National Certificate in Mechanical Engineering (Level 4) with strands in Fitting and Machining, General Engineering, Machining, Maintenance Engineering, Toolmaking, and Electricity Supply

Level **4**

Credits **270-300**

This qualification has been **reviewed**. The last date to meet the requirements is 31 December 2022.

Transition Arrangements

This qualification was republished in October 2017 to extend the last date for enrolment from 31 December 2017 to 31 December 2018, and the last date of assessment from 31 December 2021 to 31 December 2022.

This qualification has been replaced by the New Zealand Certificate in Mechanical Engineering (Trade) (Level 4) with strands in Fitting and Machining, General Engineering, Machining, Maintenance Engineering, Metal Forming, and Toolmaking [Ref: 2714].

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 2022, when the qualification will be discontinued.

People currently working towards this qualification may either complete the requirements by 31 December 2022 or transfer their results to the replacement qualification.

This qualification contains expiring unit standards for which replacement unit standards have now been registered. Candidates who have gained credit for the replacement unit standards are exempt from the requirement to gain credit for the expiring unit standards.

Credit for	Exempt from
26551, 26552	6401, 6402
27203, 27204	2402
29655	2430
29653	2432
29551	4797
29552	4800
29550	20799
29549	20917

Credit for	Exempt from
29671, 29673	21906
29674	21909
29654	21910

For detailed information see Review Summaries on the NZQA website.

NZQF Registration Information

Process	Version	Date	Last Date for Assessment
Registration	1	November 2006	December 2012
Revision	2	July 2008	December 2022
Republication	2	October 2013	December 2022
Review	3	July 2015	December 2022
Republication	3	May 2016	December 2022
Republication	3	October 2017	December 2022

Standard Setting Body

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National Certificate in Mechanical Engineering (Level 4) with strands in Fitting and Machining, General Engineering, Machining, Maintenance Engineering, Toolmaking, and Electricity Supply

Level **4**

Credits **270-300**

Purpose

The National Certificate in Mechanical Engineering (Level 4) with strands in Electricity Supply, Fitting and Machining, General Engineering, Machining, Maintenance Engineering, and Toolmaking is a trade qualification for people in the engineering industry. It combines a broad, common foundation of mechanical engineering with more specialised skills and knowledge in the form of strands to suit the nature of the particular trade or enterprise the individual is engaged in. It is intended to provide training for people in occupations traditionally referred to as Fitters, Fitters and Turners, Fitters and Welders, Maintenance and Diagnostics Engineers, Maintenance Fitters, Power Station Fitters, Toolmakers, Precision Machinists, and Machine Tool Setters.

The training common to all strands includes health and safety, measurement and tolerancing, tools, materials and metals, sketching, drawing interpretation, trade calculations, mechanics, hydraulics, pneumatics, basic machining, welding, fitting, assembly, and job costing. Additional training provides the special skills needed for each strand, and elective unit standards are chosen to match the range of work available in the candidate's enterprise.

The **Fitting and Machining** strand is for those employed in machine building and related occupations, where both precision fitting and machining skills are required. Typically this involves machining, assembly, and alignment of components to close tolerances, machine installation, and hydraulic or pneumatic control systems. Computer Numerically Controlled (CNC) machinery and simple toolmaking may be involved in some enterprises.

The **General Engineering** strand is for those employed in a general engineering workshop, where the work may involve fitting, machining, welding, maintenance, repair, hydraulics, pneumatics, marine or rail engineering, fabrication, or gunsmithing. Often the work will be of a one-off or contractual nature.

The **Machining** strand is for those employed in enterprises where the emphasis is on precision machining of components. These enterprises typically employ sophisticated CNC mills and lathes to produce engineering components to high degrees of tolerance and finish.

The **Maintenance Engineering** strand is for those employed on engineering maintenance work in enterprises where the emphasis is on maintaining reliable production, possibly in a lean (competitive) manufacturing environment. These enterprises typically have a planned approach to maintenance, involving computerised maintenance systems and condition monitoring. The strand is also appropriate for those employed in contract maintenance work for such enterprises.

