

FIELD ENGINEERING AND TECHNOLOGY**Review and Reclassification of *Communications and Radar Electronics, Consumer Electronics, Core Electronics, and Electronic Office Automation* unit standards****Existing classification**

Subfield	Domain	Id
Electronics Technology	Communications and Radar Electronics	6061-6063, 14775, 14776
	Consumer Electronics	6053-6057, 6064, 6066, 8189
	Core Electronics	5935-5937, 6625, 8188, 8190, 8192-8194, 8196, 8197, 8200-8214, 8217, 9216-9223
	Electronic Office Automation	6058-6060, 6065, 8215

New classification for standards being re-registered

Subfield	Domain	Id
Electronic Engineering	Core Electronics	8211
	Electronic Installation and Maintenance	6061-6063, 6066, 8213
	Electronics Technology	9221

The ElectroTechnology Industry Training Organisation has completed the review of the unit standards listed above that were registered in May, October, and December 1996 and in April 1998.

Date new versions published

July 2004

New comments by date

December 2007

Expiry date of new versions of the unit standards

December 2008

Summary of review and consultation process

The review began with a company survey regarding current skill needs. An expert working group was then formed involving industry, training provider, and assessor representation. Proposals were sent to all electronics companies in New Zealand, with meetings in four centres to gather feedback. There were meetings with representatives from the New Zealand Boating Industry Training Organisation regarding requirements in their sector, and with the Royal New Zealand Navy, a major user of the qualifications. The expert working group considered all feedback and endorsed the unit standard changes on 30 July 2003.

Because of the complexities and the need to maintain teaching programmes, the changes encompass three stages. Stage 1 now completed, covered the changes required by the review of the *National Certificate in Electronics Technology (Intermediate) (Level 3)* [Ref: 0408]. Stage 2, detailed in this review summary, covers all remaining unit standards in the lapsing domains of *Communications and Radar Electronics*, *Consumer Electronics*, *Core Electronics*, and *Electronic Office Automation* associated with the changes required by the review of the *National Certificate in Electronics Technology (Level 4) with strands in Communications and Radar, Consumer Products, and Office Automation* [Ref: 0409].

Stage 3 covers all remaining unit standards in the lapsing Electronics Technology Subfield not covered by Stage 1 and Stage 2. These are currently under review.

Main changes resulting from the review

The review process resulted in the following changes to the unit standards.

- Designation of the *Communications and Radar Electronics* domain in the *Electronics Technology* subfield, as lapsing. Some of the unit standards were moved to the *Electronic Installation and Maintenance* domain in the *Electronic Engineering* subfield; the remainder were designated as expiring.
- Designation of the *Consumer Electronics* domain in the *Electronics Technology* subfield, as lapsing. One unit standard was moved to the *Electronic Installation and Maintenance* domain in the *Electronic Engineering* subfield; the remainder were designated as expiring.
- Designation of the *Core Electronics* domain in the *Electronics Technology* subfield as lapsing. Some of the unit standards were moved to the *Core Electronics*, *Electronic Installation and Maintenance*, and *Electronics Technology* domains in the *Electronic Engineering* subfield, some were left to expire, and the remainder are currently under review.
- Designation of the *Electronic Office Automation* domain in the *Electronics Technology* subfield as lapsing. All the unit standards in this domain were designated as expiring.
- The designation of Unit 5936, *Carry out soldering and de-soldering procedures in the electronics service industry*, as expiring, as this unit standard is adequately covered by Unit 15849, *Perform manual soldering and de-soldering procedures for electrical work*, which is in the *Core Electrical* domain.
- The designation of Unit 6057, *Service and repair microwave ovens*, as expiring, as this unit standard is adequately covered by Unit 1189, *Service microwave ovens*, in the *Electrical Appliance Servicing* domain.
- The designation of Unit 8188, *Demonstrate electronics workplace etiquette*, as expiring, as this unit standard is adequately covered by Unit 57, *Provide customer service in given situations*, which is in the *Service Sector - Core Skills* domain.
- The designation of a further 43 unit standards, which are no longer considered fit for purpose, as expiring.
 Note: The table at the end of this review report indicates alternative unit standards where knowledge and skills in many of the expiring unit standards are covered in whole or in part.
- Changes to some unit standard titles to better reflect the assessment outcome.
- Adjustment of the levels and credit values of some unit standards to reflect the complexity and notional learning time more accurately.
- Clarification of elements, performance criteria, range statements, and special notes in some unit standards to improve assessability.
- Registration of 15 new unit standards.

