FIELD ENGINEERING AND TECHNOLOGY

Review and Reclassification of *Core Electronics* unit standards into *Electronic Engineering* subfield

This review report was republished in May 2006.

Unit standard 8199, which was designated expiring in November 2003, had been assigned an expiry date of December 2005. This did not allow sufficient time for affected qualifications to be updated. The expiry date for the standard, which is the last date for assessment, has therefore been changed to December 2010.

Unit standard 8199, categorised as category C, expires at the end of December 2010.

Existing classification

Subfield	Domain	Id
Electronics Technology	Core Electronics	5934, 8191, 8195, 8199, 8216, 8218

New classification

Subfield	Domain	Id
Electronic Engineering	Core Electronics	5934, 8195, 8199, 8216
	Electronic Installation and Maintenance	8191, 8218

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

Date new versions published **November 2003**

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 NZ 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 3 July 2003.

Because of the complexities and the need to maintain teaching programmes, the changes are being introduced in two stages. The smaller Stage 1 covers the changes required by review of the *National Certificate in Electronics Technology (Intermediate) (Level 3)* [Ref: 0408]. All remaining unit standards in the domains of *Core Electronics, Communications and Radar Electronics, Consumer Electronics, and Electronic Office Automation* are being reviewed in Stage 2.

Unit standards in the *Electronic Manufacturing* domain had been reviewed separately and were covered by a separate report published in November 2003.

Main changes resulting from the review

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

- Designation of the *Core Electronics* domain in the *Electronics Technology* subfield, as Lapsing. The standards have been moved to a new *Core Electronics* domain in the new *Electronic Engineering* subfield.
- Changes to titles to better reflect the assessment outcome.
- Changes to levels of unit standards 8191 and 8195 to better reflect the level descriptors for unit standards.
- Adjustment of credit values to reflect notional learning time more accurately.
- Clarification of elements, performance criteria, range statements, and special notes to improve assessability.
- Introduction of five new unit standards.

Unit standard 8199, categorised as category C, expires 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
Field	Engineering and Technology	2	Unit Standard Ids	8191, 8195, 8199	3
Subfield	Electronics Technology	any	Subfield	Electronic Engineering	same
Domain	Core Electronics – Lapsing	any	Domain	Core Electronics	same
		2	Unit Standard Id	8191	3
		3	Unit Standard Id	8218	3
Subfield	Electronics Technology	2	Unit Standard Ids	8191, 8195, 8199	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 ETITO qualifications were being reviewed concurrently and would incorporate the new and reviewed unit standards.

Qualifications	**Standards/Domain/ Subfield**
National Certificate in Electronics Technology (Intermediate) (Level 3) [Ref: 0408]	8191, 8195, 8199
National Certificate in Electronics Technology (Level 4) with strands in Communications and Radar, Consumer Products, and Office Automation [Ref: 0409]	Core Electronics
National Certificate in Electronic Manufacturing (Level 4) with strands in Manufacturing Technology, and Manufacturing Leadership [Ref: 0435]	Core Electronics

Qualifications	Standards/Domain/ Subfield
National Certificate in Electronic Manufacturing (Level 3) [Ref: 0434]	Core Electronics

The following ETITO qualification is to be reviewed once Stage 2 has been completed.

Qualification	Standards/Domain/ Subfield
National Certificate in Industrial Measurement and Control (Level 4) [Ref: 0410]	8191, 8195, 8199

The ElectroTechnology ITO will revise the remaining affected qualifications, for which it is responsible, following Stage 2 of its review programme.

Qualifications	Standards/Domain/ Subfield
National Certificate in Telecommunications (Level 3) with strands in Bearer and Switch, Building and Data Cabling, Customer Access Network, Customer Premises Equipment, and Radio [Ref: 0767]	8191
National Certificate in Telecommunications (Level 2) [Ref: 0338]	Core Electronics
National Diploma in Engineering (Level 6) with strands in Computer Engineering, Electrical Engineering, Electronics, Industrial Measurement and Control, and Telecommunications [Ref: 0846]	Electronics Technology
National Certificate in Electrical Engineering (Electrician) (Level 4) [Ref: 0313]	Electronics Technology
National Certificate in Electrical Engineering (Level 5) [Ref: 0951]	Core Electronics

Where qualifications were the responsibility of an SSB other than ElectroTechnology ITO, that SSB was informed and advised of the changes made to the standards.

Qualifications with listed classifications will need to be updated with the following statement.

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 where credit from domain *Core Electronics, subfield Electronic Engineering* is specified.