The **Toolmaking** strand is for those employed in enterprises making tooling, press tooling, moulds, dies, gauges, jigs, and fixtures for industrial processes. Tools are typically used in sheet metal presses, or in injection moulding, blow moulding, extrusion, and pressure diecasting operations. The making of these tools requires knowledge of tool operation and Computer-Aided Design/Computer-Aided Manufacturing (CAD/CAM) techniques, and may involve machining using CNC machining centres or electro discharge machines (EDM).

The **Electricity Supply** strand is for those employed in enterprises installing, maintaining and servicing electricity generating plant and equipment as well as ancillary plant and equipment. This will include a planned approach to maintenance using computerised maintenance systems and conditioning monitoring.

There are standards in common in the requirements of some strands. This structure has been designed so that the elective choices made by apprentices or trainees will naturally reflect the unique nature of their occupation and strand.

This qualification incorporates the standards of the National Certificate in Mechanical Engineering (Level 2) [Ref: 1220]. People who have achieved that qualification will already have 60 credits towards this qualification.

Having completed this qualification in one strand, candidates need only complete the additional strand requirements to gain this qualification in a second strand.

Those who have achieved this qualification may wish to continue training for the following higher qualifications:

- National Certificate in Maintenance and Diagnostics in Mechanical Engineering (Level 5) [Ref: 0718]; or
- National Certificate in Engineering Machining and Toolmaking (Level 5) [Ref: 0719]; or
- proposed National Certificate in Mechanical Engineering (Level 5) [currently under development]; or
- National Diploma in Engineering (Level 6) with strands in Mechanical Engineering, Production Engineering, and an optional Practical Endorsement strand [Ref: 0534].

Replacement Information

This qualification replaced the National Certificate in Maintenance and Diagnostics in Mechanical Engineering (Level 4) [Ref: 0125] and the National Certificate in Engineering Machining and Toolmaking (Level 4) [Ref: 0123].

Credit Range

	Core Compulsory	Fitting and Machining Strand		General Engineering Strand		Machining Strand	
		Comp	Elect	Comp	Elect	Comp	Elect
Level 1 credits	6	-	0-32	-	0-32	-	0-38
Level 2 credits	70	-	0-55	-	0-81	6	0-79
Level 3 credits	36	68	0-55	22	0-81	38	0-79
Level 4 or above credits	6	6	43-98	6	43-124	5	44-123
Minimum totals	118	74	98	28	124	49	123
Qualification total with strand		290		270		290	

	Maintenance Engineering Strand		Toolmaking Strand		Electricity Supply Strand	
	Comp	Elect	Comp	Elect	Comp	Elect
Level 1 credits	-	0-32	-	0-38	-	-
Level 2 credits	4	0-56	6	0-57	9	0-95
Level 3 credits	43	0-56	70	0-57	29	0-95
Level 4 or above credits	34	15-71	20	29-86	44	5-100
Minimum totals	81	71	96	86	82	100
Qualification total with strand	270		300		300	

Key
Comp = Compulsory
Elect = Elective

Requirements for Award of Qualification

Award of NQF 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 in section 7 of the New Zealand Qualifications Authority (NZQA) *Rules and Procedures* publications available at http://www.nzqa.govt.nz/ncea/acrp/index.html.

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

- Core Compulsory standards

One of the following strands is required
- Fitting and Machining Strand
- General Engineering Strand
- Machining Strand
- Maintenance Engineering Strand
- Toolmaking Strand
- Electricity Supply Strand

Detailed Requirements

Core Compulsory
The following standards are required

Engineering and Technology > Mechanical Engineering > Engineering Core Skills

ID	Title	Level	Credit
2395	Select, use and care for, engineering hand tools	2	4
2396	Select, use and maintain portable hand held engineering power tools	2	4
21905	Demonstrate knowledge of trade calculations and units for mechanical engineering trades	2	4
21906	Perform basic mechanical engineering machining operations under supervision	2	12
21908	Demonstrate knowledge of basic mechanics for mechanical engineering trades	2	2
21909	Demonstrate knowledge of fasteners used in mechanical engineering	2	1
21911	Demonstrate knowledge of safety on engineering worksites	2	1
21912	Apply safe working practices on an engineering worksite	2	2
21913	Shift loads in engineering installation, maintenance, and fabrication work	2	2
22897	Demonstrate and apply knowledge of mechanical fitting	3	5
22900	Demonstrate knowledge of job costing in mechanical engineering	4	2