Unit standards categorised as category D expire at the end of December 2010.

Impact on existing provider accreditations

Current Accreditation for			Accreditation extended to		
Nature of accreditation	Classification or Id	Level	Nature of accreditation	Classification or Id	Level
Subfield	Electronics Technology	any	Subfield	Electronic Engineering	same
Domain	Communications and Radar Electronics	4	Unit Standards	6061-6063, 20719, 20720	4
Domain	Consumer Electronics	4	Domain	Electronic Installation and Maintenance	4
			Unit Standard	1189	4
Domain	Core Electronics	2 and 3	Domain	Core Electronics	3
			Domain	Electronics Technology	3
			Unit Standard	8211, 8213	4
Domain	Electronic Office Automation	3 and 4	Domain	Electronic Installation and Maintenance	4
Unit standard	5936	2	Unit Standard	15849	2

In addition to the above general extensions, specific provision for accreditation is made for the following Standards Setting Body and training providers:

- Accreditation for the *Boating Industry Training Organisation* is extended to the domains of *Core Electronics*, and *Electronic Installation and Maintenance* in the Subfield of *Electronic Engineering* to Level 4.
- Accreditation for *Whitireia Community Polytechnic* is extended to the Subfield of *Electronic Engineering* to Level 4.
- Accreditation for *The Salvation Army Employment Plus* is extended to the Domains of *Core Electronics* to Level 3 and *Electronics Technology* to Level 3.

Impact on Accreditation and Moderation Action Plan (AMAP)

AMAP 0003 was updated to reflect the changes made to the standards.

Impact on existing qualifications

The following ElectroTechnology Industry Training Organisation qualifications are affected by this review. They are either under review, or scheduled to be reviewed.

Qualification Title
National Certificate in Electrical Engineering (Electrician) (Level 4) [Ref: 0313]
National Certificate in Electronics Technology (Intermediate) (Level 3) [Ref: 0408]
National Certificate in Electronics Technology (Level 3) [Ref: 1005]
National Certificate in Electronics Technology (Level 4) with strands in Communications and Radar, Consumer Products, and Office Automation [Ref: 0409]
National Certificate in Industrial Measurement and Control (Level 4) [Ref: 0410]
National Diploma in Engineering (Level 6) with strands in Computer Engineering, Electrical Engineering, Electronics, Industrial Measurement and Control, and Telecommunications [Ref: 0846]

Other Standard Setting Bodies whose qualifications are affected by this review were advised of the need to make changes to their qualifications.

Qualifications that specify the classifications of *Electronics Technology* and *Core Electronics* will need to be updated to reflect the new classifications and the impacts of the review on the standards.

The transition arrangements will take account of the following.

Credit for unit standards in the subfield *Electronics Technology* will continue to meet the requirements of this qualification, where credit from subfield *Electronic Engineering* is specified.

Credit for unit standards in the domain *Core Electronics* in subfield *Electronics Technology* will continue to meet the requirements of these qualifications where credit from domains *Core Electronics* or *Electronics Technology* in subfield *Electronic Engineering* is specified.

The transition information for qualifications that specify lapsing classifications in their rules would be as follows.

This qualification contains classifications that replace earlier classifications. For the purposes of this qualification, people who have gained credit for standards in the lapsing or lapsed classifications may use those credits to meet requirements relating to the replacement classifications.

Credits for standards in	Count towards qualification requirements where the following is specified
Engineering and Technology/Electronics Technology	Engineering and Technology/Electronic Engineering
Engineering and Technology/Electronics Technology/Core Electronics	Engineering and Technology/Electronic Engineering/Core Electronics
	Engineering and Technology/Electronic Engineering/Electronics Technology

Knowledge and skills in many of the expiring unit standards are covered in whole or in part by other unit standards. Where this is the case, these other unit standards are listed in *italics* in the 'summary of main changes' table – see below. SSBs may wish to include alternative standards in their qualifications where standards have been designated as expiring (D Category).

The following qualifications of the Standard Setting Bodies indicated will be affected by this review.

