# National Certificate in Mechanical Engineering (Level 2)

**Level** **2**

**Credits** **62**

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

## Transition Arrangements

This qualification was republished in April 2019 to extend the last date for enrolment from 31 December 2018 to 30 April 2019. The last date of assessment is unchanged.

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 2019 to 31 December 2020.

The last date for enrolment into programmes leading to this qualification is 30 April 2019. The last date for assessments to take place for this qualification is 31 December 2020, when the qualification will be discontinued.

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

| Credit for | Exempt from |
|---|---|
| 26551, 26552 | 6401, 6402 |
| 29655 | 2430 |
| 29653 | 2432 |
| 29550 | 20799 |
| 29549 | 20917 |
| 29671, 29673 | 21906 |
| 29674 | 21909 |
| 29670, 29730 | 25075 |

For detailed information see Review Summaries on the NZQA website.

## NZQF Registration Information

| Process | Version | Date | Last Date for Assessment |
|---|---|---|---|
| Registration | 1 | January 2006 | 31 December 2010 |
| Review | 2 | July 2008 | 31 December 2020 |
| Review | 3 | July 2015 | 31 December 2020 |
| Republication | 3 | October 2017 | 31 December 2020 |
| Republication | 3 | April 2019 | 31 December 2020 |

## Standard Setting Body

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# National Certificate in Mechanical Engineering (Level 2)

**Level** **2**

**Credits** **62**

## Purpose

This qualification represents a set of foundation skills for mechanical engineering and related trades. The qualification may be used as the first stage of an apprenticeship or as the basis for pre-trade courses. It is particularly relevant for people wishing to pursue careers in general engineering, machining, toolmaking, fitting, engineering maintenance, engineering fabrication, and marine engineering.

Holders of this qualification have the following skills and knowledge relevant to the mechanical engineering industry:

- health and safety;
- trade mathematics and mechanics;
- metals and other materials used in engineering;
- fasteners and assembly;
- sketching;
- measurement;
- engineering tools;
- machining or fabrication operations; and
- welding safety and procedures.

This qualification leads to trade qualifications in mechanical engineering and engineering fabrication at levels 4 and 5 on the NQF.

## Special Notes

Candidates intending to pursue a career in engineering fabrication should choose standard 25075 under the Elective section. Candidates for all other trades should choose standard 21906.

## Credit Range

| | Compulsory | Elective |
|---|---|---|
| Level 1 credits | 6 | - |
| Level 2 credits | 44 | 12 |
| Total | 50 | 12 |

## 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

- Compulsory standards
- Elective – A minimum of 1 standard as specified

## Detailed Requirements

### 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 |
| 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 |
| 21913 | Shift loads in engineering installation, maintenance, and fabrication work | 2 | 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 |

Engineering and Technology > Mechanical Engineering > Engineering - Materials

| ID | Title | Level | Credit |
|---|---|---|---|
| 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 |

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 |

**Elective**
A minimum of 1 standard

Engineering and Technology > Mechanical Engineering > Engineering Core Skills

| ID | Title | Level | Credit |
|---|---|---|---|
| 21906 | Perform basic mechanical engineering machining operations under supervision | 2 | 12 |

Engineering and Technology > Mechanical Engineering > Engineering - Fabrication

| ID | Title | Level | Credit |
|---|---|---|---|
| 25075 | Perform basic fabrication operations under supervision | 2 | 12 |

## Transition Arrangements

### Version 2

Version 2 was issued with an elective section in order to make it a suitable prerequisite qualification for the National Certificate in Engineering - Fabrication (Level 4) with strands in Heavy Fabrication, Light Fabrication, and Welding [Ref: 0122].

Changes to structure and content
- An elective section has been added.
- A new standard 25075 has been added to the elective section.
- Standard 21906 has been moved to the elective section.
- The credit value for standard 497 has been updated.

For detailed information see Review Summaries on the NZQA website.

Existing trainees are not affected by this review.

### Previous version of the qualification

Version 1 was issued to provide an entry level or pre-trade qualification for careers in mechanical engineering and related trades.

## Other standard setting bodies whose standards are included in the qualification

The Skills Organisation
NZQA

## Certification

This 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 Consent and Moderation Requirements (CMR) for each standard.

## Prerequisite Diagram