Engineering and Technology > Mechanical Engineering > Engineering Drawing and Design

ID	Title	Level	Credit
2430	Draw and interpret engineering sketches under supervision	2	4
2432	Construct engineering plane geometric shapes under supervision	2	3
21910	Interpret mechanical engineering drawings	3	5

Engineering and Technology > Mechanical Engineering > Engineering Machining and Toolmaking

ID	Title	Level	Credit
22908	Demonstrate and apply knowledge of manually controlled machining operations	3	10

Engineering and Technology > Mechanical Engineering > Engineering - Materials

ID	Title	Level	Credit
4797	Demonstrate knowledge of the composition of engineering metals	3	5
20799	Demonstrate basic knowledge of engineering metals	2	4
20917	Demonstrate basic knowledge of engineering materials	2	2

Engineering and Technology > Mechanical Engineering > Engineering - Measurement

ID	Title	Level	Credit
4433	Select, use, and care for simple measuring devices used in engineering	1	2
4435	Select, use, and care for engineering dimensional measuring equipment	2	3
4436	Select, use, and care for engineering marking-out equipment	2	4
4438	Demonstrate knowledge of fits, limits, and tolerances in engineering	2	2
4440	Demonstrate and apply knowledge of international tolerancing in engineering	4	4

Engineering and Technology > Mechanical Engineering > Fluid Power - Hydraulics

ID	Title	Level	Credit
20611	Demonstrate knowledge of hydraulics and hydraulic power systems	2	5

Engineering and Technology > Mechanical Engineering > Fluid Power - Pneumatics

ID	Title	Level	Credit
20612	Demonstrate knowledge of pneumatics and pneumatic power systems	2	5

Engineering and Technology > Mechanical Engineering > Maintenance and Diagnostics in Mechanical Engineering

ID	Title	Level	Credit
2401	Safely shut down and isolate machines and equipment	3	3
19873	Demonstrate knowledge of bearings used in machines and equipment	3	8

Engineering and Technology > Mechanical Engineering > Mechanical Assembly

ID	Title	Level	Credit
2387	Assemble mechanical components under supervision	2	2

Engineering and Technology > Mechanical Engineering > Welding

ID	Title	Level	Credit
21907	Demonstrate and apply knowledge of safe welding procedures under supervision	2	3

Health > Health Studies > Core Health

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

Health > Occupational Health and Safety > Occupational Health and Safety Practice

ID	Title	Level	Credit
497	Demonstrate knowledge of workplace health and safety requirements	1	3

Fitting and Machining Strand

Meet the requirements of all of the following sets

- Fitting and Machining Strand Compulsory
- Fitting and Machining Strand Elective

Fitting and Machining Strand Compulsory
The following standards are required

Engineering and Technology > Mechanical Engineering > Engineering Core Skills

ID	Title	Level	Credit
22898	Demonstrate and apply knowledge of machine levelling and alignment	3	3
22899	Demonstrate knowledge of mechanical power transmission	3	3

Engineering and Technology > Mechanical Engineering > Engineering Machining and Toolmaking

ID	Title	Level	Credit
2714	Produce components by performing engineering turning operations	3	15
2715	Produce components by performing engineering milling operations	3	15
22909	Demonstrate and apply knowledge of setting and operating CNC engineering machines	3	4
22910	Demonstrate and apply knowledge of programming CNC engineering machines	3	4

Engineering and Technology > Mechanical Engineering > Maintenance and Diagnostics in Mechanical Engineering

ID	Title	Level	Credit
2403	Select and replace static seals in machines and equipment	3	5
2406	Dismantle, inspect, assemble and test components	4	6
22901	Demonstrate knowledge of pumps, fans, and valves used in engineering	3	3

