

National Certificate in Gunsmithing (Level 4)

| | |
|----------------|------------|
| Level | 4 |
| Credits | 310 |

This qualification is **expiring**. The last date to meet the requirements is 31 December 2012.

Purpose

This level 4 national qualification is designed to enable people employed in Gunsmithing to gain recognition for the relevant skills and knowledge required to be a competent Gunsmith.

This qualification, while using a number of skills applicable to most other areas of mechanical engineering, has a unique combination of diverse skills from other fields and those applicable only to Gunsmiths. Therefore, it is recognised that entrants to the qualification may already have a background of experience in other areas. People working on firearms or parts of firearms are required to hold an *A Licence for General Firearms*.

People awarded with this qualification are able to use precision machinery and tooling to make parts for firearms, assemble ammunition, dismantle, inspect, assemble and test components, and carry out conservation and restoration of arms. This qualification includes an understanding of arms legislation, the safe use and security of firearms.

This qualification provides a pathway to the National Certificate in Gunsmithing (Master) (Level 5) and can be used to meet the entry requirements for that qualification.

Credit Range

| | Compulsory | Elective A | Elective B |
|---------------------------|-------------------|-------------------|-------------------|
| Level 1 credits | 4 | - | 0-20 |
| Level 2 credits | 131 | 0-40 | 0-20 |
| Level 3 credits | 42 | 0-40 | 0-20 |
| Level 4 credits | 13 | 70-110 | 0-20 |
| Level 5 and above credits | - | - | 0-20 |
| Minimum totals | 190 | 110 | 20 |

Requirements for Award of Qualification

- Compulsory standards
- Elective A – A minimum of 110 credits as specified
- Elective B – A minimum of 20 credits as specified

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.

Detailed Requirements**Compulsory**

The following standards are required

Engineering and Technology > Mechanical Engineering > Engineering Core Skills

| ID | Title | Level | Credit |
|------|--|-------|--------|
| 2383 | Carry out heat treatment of metal parts | 2 | 5 |
| 2395 | Select, use, and care for engineering hand tools | 1 | 4 |
| 2396 | Select, use, and maintain portable hand held engineering power tools | 2 | 4 |
| 2824 | Follow safe working practices on an engineering worksite | 2 | 3 |

Engineering and Technology > Mechanical Engineering > Engineering Drawing and Design

| ID | Title | Level | Credit |
|------|---|-------|--------|
| 2430 | Draw and interpret engineering sketches under supervision | 2 | 4 |
| 2431 | Draw and interpret engineering drawings under supervision | 2 | 8 |

Engineering and Technology > Mechanical Engineering > Engineering Machining

| ID | Title | Level | Credit |
|------|---|-------|--------|
| 2714 | Produce components by performing engineering turning operations | 3 | 15 |
| 2715 | Produce components by performing engineering milling operations | 3 | 15 |

Engineering and Technology > Mechanical Engineering > Engineering Machining and Toolmaking

| ID | Title | Level | Credit |
|-------|--|-------|--------|
| 11661 | Produce components by performing general engineering drilling operations | 2 | 5 |

| ID | Title | Level | Credit |
|-------|--|-------|--------|
| 11662 | Produce components by performing general engineering turning operations | 2 | 12 |
| 11663 | Produce components by performing general engineering milling operations | 2 | 12 |
| 11664 | Produce components by performing general engineering surface grinding operations | 2 | 3 |

Engineering and Technology > Mechanical Engineering > Engineering - Materials

| ID | Title | Level | Credit |
|------|---|-------|--------|
| 4795 | Distinguish the characteristics of engineering materials | 1 | 2 |
| 4796 | Distinguish the characteristics of engineering metals | 2 | 3 |
| 4798 | Identify and select engineering metals for specified applications | 3 | 2 |

