrical appliances	4	4
18088	Demonstrate systematic fault finding techniques in electrical appliance servicing	3	3
22763	Service electrical or electronic goods to gain electrical service technician's registration	4	10

Engineering and Technology > Electrical Engineering > Electrical Service Technicians

ID	Title	Level	Credit
17798	Demonstrate knowledge of legislation and standards for electrical service technicians - single phase	3	2
17799	Demonstrate knowledge of testing for electrical safety for electrical service technicians - single phase	2	2
17800	Demonstrate knowledge of electrical control devices and simple electrical circuits	3	3
17801	Demonstrate knowledge of single phase motors for electrical service technicians	4	3
17802	Replace fuses and plug-in miniature circuit breakers	3	1
17803	Select and connect flexible cords in single phase plug-in and fixed wired applications	3	2
17804	Test single phase electrical appliances	3	2
17805	Disconnect and reconnect fixed wired single phase electrical appliances	3	3
17806	Demonstrate knowledge of protection from the harmful effects of electricity	3	2
17808	Isolate electrical appliances from the supply	3	1

Health > Health Studies > Core Health

ID	Title	Level	Credit
6401	Provide first aid	2	1
6402	Provide resuscitation level 2	1	1

Transition Arrangements

Version 2 was issued following revision in order to include magnetism and electricity standards 25070-25072, which replaced standard 15843 to improve assessability.

This qualification contains standards that replace earlier standards. For the purposes of this qualification, people who have gained credit for the expiring standards are exempt from the requirement to gain credit for the replacement standards – see table below.

Credit for	Exempt from
15843	25070, 25071, 25072
18083	22763

Previous version of the qualification

Version 2 changes included: standards 25070-25072 replaced standard 15843.

Version 1 of this qualification and the National Certificate in Electrical Engineering

(Electrical Appliance and Electronic Servicing) (Level 4) with strands in Commercial Electrical Appliances, Domestic Electrical Appliances, Electronic Consumer Goods, Office Equipment, and Portable Electrical Appliances and Power Tools [Ref: 1266] replaced the National Certificate in Electrical Appliance Servicing [Ref: 0827] as significant changes were made. The last date to complete the requirements of the former qualification the National Certificate in Electrical Appliance Servicing [Ref: 0827] was 31 December 2008.

Other standard setting bodies whose standards are included in the qualification

NZQA

Certification

The certificate will display the logos of NZQA, The Skills Organisation and the accredited organisation.

Classification

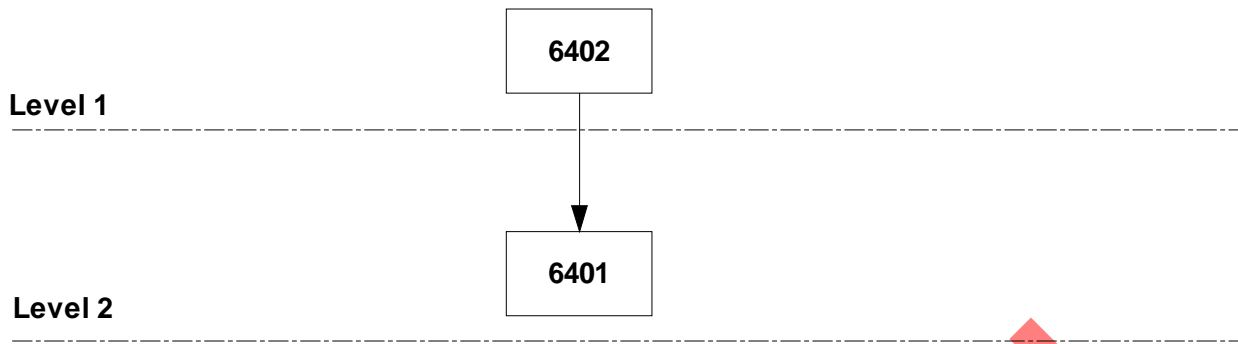
This qualification is classified according to the classification system listed on the Directory of Assessment Standards (DAS) and the New Zealand Standard Classification of Education (NZSCED) system as specified below.

DAS Classification		NZSCED	
Code	Description	Code	Description
204	Engineering and Technology > Electrical Engineering	031301	Engineering and Related Technologies > Electrical and Electronic Engineering and Technology > Electrical Engineering

Quality Management Systems

Providers and Industry Training Organisations must be granted consent to assess by a recognised Quality Assurance Body before they can register credits from assessment against standards. Organisation with consent to assess and Industry Training Organisations assessing against standards must engage with the moderation system that applies to those standards. Consent to assess requirements and the moderation system are outlined in the associated Consent and Moderation Requirements (CMR) for each standard.

Prerequisite Diagram



EXPIRING