Qualification Title	Classification or Id	SSB Name
National Certificate in Fire Detection and Alarm Systems (Level 4) [Ref: 0569]	6625	Competenz
National Certificate in Fire Protection Systems Technology (Inspection and Testing) (Level 4) [Ref: 0864]	6625	Competenz
National Certificate in Locksmithing (Level 4) [Ref: 0452]	5936	Competenz

Qualification Title	Classification or Id	SSB Name
National Diploma in Fire Protection Systems Technology (Certification of Fire Safety Systems) (Level 5) [Ref: 0867]	6625	Competenz
National Certificate in Electricity Supply (Electrical) (Level 2) with optional strands in Electrical Fitter, and Technician [Ref: 0887]	5937, 8189, 8197, 9218, 9222	ESITO
National Certificate in Electricity Supply (Electrical) (Level 3) with strands in Electrical Fitter, and Electrician [Ref: 0888]	5935	ESITO
National Certificate in Electricity Supply (Electrical) (Level 4) with optional strands in Electrical Fitter Networks, and Electrical Fitter Hydro [Ref: 0921]	5935	ESITO
National Certificate in Electricity Supply (Technician) (Level 3) with strands in Control and Instrumentation, Power Technician, and HVDC Technician [Ref: 0922]	6625, 8190, 8193, 8194, 8196, 8200, 8201, 8204, 8205, 8206, 8207, 8209, 8210, 8211, 9217, 9223	ESITO
National Certificate in Electricity Supply (Technician) (Level 4) with strands in Control and Instrumentation, Power Technician, and HVDC Technician; and an optional strand in Electrical Services [Ref: 0917]	6059, 6065	ESITO
National Certificate in Occupational Health and Safety (Coordination) (Level 4) [Ref: 0944]	Electronics Technology	NZITO
National Certificate in Music Technology (Level 5) [Ref: 0603]	Electronics Technology	NZQA
National Certificate in Performing Arts Technology (Level 2) [Ref: 0612]	Electronics Technology	NZQA
National Certificate in Snowsport (Level 2) with strands in Surface Lift Operation, Aerial Lift Operation, Road and Carpark Services, and Maintenance [Ref: 0439]	5936	Sfrito

Summary of main changes to standards' Ids, classification, titles, levels, and credits

The following summary shows the changes made to the standards as a result of the review. All changes are in **bold**.

Key to review category

- A** Dates changed, but no other changes are made - the replacement standard carries the same Id and a new version number
- B** Changes made, but the overall outcome remains the same - the replacement 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

Knowledge and skills in many of the expiring unit standards are covered in whole or in part by other unit standards. Where this is the case, these other unit standards are listed in *italics* in the following table.

Subfield Electronics Technology
Electronic Engineering

Id	Domain	Title	Level	Credit	Review Category
5935	Core Electronics	Calculate values for and use test instruments to measure electronic circuits	2	3	D
18239	<i>Electronics Technology</i>	<i>Demonstrate introductory knowledge of circuit concepts and measurements for electronics</i>	2	5	
20430	Core Electronics	<i>Demonstrate and apply introductory knowledge of d.c. principles for electronics technicians</i>	3	7	
20431		<i>Demonstrate and apply introductory knowledge of a.c. principles for electronics technicians</i>	3	7	
20615		<i>Use electronic test equipment</i>	3	6	
5936	Core Electronics	Carry out soldering and de-soldering procedures in the electronics service industry	2	3	D
15849	<i>Core Electrical</i>	<i>Perform manual soldering and de-soldering procedures for electrical work</i>	2	2	
5937	Core Electronics	Explain operation of semi-conductor devices	2	3	D
18240	<i>Electronics Technology</i>	<i>Demonstrate knowledge of basic electronic components</i>	2	5	
20433	Core Electronics	<i>Demonstrate and apply introductory knowledge of analogue electronics for technicians</i>	3	7	
6053	Consumer Electronics	Service and repair consumer audio systems and products	4	10	D
20724	<i>Electronic Installation and Maintenance</i>	<i>Diagnose and repair faulty consumer electronic equipment to component level</i>	4	40	
6054	Consumer Electronics	Service and repair tape recorders	4	10	D
20724	<i>Electronic Installation and Maintenance</i>	<i>Diagnose and repair faulty consumer electronic equipment to component level</i>	4	40	