Engineering and Technology > Mechanical Engineering > Engineering - Measurement

| ID | Title | Level | Credit |
|------|--|-------|--------|
| 4432 | Identify and convert basic units of measure used in engineering | 1 | 1 |
| 4433 | Measure with non-complex 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 > Gunsmithing

| ID | Title | Level | Credit |
|------|--|-------|--------|
| 9125 | Make parts for firearms by hand forging under supervision | 2 | 15 |
| 9127 | Assemble ammunition using specialist equipment under supervision | 2 | 5 |
| 9131 | Identify and understand arms legislation and demonstrate the safe use and security of firearms | 4 | 7 |
| 9721 | Carry out conservation and restoration work on arms under supervision | 2 | 25 |

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

| ID | Title | Level | Credit |
|------|--|-------|--------|
| 2397 | Service machines and equipment | 2 | 4 |
| 2399 | Dismantle, inspect, assemble and test components under supervision | 3 | 10 |
| 2406 | Dismantle, inspect, assemble and test components | 4 | 6 |

Engineering and Technology > Mechanical Engineering > Welding

| ID | Title | Level | Credit |
|------|--|-------|--------|
| 2670 | Avoid welding hazards with safe work practices | 2 | 1 |

Elective A

A minimum of 110 credits

- Of which a minimum of 70 credits at Level 4

Engineering and Technology > Mechanical Engineering > Engineering Drawing and Design

| ID | Title | Level | Credit |
|------|--|-------|--------|
| 2433 | Create two dimensional engineering drawings using computer aided design system | 2 | 6 |
| 2434 | Produce detailed engineering drawings under supervision | 3 | 15 |
| 2436 | Create simple three dimensional engineering model | 3 | 10 |

Engineering and Technology > Mechanical Engineering > Engineering - Fabrication

| ID | Title | Level | Credit |
|------|--|-------|--------|
| 2415 | Form and shape fabrication materials under supervision | 2 | 10 |
| 2417 | Mechanically cut fabrication materials under supervision | 2 | 8 |
| 2421 | Mechanically cut fabrication materials using powered machinery under supervision | 3 | 10 |
| 2423 | Form and shape fabrication materials | 4 | 15 |

Engineering and Technology > Mechanical Engineering > Engineering Machining

| ID | Title | Level | Credit |
|------|---|-------|--------|
| 2702 | Set and operate a Computer Numerical Controlled machining centre | 4 | 15 |
| 2703 | Set and operate a Computer Numerical Controlled lathe | 4 | 8 |
| 2704 | Produce components by performing precision engineering turning operations | 4 | 15 |
| 2705 | Produce components by performing horizontal boring operations | 4 | 15 |
| 2706 | Produce components by performing vertical boring operations | 4 | 10 |
| 2711 | Write Computer Numerical Controlled programmes for engineering machines | 4 | 15 |
| 2712 | Produce components by performing engineering grinding operations | 3 | 15 |
| 2713 | Set manually operated production engineering machines | 3 | 15 |

Engineering and Technology > Mechanical Engineering > Engineering - Materials

| ID | Title | Level | Credit |
|------|--|-------|--------|
| 4797 | Identify the composition of engineering metals | 3 | 3 |
| 4799 | Test the physical properties of engineering metals | 4 | 4 |
| 4800 | Identify the characteristics of heat treatment processes used for engineering steels | 4 | 6 |
| 4801 | Identify the characteristics of heat treatment processes used for engineering non-ferrous metals | 4 | 3 |
| 4802 | Complete heat treatment of engineering metals in a furnace | 4 | 40 |

Engineering and Technology > Mechanical Engineering > Engineering - Measurement

| ID | Title | Level | Credit |
|------|---|-------|--------|
| 4437 | Select, use and care for advanced engineering measuring equipment | 3 | 3 |
| 4438 | Identify and use dimensional tolerancing in engineering | 3 | 2 |
| 4439 | Select, use and care for complex engineering measuring equipment | 4 | 4 |

Engineering and Technology > Mechanical Engineering > Engineering Patternmaking

| ID | Title | Level | Credit |
|------|--|-------|--------|
| 2364 | Make wooden patterns/tooling under supervision for use in industry | 3 | 25 |
| 2367 | Make wooden patterns/tooling for use in industry | 4 | 20 |