Engineering and Technology > Mechanical Engineering > Mechanical Assembly

ID	Title	Level	Credit
22914	Assemble and fit precision components	3	10

Engineering and Technology > Mechanical Engineering > Welding

ID	Title	Level	Credit
22906	Demonstrate and apply knowledge of welding low carbon steel	3	3
22907	Demonstrate and apply knowledge of welding aluminium and stainless steel	3	3

Fitting and Machining Strand Elective
A minimum of 98 credits
- Of which a minimum of 43 credits at Level 4 or above

Field	Subfield	Domain
Engineering and Technology	Mechanical Engineering	Applied Principles of Mechanical Engineering
		Engineering Core Skills
		Engineering Drawing and Design
		Engineering - Fabrication
		Engineering Machining and Toolmaking
		Engineering - Materials
		Engineering - Measurement
		Engineering Patternmaking
		Engineering - Robotics
		Fluid Power - Hydraulics
		Fluid Power - Pneumatics
		Gunsmithing
		Maintenance and Diagnostics in Mechanical Engineering
		Mechanical Assembly
		Mechanical Commissioning
		Mechanical Engineering Inspection
		Mechanical Installation
		Metal Casting
		Metal Surface Finishing
		Welding
Sciences	Mathematics	Algebra
		Calculus
		Trigonometry
Service Sector	Maritime	Marine Engineering
		Maritime Engineering
	Rail Transport	Rail Core Skills

General Engineering Strand
Meet the requirements of all of the following sets
- General Engineering Strand Compulsory
- General Engineering Strand Elective

General Engineering Strand Compulsory
The following standards are required

Engineering and Technology > Mechanical Engineering > Engineering Core Skills

ID	Title	Level	Credit
22898	Demonstrate and apply knowledge of machine levelling and alignment	3	3
22899	Demonstrate knowledge of mechanical power transmission	3	3

Engineering and Technology > Mechanical Engineering > Maintenance and Diagnostics in Mechanical Engineering

ID	Title	Level	Credit
2402	Demonstrate knowledge of lubricants and lubrication systems, and inspect lubrication systems	3	5
2403	Select and replace static seals in machines and equipment	3	5
2406	Dismantle, inspect, assemble and test components	4	6
22901	Demonstrate knowledge of pumps, fans, and valves used in engineering	3	3

Engineering and Technology > Mechanical Engineering > Welding

ID	Title	Level	Credit
22906	Demonstrate and apply knowledge of welding low carbon steel	3	3

General Engineering Strand Elective
A minimum of 124 credits
- Of which a minimum of 43 credits at Level 4 or above

Field	Subfield	Domain
Engineering and Technology	Mechanical Engineering	Applied Principles of Mechanical Engineering
		Engineering Core Skills
		Engineering Drawing and Design
		Engineering - Fabrication
		Engineering Machining and Toolmaking
		Engineering - Materials
		Engineering - Measurement
		Engineering Patternmaking
		Engineering - Robotics
		Fluid Power - Hydraulics
		Fluid Power - Pneumatics

Field	Subfield	Domain
		Gunsmithing
		Maintenance and Diagnostics in Mechanical Engineering
		Mechanical Assembly
		Mechanical Commissioning
		Mechanical Engineering Inspection
		Mechanical Installation
		Metal Casting
		Metal Surface Finishing
		Welding
Sciences	Mathematics	Algebra
		Calculus
		Trigonometry
Service Sector	Maritime	Marine Engineering
		Maritime Engineering
	Rail Transport	Rail Core Skills

Machining Strand
Meet the requirements of all of the following sets
- Machining Strand Compulsory
- Machining Strand Elective

Machining Strand Compulsory
The following standards are required

Engineering and Technology > Mechanical Engineering > Engineering Drawing and Design

ID	Title	Level	Credit
2433	Create simple engineering drawings using computer aided design (CAD) software	2	6

Engineering and Technology > Mechanical Engineering > Engineering Machining and Toolmaking

ID	Title	Level	Credit
2714	Produce components by performing engineering turning operations	3	15
2715	Produce components by performing engineering milling operations	3	15
22909	Demonstrate and apply knowledge of setting and operating CNC engineering machines	3	4
22910	Demonstrate and apply knowledge of programming CNC engineering machines	3	4