Id	Domain	Title	Level	Credit	Review Category
6055 20724	Consumer Electronics <i>Electronic Installation and Maintenance</i>	Service and repair consumer video cassette recorders <i>Diagnose and repair faulty consumer electronic equipment to component level</i>	4 4	15 40	D
6056 20724	Consumer Electronics <i>Electronic Installation and Maintenance</i>	Service and repair compact disc players <i>Diagnose and repair faulty consumer electronic equipment to component level</i>	4 4	12 40	D
6057 1189	Consumer Electronics <i>Electrical Appliance Servicing</i>	Service and repair microwave ovens <i>Service microwave ovens</i>	4 4	5 3	D
6058 6066 20726	Electronic Office Automation <i>Electronic Installation and Maintenance</i>	Service and repair photocopier electronic circuitry and printed circuit boards <i>Diagnose and repair faulty electronic office equipment to module level</i> <i>Diagnose and repair faulty electronic systems to module level</i>	4 4 4	5 25 25	D
6059 20725	Electronic Office Automation <i>Electronic Installation and Maintenance</i>	Service and repair telephones and telephone answering equipment <i>Diagnose and repair faulty telecommunications equipment to component level</i>	4 4	5 40	D
6060 6066 20726	Electronic Office Automation <i>Electronic Installation and Maintenance</i>	Service and repair facsimile machines <i>Diagnose and repair faulty electronic office equipment to module level</i> <i>Diagnose and repair faulty electronic systems to module level</i>	4 4 4	8 25 25	D
6061	Communications and Radar Electronics Electronic Installation and Maintenance	Service, repair and maintain marine radar Performance test and repair faulty radar equipment	4	15 12	B
6062	Communications and Radar Electronics Electronic Installation and Maintenance	Adjust, repair and maintain radio transmitters Performance test and repair faulty radio transmitter equipment	4	15 12	B

Id	Domain	Title	Level	Credit	Review Category
6063	Communications and Radar Electronics Electronic Installation and Maintenance	Service and repair communication radio receivers Performance test and repair faulty communications radio receiver equipment	4	15 12	B
6064 20724	Consumer Electronics <i>Electronic Installation and Maintenance</i>	Service and repair television sets and monitors <i>Diagnose and repair faulty consumer electronic equipment to component level</i>	4 4	15 40	D
6065 20726	Electronic Office Automation <i>Electronic Installation and Maintenance</i>	Repair and maintain uninterruptable power supplies <i>Diagnose and repair faulty electronic systems to module level</i>	4 4	6 25	D
6066	Consumer Electronics Electronic Installation and Maintenance	Service and repair office automation products Diagnose and repair faulty electronic office equipment to module level	4	8 25	B
6625 18239 18240 18241	Core Electronics <i>Electronics Technology</i>	Read, interpret, and draw electronic circuit diagrams <i>Demonstrate introductory knowledge of circuit concepts and measurements for electronics</i> <i>Demonstrate knowledge of basic electronic components</i> <i>Demonstrate knowledge of basic electronic systems</i>	2 2 2 2	3 5 5 5	D
8188 57	Core Electronics <i>Service Sector - Core Skills</i>	Demonstrate electronics workplace etiquette <i>Provide customer service in given situations</i>	2 2	4 2	D
8189 6061 20724	Consumer Electronics <i>Electronic Installation and Maintenance</i>	Service mechanical systems within electronic products <i>Performance test and repair faulty radar equipment</i> <i>Diagnose and repair faulty consumer electronic equipment to component level</i>	2 4 4	4 12 40	D

Id	Domain	Title	Level	Credit	Review Category
8190	Core Electronics	Explain and test transistor operation	2	6	D
18240	<i>Electronics Technology</i>	<i>Demonstrate knowledge of basic electronic components</i>	2	5	
19743		<i>Demonstrate and apply knowledge of basic semiconductor devices</i>	3	4	
20433	Core Electronics	<i>Demonstrate and apply introductory knowledge of analogue electronics for technicians</i>	3	7	
8192	Core Electronics	Perform calculations and conversions with numbering systems as used in digital electronics	2	2	D
20432		<i>Demonstrate and apply introductory knowledge of digital electronics for technicians</i>	3	7	
8193	Core Electronics	Explain and test the functions of logic gates as used in electronic applications	2	3	D
19744	<i>Electronics Technology</i>	<i>Demonstrate knowledge of basic digital and analogue electronics concepts</i>	3	5	
20432	Core Electronics	<i>Demonstrate and apply introductory knowledge of digital electronics for technicians</i>	3	7	
8194	Core Electronics	Explain analogue to digital and digital to analogue conversion	2	3	D
20714		<i>Demonstrate and apply advanced knowledge of digital principles for electronics technicians</i>	4	7	
8196	Core Electronics	Draw and use circuit and block diagrams to explain the operation of electronic circuits	2	3	D
18239	<i>Electronics Technology</i>	<i>Demonstrate introductory knowledge of circuit concepts and measurements for electronics</i>	2	5	
18240		<i>Demonstrate knowledge of basic electronic components</i>	2	5	
18241		<i>Demonstrate knowledge of basic electronic systems</i>	2	5	

