National Certificate in Aeronautical Engineering with strands in Aeronautical Non Destructive Testing, Aircraft Mechanical, Aircraft Powerplant, Aircraft Structures, Armament, Avionic Electrical Repair, Avionic Instrument Repair, Avionic Maintenance, Avionic Radio Repair, and Rotorcraft

Level **4**

Credits **200**

This qualification has been **reviewed**. The last date to meet the requirements is 31 December 2020.

Transition Arrangements

This qualification has been reviewed and replaced by the New Zealand Certificate in Aeronautical Engineering (Applied Skills) (Level 4) with strands in Aeronautical Composites, Aeronautical Non Destructive Testing, Aircraft Mechanical, Aircraft Powerplant, Aircraft Structures, Armament, Avionic Electrical Repair, Avionic Instrument Repair, Avionic Radio Repair, Avionic Maintenance, and Rotorcraft [Ref: 2909].

The last date for entry into programmes leading to this qualification is 31 December 2017. The last date for assessment of this qualification is 31 December 2020, when the qualification will be discontinued.

For detailed information see Review Summaries on the NZQA website.

NQF Registration Information

Process	Version	Date	Last Date for Assessment
Registration	1	July 1996	December 2010
Review	2	November 1997	December 2010
Revision	3	March 1998	December 2010
Review	4	March 2008	December 2020
Review	5	October 2015	December 2020

Standard Setting Body

ServiceIQ
PO Box 25522
Wellington 6146

Telephone 0800 863 693
Fax 04 817 5399
Email qualifications@serviceiq.org.nz
Website www.serviceiq.org.nz

National Certificate in Aeronautical Engineering with strands in Aeronautical Non Destructive Testing, Aircraft Mechanical, Aircraft Powerplant, Aircraft Structures, Armament, Avionic Electrical Repair, Avionic Instrument Repair, Avionic Maintenance, Avionic Radio Repair, and Rotorcraft

Level **4**

Credits **200**

Purpose

The National Certificate in Aeronautical Engineering with strands in Aeronautical Non Destructive Testing, Armament, Avionic Electrical Repair, Avionic Instrument Repair, Avionic Maintenance, Avionic Radio Repair, Aircraft Mechanical, Aircraft Powerplant, Rotorcraft, and Aircraft Structures [Ref: 0192] is designed for people working in the aeronautical engineering industry and recognises the skills required to carry out maintenance, overhauls and repairs to aircraft, aircraft systems and aircraft components or equipment in accordance with the requirements of Part 43 and/or Part 145 of the Civil Aviation Rules 1990, and is recognised as the predominant trades level qualification for the industry. The certificate is structured to ensure that holders have a concentration of specialist skills in one of ten Aeronautical Engineering strands, supported by a range of skills and knowledge across the whole Aeronautical Engineering subfield.

The certificate is flexible in that it enables candidates to structure the qualification to suit their chosen career path or an employer's requirements. Candidates complete core compulsory unit standards then select a strand in the discipline of their choice, and choose options from the whole Aeronautical Engineering subfield to support the strand.

This qualification incorporates eight compulsory core unit standards common to the award of the National Certificate in Aeronautical Engineering (Specialist Support) with optional strands in Aeronautical Composites, Aeronautical Electroplating, Aeronautical Machining, Aeronautical Non Destructive Testing, Aircraft Furnishings and Equipment, Aircraft Mechanical, Aircraft Painting, Aircraft Powerplant, Aircraft Structures, Armament, Avionics, and Rotorcraft [Ref: 0191], the National Certificate in Aircraft Servicing [Ref: 0171], and the National Certificate in Aeronautical Engineering (Related Technology) [Ref: 0381], and is another step on the pathway for people interested in a career in aeronautical engineering.

This qualification can be used to build on skills and knowledge from the National Certificate in Aeronautical Engineering (Related Technology) [Ref: 0381]. Candidates may progress towards the National Diploma in Aeronautical Maintenance Certification with strands in Aeroplane, Rotorcraft, and Powerplant [Ref: 1133] to gain the privileges of certifying the release to service of aircraft components following maintenance as required for the issue of the Civil Aviation Authority (CAA) Aircraft Maintenance Engineers Licence (AMEL) (issued under Part 66 of the Civil Aviation Rules 1990).