Engineering and Technology > Mechanical Engineering > Engineering - Materials

ID	Title	Level	Credit
4800	Demonstrate knowledge of heat treatment for engineering steels	4	5

Machining Strand Elective

A minimum of 123 credits

- Of which a minimum of 44 credits at Level 4 or above

Field	Subfield	Domain
Engineering and Technology	Mechanical Engineering	Applied Principles of Mechanical Engineering
		Engineering Core Skills
		Engineering Drawing and Design
		Engineering - Fabrication
		Engineering Machining and Toolmaking
		Engineering - Materials
		Engineering - Measurement
		Engineering Patternmaking
		Engineering - Robotics
		Fluid Power - Hydraulics
		Fluid Power - Pneumatics
		Gunsmithing
		Mechanical Assembly
		Metal Casting
		Metal Surface Finishing
		Welding
Manufacturing	Plastics Processing Technology	Plastics Materials
Sciences	Mathematics	Algebra
		Calculus
		Trigonometry

Maintenance Engineering Strand

Meet the requirements of all of the following sets

- Maintenance Engineering Strand Compulsory
- Maintenance Engineering Strand Elective

Maintenance Engineering Strand Compulsory
The following standards are required

Engineering and Technology > Mechanical Engineering > Engineering Core Skills

ID	Title	Level	Credit
22898	Demonstrate and apply knowledge of machine levelling and alignment	3	3
22899	Demonstrate knowledge of mechanical power transmission	3	3

Engineering and Technology > Mechanical Engineering > Maintenance and Diagnostics in Mechanical Engineering

ID	Title	Level	Credit
2397	Service machines and equipment	2	4
2400	Describe the principles of static and dynamic balancing, and carry out static balancing	3	4
2402	Demonstrate knowledge of lubricants and lubrication systems, and inspect lubrication systems	3	5
2403	Select and replace static seals in machines and equipment	3	5
2406	Dismantle, inspect, assemble and test components	4	6
2407	Monitor the condition of machinery and equipment	4	4
2408	Align machinery and equipment	4	8
2409	Level machinery and equipment	3	4
22901	Demonstrate knowledge of pumps, fans, and valves used in engineering	3	3
22902	Demonstrate knowledge of process control in mechanical engineering	4	3
22903	Demonstrate knowledge of modern manufacturing concepts and their significance in plant maintenance	4	3
22904	Demonstrate knowledge of modern engineering plant maintenance practice	4	5
22905	Perform planned maintenance work on mechanical equipment	4	5

Engineering and Technology > Mechanical Engineering > Mechanical Assembly

ID	Title	Level	Credit
22914	Assemble and fit precision components	3	10

Engineering and Technology > Mechanical Engineering > Welding

ID	Title	Level	Credit
22906	Demonstrate and apply knowledge of welding low carbon steel	3	3
22907	Demonstrate and apply knowledge of welding aluminium and stainless steel	3	3

Maintenance Engineering Strand Elective

A minimum of 71 credits

- Of which a minimum of 15 credits at Level 4 or above

Field	Subfield	Domain
Engineering and Technology	Mechanical Engineering	Applied Principles of Mechanical Engineering
		Engineering Core Skills
		Engineering Drawing and Design
		Engineering Machining and Toolmaking
		Engineering - Materials
		Engineering - Measurement
		Engineering - Robotics
		Fluid Power - Hydraulics
		Fluid Power - Pneumatics
		Gunsmithing
		Maintenance and Diagnostics in Mechanical Engineering
		Mechanical Assembly
		Mechanical Commissioning
		Mechanical Engineering Inspection
		Mechanical Installation
		Welding
Manufacturing	Manufacturing Skills	Competitive Manufacturing
Sciences	Mathematics	Algebra
		Calculus
		Trigonometry
Service Sector	Maritime	Marine Engineering
		Maritime Engineering
	Rail Transport	Rail Core Skills

Toolmaking Strand
Meet the requirements of all of the following sets
- Toolmaking Strand Compulsory
- Toolmaking Strand Elective