Id	Domain	Title	Level	Credit	Review Category
8197 20433	Core Electronics	Explain and test the operation of simple power supply circuits as found in electronic products <i>Demonstrate and apply introductory knowledge of analogue electronics for technicians</i>	2 3	4 7	D
8200 20715	Core Electronics	Explain and test operation of solid state amplifier circuits <i>Demonstrate and apply advanced knowledge of analogue electronics for technicians</i>	3 4	4 9	D
8201 19744 20433	Core Electronics <i>Electronics Technology</i> Core Electronics	Explain and test operational amplifier (Op Amp) circuit operation <i>Demonstrate knowledge of basic digital and analogue electronics concepts</i> <i>Demonstrate and apply introductory knowledge of analogue electronics for technicians</i>	3 3 3	3 5 7	D
8202	Core Electronics	Explain and test the operation of valve amplifier and rectifier circuits	3	4	D
8203 20715 20717	Core Electronics	Explain and test oscillator, modulator, and demodulator circuits as found in electronic products <i>Demonstrate and apply advanced knowledge of analogue electronics for technicians</i> <i>Demonstrate and apply knowledge of electronic filters, oscillators, and frequency synthesisers</i>	3 4 4	5 9 6	D
8204 20715 20717	Core Electronics	Explain, build, and service passive and active filter circuits <i>Demonstrate and apply advanced knowledge of analogue electronics for technicians</i> <i>Demonstrate and apply knowledge of electronic filters, oscillators, and frequency synthesisers</i>	3 4 4	5 9 6	D

Id	Domain	Title	Level	Credit	Review Category
8205 20432	Core Electronics	Service digital logic gate circuits <i>Demonstrate and apply introductory knowledge of digital electronics for technicians</i>	3 3	3 7	D
8206 19744 20716	Core Electronics <i>Electronics Technology</i> Core Electronics	Explain and test electronic transducer circuit operation <i>Demonstrate knowledge of basic digital and analogue electronics concepts</i> <i>Demonstrate and apply knowledge of transducers and their interfaces with digital circuits</i>	3 3 4	3 5 10	D
8207 20433 20716	Core Electronics	Explain and test opto-electrical transducer circuits as found within electronic products <i>Demonstrate and apply introductory knowledge of analogue electronics for technicians</i> <i>Demonstrate and apply knowledge of transducers and their interfaces with digital circuits</i>	3 3 4	3 7 10	D
8208 20717	Core Electronics	Explain and test phase locked loop circuit operation <i>Demonstrate and apply knowledge of electronic filters, oscillators, and frequency synthesisers</i>	3 4	3 6	D
8209 20432	Core Electronics	Explain and test digital electronic timer circuit operation <i>Demonstrate and apply introductory knowledge of digital electronics for technicians</i>	3 3	3 7	D
8210 20714 20716	Core Electronics	Explain and test electronic servo control circuit operation <i>Demonstrate and apply advanced knowledge of digital principles for electronics technicians</i> <i>Demonstrate and apply knowledge of transducers and their interfaces with digital circuits</i>	3 4 4	3 7 10	D
8211	Core Electronics Core Electronics	Explain and test power supply circuits in electronic products Demonstrate and apply knowledge of switching power supplies	3 4	6 4	B

Id	Domain	Title	Level	Credit	Review Category
8212 20716 20724	Core Electronics <i>Electronic Installation and Maintenance</i>	Explain and test small electric motor drive circuits <i>Demonstrate and apply knowledge of transducers and their interfaces with digital circuits</i> <i>Diagnose and repair faulty consumer electronic equipment to component level</i>	3 4 4	2 10 40	D
8213	Core Electronics Electronic Installation and Maintenance	Explain and test microprocessor control circuit operation Diagnose and repair a faulty microprocessor or microcontroller system	3 4	8 6	B
8214 6062 20719	Core Electronics <i>Electronic Installation and Maintenance</i> Core Electronics	Explain and test radio frequency (r.f) amplifier circuits <i>Performance test and repair faulty radio transmitter equipment</i> <i>Demonstrate and apply knowledge of radio communications for technicians</i>	3 4 4	8 15 15	D
8215 6066 20726	Electronic Office Automation <i>Electronic Installation and Maintenance</i>	Explain and test facsimile and data modem operation <i>Diagnose and repair faulty electronic office equipment to module level</i> <i>Diagnose and repair faulty electronic systems to module level</i>	3 4 4	5 25 25	D
8217 20432 20717	Core Electronics	Service digital signal processing circuits <i>Demonstrate and apply introductory knowledge of digital electronics for technicians</i> <i>Demonstrate and apply knowledge of electronic filters, oscillators, and frequency synthesizers</i>	3 3 4	6 7 6	D
9216	Core Electronics	Describe one electronic technology application in modern society	2	3	D
9217 20432	Core Electronics	Describe the operation of monostable, bistable and astable circuits <i>Demonstrate and apply introductory knowledge of digital electronics for technicians</i>	2 3	2 7	D