Credit Range

	Core Compulsory	Core Elective	Elective Strands
Level 1 credits	1	-	-
Level 2 credits	18	55	-
Level 3 credits	36	55	0-50
Level 4 credits	-	55	40-90
Minimum totals	55	55	90

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
- Core Elective – A minimum of 55 credits as specified

One of the following strands is required
- Aeronautical Non Destructive Testing Strand
- Aircraft Mechanical Strand
- Aircraft Powerplant Strand
- Aircraft Structures Strand
- Armament Strand
- Avionic Electrical Repair Strand
- Avionic Instrument Repair Strand
- Avionic Maintenance Strand
- Avionic Radio Repair Strand
- Rotocraft Strand

Detailed Requirements

Core Compulsory

The following standards are required

Engineering and Technology > Aeronautical Engineering > Aeronautical Engineering - Core

ID	Title	Level	Credit
3894	Use aeronautical industry publications and documentation	3	6
3895	Apply aeronautical engineering maintenance practices	3	20
3896	Select, use, and maintain aeronautical engineering tools and equipment	3	10
5428	Demonstrate knowledge of aircraft construction and maintenance practices	2	14

Engineering and Technology > Mechanical Engineering > Engineering Core Skills

ID	Title	Level	Credit
21911	Demonstrate knowledge of safety on engineering worksites	2	1
21912	Apply safe working practices on an engineering worksite	2	2

Health > Health Studies > Core Health

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

Core Elective

A minimum of 55 credits

Field	Subfield	Domain
Engineering and Technology	Aeronautical Engineering	Any

Aeronautical Non Destructive Testing Strand

A minimum of 90 credits

- Of which a minimum of 40 credits at Level 4 or above

Field	Subfield	Domain
Engineering and Technology	Aeronautical Engineering	Aeronautical Non Destructive Testing

Aircraft Mechanical Strand
A minimum of 90 credits
From the following sets

- Set 1
- Set 2

Set 1
A minimum of 45 credits

- Of which a minimum of 40 credits at Level 4 or above

Field	Subfield	Domain
Engineering and Technology	Aeronautical Engineering	Aircraft Mechanical Maintenance
		Aircraft Mechanical Repair and Overhaul

Set 2
A minimum of 45 credits

Field	Subfield	Domain
Engineering and Technology	Aeronautical Engineering	Aeronautical Composites
		Aircraft Mechanical Maintenance
		Aircraft Mechanical Repair and Overhaul
		Aircraft Powerplant Maintenance
		Aircraft Powerplant Repair and Overhaul
		Aircraft Structures
		Helicopter Maintenance
		Helicopter Repair and Overhaul

Aircraft Powerplant Strand
A minimum of 90 credits
From the following sets

- Set 1
- Set 2

Set 1
A minimum of 45 credits

- Of which a minimum of 40 credits at Level 4 or above

Field	Subfield	Domain
Engineering and Technology	Aeronautical Engineering	Aircraft Powerplant Maintenance
		Aircraft Powerplant Repair and Overhaul

Set 2
A minimum of 45 credits

Field	Subfield	Domain
Engineering and Technology	Aeronautical Engineering	Aeronautical Composites
		Aircraft Mechanical Maintenance
		Aircraft Mechanical Repair and Overhaul
		Aircraft Powerplant Maintenance
		Aircraft Powerplant Repair and Overhaul
		Aircraft Structures
		Helicopter Maintenance
		Helicopter Repair and Overhaul

Aircraft Structures Strand
A minimum of 90 credits
From the following sets
- Set 1
- Set 2

Set 1
A minimum of 45 credits
- Of which a minimum of 40 credits at Level 4 or above

Field	Subfield	Domain
Engineering and Technology	Aeronautical Engineering	Aeronautical Composites
		Aircraft Structures

Set 2
A minimum of 45 credits

Field	Subfield	Domain
Engineering and Technology	Aeronautical Engineering	Aeronautical Composites
		Aircraft Mechanical Maintenance
		Aircraft Mechanical Repair and Overhaul
		Aircraft Powerplant Maintenance
		Aircraft Powerplant Repair and Overhaul
		Aircraft Structures
		Helicopter Maintenance
		Helicopter Repair and Overhaul

Armament Strand
A minimum of 90 credits
- Of which a minimum of 40 credits at Level 4 or above

Field	Subfield	Domain
Engineering and Technology	Aeronautical Engineering	Aeronautical Armament

Avionic Electrical Repair Strand
A minimum of 90 credits
From the following sets
- Set 1
- Set 2

Set 1
A minimum of 45 credits
- Of which a minimum of 40 credits at Level 4 or above

Field	Subfield	Domain
Engineering and Technology	Aeronautical Engineering	Avionic Electrical Repair