Toolmaking Strand Compulsory
The following standards are required

Engineering and Technology > Mechanical Engineering > Engineering Drawing and Design

ID	Title	Level	Credit
2433	Create simple engineering drawings using computer aided design (CAD) software	2	6
2436	Create three-dimensional engineering models under supervision	3	5

Engineering and Technology > Mechanical Engineering > Engineering Machining and Toolmaking

ID	Title	Level	Credit
2714	Produce components by performing engineering turning operations	3	15
2715	Produce components by performing engineering milling operations	3	15
18542	Manufacture single stage tooling for industry	3	15
18543	Manufacture multi-stage tooling for industry	4	15
22909	Demonstrate and apply knowledge of setting and operating CNC engineering machines	3	4
22910	Demonstrate and apply knowledge of programming CNC engineering machines	3	4
22911	Demonstrate knowledge of toolmaking principles	3	2

Engineering and Technology > Mechanical Engineering > Engineering - Materials

ID	Title	Level	Credit
4800	Demonstrate knowledge of heat treatment for engineering steels	4	5

Engineering and Technology > Mechanical Engineering > Mechanical Assembly

ID	Title	Level	Credit
22913	Assemble and fit precision tooling	3	10

Toolmaking Strand Elective
A minimum of 86 credits
- Of which a minimum of 29 credits at Level 4 or above

Field	Subfield	Domain
Engineering and Technology	Mechanical Engineering	Applied Principles of Mechanical Engineering
		Engineering Core Skills
		Engineering Drawing and Design
		Engineering - Fabrication
		Engineering Machining and Toolmaking
		Engineering - Materials
		Engineering - Measurement
		Engineering Patternmaking
		Engineering - Robotics
		Fluid Power - Hydraulics
		Fluid Power - Pneumatics
		Gunsmithing
		Mechanical Assembly
		Metal Casting
		Metal Surface Finishing
Manufacturing	Plastics Processing Technology	Plastics Materials
Sciences	Mathematics	Algebra
		Calculus
		Trigonometry

Electricity Supply Strand
Meet the requirements of all of the following sets
- Electricity Supply Strand Compulsory
- Electricity Supply Strand Elective

Electricity Supply Strand Compulsory
The following standards are required

Engineering and Technology > Electricity Supply > Electricity Supply - Power System Maintenance

ID	Title	Level	Credit
6975	Repair and overhaul bearings of rotating machines of 100kVA and above	4	8
6984	Repair and overhaul lubrication systems for rotating plant of 100kVA and over	4	5

ID	Title	Level	Credit
10395	Repair and overhaul compressed air systems	4	5
10397	Repair and overhaul cooling systems	4	5
10414	Repair and overhaul pumps	5	8
10420	Repair and overhaul valves	4	5

Engineering and Technology > Mechanical Engineering > Engineering Machining and Toolmaking

ID	Title	Level	Credit
2714	Produce components by performing engineering turning operations	3	15

Engineering and Technology > Mechanical Engineering > Maintenance and Diagnostics in Mechanical Engineering

ID	Title	Level	Credit
2402	Demonstrate knowledge of lubricants and lubrication systems, and inspect lubrication systems	3	5
2403	Select and replace static seals in machines and equipment	3	5
2408	Align machinery and equipment	4	8
2409	Level machinery and equipment	3	4

Humanities > Communication Skills > Interpersonal Communications

ID	Title	Level	Credit
1277	Communicate information in a specified workplace	2	3
9677	Participate in a group/team which has an objective(s)	2	3

Humanities > Communication Skills > Writing

ID	Title	Level	Credit
3492	Write a short report	2	3

Electricity Supply Strand Elective
A minimum of 100 credits
- Of which a minimum of 5 credits at Level 4 or above

Field	Subfield	Domain
Engineering and Technology	Electricity Supply	Electricity Supply - Core Skills
		Electricity Supply - Distribution Networks
		Electricity Supply - Power System Maintenance
	Mechanical Engineering	Engineering Machining and Toolmaking
		Fluid Power - Hydraulics
		Fluid Power - Pneumatics
		Maintenance and Diagnostics in Mechanical Engineering
		Mechanical Installation

Transition Arrangements

Version 2

The qualification was revised to incorporate an additional strand to recognise the training of mechanical personnel who are engaged in installing, maintaining and servicing electricity generating plant and equipment. The core skills and knowledge required by this trade were a close fit to the core skills in this qualification. Following negotiations between Competenz and the Electricity Supply Industry Training Organisation (ESITO), a Memorandum of Understanding was signed which provides for cooperation between the two organisations for the purpose of the additional strand.

