

Field Engineering and Technology

Review of *Electrical Engineering* unit standards

Subfield	Domain	ID
Electrical Engineering	Electrical Appliance Servicing	30645, 30646
	Electrical Service Technicians	17800, 17802, 17803, 17806, 17808, 18090
	Electrical Standards and Statutes	27350, 27352
	Electrotechnology	16973–16975, 16991, 16992, 22734–22736, 25629, 25630, 26727, 27910–27912, 28881, 28882, 30641, 30643, 30644, 30647–30651

Waihanga Ara Rau Construction and Infrastructure Workforce Development Council has completed the review of the unit standards listed above.

Date new versions published

February 2023

Planned review date

December 2027

Summary

Waihanga Ara Rau Construction and Infrastructure Workforce Development Council reviewed 34 unit standards from the Electrical Engineering subfield between September and November 2022. The review involved consultation with providers, consent to assess holders, and industry representatives.

The review identified that many of the unit standards are no longer being used by providers with consent to assess and are no longer required by industry, and these are set to be expired.

Those that are being used were updated in line with current industry practices, standards, acts and regulations. This was done in consultation with industry representatives and providers with consent to assess during five online meetings.

Main changes

- 9 unit standards with no recent usage and no longer required by industry or providers were expired.
- 7 unit standards are no longer required by industry beyond 31st December 2024. These standards were also expired.
- 18 unit standards are still in use and were updated to meet industry requirements. Changes were made to refer to current standards, acts and regulations, add clarity to outcome statements and performance criteria, and correct formatting. Three had minor title changes for clarity.

Category D unit standards will expire at the end of December 2024

The last date for assessment of superseded versions of Category B unit standards is December 2024

Detailed list of unit standards – classification, title, level, and credits

All changes are in **bold**.

Key to review category	
A	Dates changed, but no other changes are made - the new version of the standard carries the same ID and a new version number
B	Changes made, but the overall outcome remains the same - the new version of the standard carries the same ID and a new version number
C	Major changes that necessitate the registration of a replacement standard with a new ID
D	Standard will expire and not be replaced

Engineering and Technology > Electrical Engineering > Electrical Appliance Servicing

ID	Title	Level	Credit	Review Category
30645	Demonstrate practical application of theory and legislation for electrical appliance servicepersons (endorsed)	3	3	B
30646	Demonstrate knowledge of electrical theory and legislation for electrical appliance servicepersons (endorsed)	3	7	B

Engineering and Technology > Electrical Engineering > Electrical Service Technicians

ID	Title	Level	Credit	Review Category
17800	Demonstrate knowledge of electrical control devices and simple electrical circuits	3	3	D
17802	Replace fuses and plug-in miniature circuit breakers	3	1	D
17803	Select and connect flexible cords in single phase plug-in and fixed wired applications	3	2	D
17806	Demonstrate knowledge of protection from the harmful effects of electricity	3	2	D
17808	Isolate electrical appliances from the supply	3	1	D
18090	Demonstrate knowledge of alternating current (a.c.) theory for electrical appliance servicing	4	5	D

Engineering and Technology > Electrical Engineering > Electrical Standards and Statutes

ID	Title	Level	Credit	Review Category
27350	Demonstrate knowledge of theory and legislation for registration of electrical appliance servicepersons (endorsed)	3	3	B
27352	Demonstrate knowledge of supervision of trainees undertaking prescribed electrical work	4	2	B

Engineering and Technology > Electrical Engineering > Electrotechnology

ID	Title	Level	Credit	Review Category
16973	Demonstrate and apply knowledge of electrotechnology engineering construction and testing skills	3	5	D
16974	Demonstrate and apply knowledge of CAD tools as used in an electrotechnology engineering environment	4	5	D
16975	Demonstrate and apply knowledge of software tools as used in electrotechnology industry applications	3	5	D
16991	Demonstrate and apply knowledge of electrotechnology engineering workshop safe practice	3	5	D
16992	Describe and apply knowledge of electrotechnology fault-diagnosis procedures	4	5	D
22734	Demonstrate and apply introductory knowledge of electrotechnology engineering mathematics	4	15	D

ID	Title	Level	Credit	Review Category
22735	Explain and apply information gathering methods and present reports in an electrotechnology industry	4	5	D
22736	Explain and apply communication skills and societal responsibilities in an electrotechnology industry	3	10	D
25629	Demonstrate introductory knowledge of building management systems	4	5	D
25630	Demonstrate knowledge of and analyse energy efficiency of buildings and plant	4	5	D
26727	Describe and apply techniques for identifying and locating faults in electrotechnology products or systems	3	5	B
27910	Demonstrate and apply knowledge of stakeholder engagement in an electrotechnology or telecommunications environment	3	5	B
27911	Demonstrate knowledge of workplace safety in an electrotechnology or telecommunications environment	3	10	B
27912	Demonstrate knowledge of electrical principles in an electrotechnology or telecommunications environment	3	15	B
28881	Enhance workplace safety and mitigate environmental impacts in an electrotechnology or telecommunications environment	4	10	B
28882	Apply stakeholder engagement principles and techniques in an electrotechnology or telecommunications environment	4	7	B
30641	Demonstrate knowledge of electromechanical engineering principles for technicians	3	10	B
30643	Demonstrate knowledge of the installation of electrotechnology systems on customer premises	3	10	B
30644	Demonstrate basic knowledge of diagnostics and fault finding for service and installation technicians	3	5	B
30647	Apply safe working procedures and practices in an electrotechnology environment and identify and control special hazards	3	5	B
30648	Demonstrate knowledge of installation practices and procedures for customer premises systems	3	5	B
30649	Select, install, and commission basic extra-low voltage and low voltage customer premises systems	3	15	B
30650	Diagnose, service, and repair basic extra-low voltage and low voltage customer premises systems Diagnose faults, and repair basic extra-low voltage and low voltage customer premises systems	3	10	B
30651	Explain regulatory requirements for installing and servicing extra-low and low voltage customer premises systems	3	5	B