Qualifications	Standards, Domain, Subfield	SSB
National Certificate in Fire Detection and Alarm Systems (Level 4) [Ref: 0569]	Core Electronics	Competenz
National Certificate in Fire Protection Systems Technology (Inspection and Testing) (Level 4) [Ref: 0864]	Core Electronics	Competenz
National Certificate in Lifts and Escalators (Level 4) with strands in Installation, and Servicing [Ref: 0662]	Core Electronics	Competenz
National Certificate in Locksmithing (Level 4) [Ref: 0452]	Core Electronics	Competenz

Qualifications	Standards, Domain, Subfield	SSB
National Diploma in Fire Protection Systems Technology (Certification of Fire Safety Systems) (Level 5) [Ref: 0867]	Core Electronics	Competenz
National Certificate in Electricity Supply (Electrical) (Level 2) with optional strands in Electrical Fitter, and Technician [Ref: 0887]	Core Electronics	ESITO[1]
National Certificate in Electricity Supply (Technician) (Level 3) with strands in Control and Instrumentation, Power Technician, and HVDC Technician [Ref: 0922]	8191, 8199	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 Plastics Processing Technology (Level 2) with strands in Injection Moulding, Extrusion, Blow Moulding, Pressure Thermoforming, Vacuum Thermoforming, Blow Film Extrusion, Film Conversion, Injection Stretch Blow Moulding, and Rotational Moulding [Ref: 0394]	Core Electronics	PaMPITO[2]
National Certificate in Plastics Processing Technology (Level 3) with strands in Injection Moulding, Extrusion, Blow Moulding, Pressure Thermoforming, Vacuum Thermoforming, Blown Film Extrusion, Film Conversion, Injection Stretch Blow Moulding, and Rotational Moulding [Ref: 0395]	Core Electronics	PaMPITO
National Certificate in Plastics Processing Technology (Level 4) with strands in Injection Moulding, Extrusion, Blow Moulding, Thermoforming, Blown Film Extrusion, Injection Stretch Blow Moulding Single Stage, Injection Stretch Blow Moulding Two Stage, and Rotational Moulding [Ref: 0396]	Core Electronics	PaMPITO
National Certificate in Plastics Production (Level 1) with strands in Injection Moulding, Extrusion, Blow Moulding, Thermoforming, Blown Film Extrusion, Film Conversion, Injection Stretch Blow Moulding, Rotational Moulding, Film Slitting, and Expanded Polystyrene Moulding [Ref: 0392]	Core Electronics	PaMPITO
National Certificate in Plastics Production (Level 2) with strands in Injection Moulding, Extrusion, Blow Moulding, Pressure Thermoforming, Vacuum Thermoforming, Blown Film Extrusion, Film Conversion, Injection Stretch Blow Moulding, Rotational Moulding, Expanded Polystyrene Moulding, and Polystyrene Pre-expansion [Ref: 0393]	Core Electronics	PaMPITO
National Certificate in Plastics Processing Technology (Level 1) with strands in Injection Moulding, Extrusion, Blow Moulding, Thermoforming, Blown Film Extrusion, Film Conversion, Injection Stretch Blow Moulding, and Rotational Moulding [Ref: 0260]	Core Electronics	PaMPITO

[1] Electricity Supply ITO
[2] Plastics and Materials Processing ITO

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	
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

Subfield Electronics Technology
Electronic Engineering

Id	Domain	Title	Level	Credit	Review Category
5934	Core Electronics	Prevent electrostatic damage to electronic components	2	1	**B**
8191	Core Electronics **Electronic Installation and Maintenance**	Apply systematic fault finding methodology in servicing electronic products **Demonstrate systematic and logical fault finding techniques in electronic products or systems**	2 **3**	8 **6**	**B**
8195	Core Electronics	Select and maintain cells and batteries used in electronic applications **Test and select batteries used in electronic applications, and select suitable chargers**	2 **3**	3	**B**
8199 **20615**	Core Electronics	Use oscilloscopes to measure electronic circuits **Use electronic test equipment**	2 **3**	3 **6**	**C**
8216	Core Electronics	Replace and set-up cathode ray tubes **Demonstrate and apply knowledge of cathode ray tubes**	3	2	**B**
8218	Core Electronics **Electronic Installation and Maintenance**	Carry out surface mounted device (SMD) soldering and de-soldering as used in electronics servicing **Carry out surface mounted device (SMD) soldering, de-soldering, and printed circuit board repair**	3	3 **8**	**B**

Subfield Electronic Engineering
Domain Core Electronics

Id	Title	Level	Credit	Category
20430	**Demonstrate and apply introductory knowledge of d.c. principles for electronics technicians**	**3**	**7**	**New**
20431	**Demonstrate and apply introductory knowledge of a.c. principles for electronics technicians**	**3**	**7**	**New**
20432	**Demonstrate and apply introductory knowledge of digital electronics for technicians**	**3**	**7**	**New**

Id	Title	Level	Credit	Category
20433	Demonstrate and apply introductory knowledge of analogue electronics for technicians	3	7	New
20434	Demonstrate knowledge of practical mathematics for electronics technicians	3	8	New