Set 2
A minimum of 45 credits

Field	Subfield	Domain
Engineering and Technology	Aeronautical Engineering	Aeronautical Engineering - Core
		Avionic Electrical Repair
		Avionic Instrument Repair
		Avionic Maintenance
		Avionic Radio Repair

Avionic Instrument Repair Strand
A minimum of 90 credits
From the following sets
- Set 1
- Set 2

Set 1
A minimum of 45 credits
- Of which a minimum of 40 credits at Level 4 or above

Field	Subfield	Domain
Engineering and Technology	Aeronautical Engineering	Avionic Instrument Repair

Set 2
A minimum of 45 credits

Field	Subfield	Domain
Engineering and Technology	Aeronautical Engineering	Aeronautical Engineering - Core
		Avionic Electrical Repair
		Avionic Instrument Repair
		Avionic Maintenance
		Avionic Radio Repair

Avionic Maintenance Strand
A minimum of 90 credits
From the following sets
- Set 1
- Set 2

Set 1
A minimum of 45 credits
- Of which a minimum of 40 credits at Level 4 or above

Field	Subfield	Domain
Engineering and Technology	Aeronautical Engineering	Avionic Maintenance

Set 2
A minimum of 45 credits

Field	Subfield	Domain
Engineering and Technology	Aeronautical Engineering	Aeronautical Engineering - Core
		Avionic Electrical Repair
		Avionic Instrument Repair
		Avionic Maintenance
		Avionic Radio Repair

Avionic Radio Repair Strand
A minimum of 90 credits
From the following sets
- Set 1
- Set 2

Set 1
A minimum of 45 credits
- Of which a minimum of 40 credits at Level 4 or above

Field	Subfield	Domain
Engineering and Technology	Aeronautical Engineering	Avionic Radio Repair

Set 2
A minimum of 45 credits

Field	Subfield	Domain
Engineering and Technology	Aeronautical Engineering	Aeronautical Engineering - Core
		Avionic Electrical Repair
		Avionic Instrument Repair
		Avionic Maintenance
		Avionic Radio Repair

Rotocraft Strand
A minimum of 90 credits
From the following sets
- Set 1
- Set 2

Set 1
A minimum of 45 credits
- Of which a minimum of 40 credits at Level 4 or above

Field	Subfield	Domain
Engineering and Technology	Aeronautical Engineering	Helicopter Maintenance
		Helicopter Repair and Overhaul

Set 2
A minimum of 45 credits

Field	Subfield	Domain
Engineering and Technology	Aeronautical Engineering	Aeronautical Composites
		Aircraft Mechanical Maintenance
		Aircraft Mechanical Repair and Overhaul
		Aircraft Powerplant Maintenance
		Aircraft Powerplant Repair and Overhaul
		Aircraft Structures
		Helicopter Maintenance
		Helicopter Repair and Overhaul

Transition Arrangements

Version 4

Version 4 was issued following review in order to update the content.

Changes to structure and content
- the Avionic Repair domain has been split to create three new domains, enabling the creation of three separate strands which replace the Avionics strand within the avionic skill sector;
- compulsory unit standard 2824 has been replaced by unit standards 21911 and 21912;
- unit standards 3894 and 3896 have been raised to Level 3.

For detailed information see Review Summaries on the NZQA website.

People currently enrolled in programmes leading to the award of an earlier version of this qualification may either complete that version or transfer to version 4. All versions of this qualification will be recognised by ServiceIQ.

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
2824	21911, 21912

This qualification contains classifications that replace earlier classifications. For the purposes of this qualification people who have gained credit for the standards listed in the lapsing classification are exempt from the requirement to gain credit for the standards in the new classifications.

Credit for	Exempt from
Engineering and Technology > Aeronautical Engineering > Avionic Repair - Lapsing	Engineering and Technology > Aeronautical Engineering > Avionic Electrical Repair Engineering and Technology > Aeronautical Engineering > Avionic Instrument Repair Engineering and Technology > Aeronautical Engineering > Avionic Radio Repair

Previous versions of the qualification

Version 3 was issued following a revision. The qualification was amended to include unit standard 6401, *Provide basic first aid* in the transition arrangements for unit standard 532, *Obtain first aid certificate*. This change should not have disadvantaged any person enrolled in a programme leading to the award of this qualification.

Other standard setting bodies whose standards are included in the qualification

Competenz
NZQA

Certification

The certificate will display the logos of NZQA, the provider and ServiceIQ.

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**
198	Engineering and Technology > Aeronautical Engineering	031503	Engineering and Related Technologies > Aerospace Engineering and Technology > Aircraft Maintenance 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.

Prerequisite Diagram