Id	Domain	Title	Level	Credit	Review Category
9218	Core Electronics	Describe the operation of electronic logic gates	2	2	D
20432		<i>Demonstrate and apply introductory knowledge of digital electronics for technicians</i>	3	7	
9219	Core Electronics	Describe the operation of electronic building blocks digital circuits	2	2	D
20432		<i>Demonstrate and apply introductory knowledge of digital electronics for technicians</i>	3	7	
9220	Core Electronics	Describe and modify electronic building block circuits	2	2	D
20432		<i>Demonstrate and apply introductory knowledge of digital electronics for technicians</i>	3	7	
20433		<i>Demonstrate and apply introductory knowledge of analogue electronics for technicians</i>	3	7	
9221	Core Electronics	Describe the development of a new electrical or electronic product	2	3	B
	Electronics Technology	Describe the development of a new electronic product	3		
9222	Core Electronics	Measure values in electronic circuits, using a multimeter	2	2	D
18239	<i>Electronics Technology</i>	<i>Demonstrate introductory knowledge of circuit concepts and measurements for electronics</i>	2	5	
9223	Core Electronics	Construct and describe bipolar transistor circuits	2	3	D
20433		<i>Demonstrate and apply introductory knowledge of analogue electronics for technicians</i>	3	7	
14775	Communications and Radar Electronics	Explain, check-tune, diagnose, and maintain electronic control systems	4	30	D
11795	<i>Boatbuilding</i>	<i>Commission marine electrical and electronic systems and equipment</i>	4	10	
20720	<i>Core Electronics</i>	<i>Demonstrate knowledge of radar principles for technicians</i>	4	15	

Id	Domain	Title	Level	Credit	Review Category
14776	Communications and Radar Electronics	Maintain, diagnose, and repair electronic marine navigational aids	4	25	D
6061	<i>Electronic Installation and Maintenance</i>	<i>Performance test and repair faulty radar equipment</i>	4	12	
11796	<i>Boatbuilding</i>	<i>Maintain and repair marine electronic systems and equipment</i>	5	20	
20712	Core Electronics	Demonstrate and apply advanced knowledge of d.c. principles for electronics technicians	4	6	New
20713	Core Electronics	Demonstrate and apply advanced knowledge of a.c. principles for electronics technicians	4	7	New
20714	Core Electronics	Demonstrate and apply advanced knowledge of digital principles for electronics technicians	4	7	New
20715	Core Electronics	Demonstrate and apply advanced knowledge of analogue electronics for technicians	4	9	New
20716	Core Electronics	Demonstrate and apply knowledge of transducers and their interfaces with digital circuits	4	10	New
20717	Core Electronics	Demonstrate and apply knowledge of electronic filters, oscillators, and frequency synthesisers	4	6	New
20718	Core Electronics	Demonstrate and apply knowledge of advanced electronic measurement	4	6	New
20719	Core Electronics	Demonstrate and apply knowledge of radio communications for technicians	4	15	New
20720	Core Electronics	Demonstrate knowledge of radar principles for technicians	4	15	New
20721	Electronic Installation and Maintenance	Demonstrate and apply knowledge of advanced diagnostics for electronics technicians	4	5	New

Id	Domain	Title	Level	Credit	Review Category
20722	Electronic Installation and Maintenance	Install and commission electronic equipment	4	25	New
20723	Electronic Installation and Maintenance	Diagnose and repair faulty industrial electronic equipment to component level	4	40	New
20724	Electronic Installation and Maintenance	Diagnose and repair faulty consumer electronic equipment to component level	4	40	New
20725	Electronic Installation and Maintenance	Diagnose and repair faulty telecommunications equipment to component level	4	40	New
20726	Electronic Installation and Maintenance	Diagnose and repair faulty electronic systems to module level	4	25	New