Changes to structure and content
- a sixth strand of Electricity Supply was added to the qualification;
- compulsory standard 497 was updated to reflect the results of review;
- strand elective credit requirements for the first five strands were reduced by 2 to keep total credit the same.

For detailed information see Review Summaries on the NZQA website.

There are no transitions consequences resulting from this revision.

This qualification contains standards that replace or compensate for 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
2388	22913, 22914
2389	21909
2431	2433
2434	2430, 2433, 21910
2670	21907
2711	22910
2824	21911, 21912
4432, 4434	21908
4795	20917
4796	20799
4798	4797
5223, 5226, 5251	21905
5226, 5228, 5251	21905
17344	20612
17345	20611
2405	19873
12299	21913

Credit for	Exempt from		
	Classification	**Level**	**Credit**
3241	Engineering and Technology > Mechanical Engineering > Mechanical Installation	2	2
3242	Engineering and Technology > Mechanical Engineering > Mechanical Installation	2	1
3243	Engineering and Technology > Mechanical Engineering > Mechanical Installation	3	6
4810	Engineering and Technology > Mechanical Engineering > Engineering Machining and Toolmaking	2	12
4811	Engineering and Technology > Mechanical Engineering > Engineering Machining and Toolmaking	3	12
2405	Engineering and Technology > Mechanical Engineering > Maintenance and Diagnostics in Mechanical Engineering	4	12

These exemptions will be available up to 31 December 2011.

Competenz will publicise these arrangements in the trade press and the Competenz website http://www.competenz.org.nz/, and by direct communication with apprentices and their employers.

It is not intended that anyone be disadvantaged by this revision, and the above arrangements have been designed for a smooth transition. However, anyone who feels they have been disadvantaged may appeal to Competenz at the address below.

Previous version of the qualification

Version 1 of this qualification replaced the National Certificate in Maintenance and Diagnostics in Mechanical Engineering (Level 4) [Ref: 0125] and the National Certificate in Engineering Machining and Toolmaking (Level 4) [Ref: 0123].

All new trainees or apprentices from 2007 have been enrolled in the new qualification.

People working towards the National Certificate in Maintenance and Diagnostics in Mechanical Engineering (Level 4) [Ref: 0125] or the National Certificate in Engineering Machining and Toolmaking (Level 4) [Ref: 0123] were encouraged to complete these qualifications by 2012. The last date for assessments to take place is 31 December 2012. Existing courses have been progressively phased out from 2007. Provision has been made for final Year 2 and 3 courses in 2008 and 2009 respectively, if needed, for people who may have failed to complete earlier.

Industry will continue to recognise the former qualifications, and there is no requirement for qualified trades' people to 'upgrade' to the new qualification.

Other standard setting bodies whose standards are included in the qualification

Electricity Supply Industry Training Organisation
New Zealand Industry Training Organisation
NZQA

Certification

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

Classification

This qualification is classified according to the NQF classification system and the New Zealand Standard Classification of Education (NZSCED) system as specified below.

DAS Classification		NZSCED	
Code	**Description**	**Code**	**Description**
212	Engineering and Technology > Mechanical Engineering	030701	Engineering and Related Technologies > Mechanical and Industrial Engineering and Technology > Mechanical Engineering

Quality Management Systems

Providers and Industry Training Organisations must be accredited by a recognised Quality Assurance Body before they can register credits from assessment against standards. Accredited providers and Industry Training Organisations assessing against standards must engage with the moderation system that applies to those standards. Accreditation requirements and the moderation system are outlined in the associated Accreditation and Moderation Action Plan (AMAP) for each standard.