Engineering and Technology > Mechanical Engineering > Gunsmithing

| ID | Title | Level | Credit |
|------|--|-------|--------|
| 9126 | Make parts for firearms by hand forging | 4 | 15 |
| 9128 | Prepare tooling and specify components for ammunition requirements | 4 | 15 |
| 9722 | Carry out conservation and restoration work on arms | 4 | 20 |

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

| ID | Title | Level | Credit |
|------|--|-------|--------|
| 2398 | Monitor, under supervision, the condition of machinery and equipment | 3 | 4 |
| 2401 | Shut down and isolate machines and equipment | 3 | 3 |
| 2410 | Carry out non destructive testing of metal parts | 4 | 8 |

Engineering and Technology > Mechanical Engineering > Mechanical Assembly

| ID | Title | Level | Credit |
|------|--|-------|--------|
| 2388 | Assemble and fit precision tooling and mechanical components | 3 | 10 |
| 2389 | Assemble and fit precision tooling and mechanical components under supervision | 2 | 4 |
| 2391 | Assemble and fit precision tooling and mechanical components using technology aids | 4 | 20 |

Engineering and Technology > Mechanical Engineering > Mechanical Commissioning

| ID | Title | Level | Credit |
|------|-----------------------------------|-------|--------|
| 2392 | Commission single station machine | 4 | 8 |

Engineering and Technology > Mechanical Engineering > Mechanical Installation

| ID | Title | Level | Credit |
|------|--------------------------------|-------|--------|
| 2390 | Install single station machine | 3 | 12 |

Engineering and Technology > Mechanical Engineering > Metal Casting

| ID | Title | Level | Credit |
|------|---|-------|--------|
| 2374 | Prepare and mix sand for metal casting processes | 3 | 20 |
| 2375 | Produce moulds and cores by hand for metal casting processes | 4 | 20 |
| 2377 | Produce molten metal using metal melting furnace | 3 | 20 |
| 2378 | Pour molten metal into moulds | 2 | 5 |
| 2379 | Finish metal castings | 2 | 15 |
| 2380 | Inspect and test metal castings | 3 | 15 |
| 2382 | Produce expendable wax patterns for lost wax casting method | 2 | 5 |
| 2386 | Produce ceramic shell moulds for use in the investment casting process in metal casting | 2 | 8 |

Engineering and Technology > Mechanical Engineering > Metal Surface Finishing

| ID | Title | Level | Credit |
|------|---|-------|--------|
| 2352 | Load work for metal surface finishing processing operations | 3 | 5 |
| 2353 | Pre-treat work for subsequent metal surface finishing operations | 3 | 5 |
| 2354 | Finish work using electroplating solutions in metal surface finishing operations | 3 | 15 |
| 2358 | Operate and control waste treatment process in metal surface finishing operations | 3 | 10 |

| ID | Title | Level | Credit |
|------|---|-------|--------|
| 2359 | Prepare and maintain processing solutions in metal surface finishing operations | 3 | 15 |
| 2362 | Carry out hydrogen de-embrittlement of plated ferrous metal parts | 3 | 3 |
| 2363 | Polish ferrous and non-ferrous metal parts to produce a decorative finish | 3 | 10 |

Engineering and Technology > Mechanical Engineering > Welding

| ID | Title | Level | Credit |
|------|---|-------|--------|
| 2678 | Join metals using oxy-acetylene equipment | 3 | 6 |
| 2679 | Join metals using torch brazing and soldering | 3 | 6 |
| 2682 | Weld steel up to 10mm thick with the manual metal arc welding process in the downhand positions | 3 | 6 |

Manufacturing > Furniture > Furniture Finishing

| ID | Title | Level | Credit |
|------|--|-------|--------|
| 2206 | Handle and manage hazardous materials for furniture finishing | 2 | 2 |
| 3152 | Prepare wooden and substrate surfaces for finishing including wood filling open grains | 2 | 3 |
| 3153 | Apply stain to wooden furniture surfaces | 2 | 4 |
| 3154 | Apply preparation coatings to furniture surfaces | 2 | 4 |

Manufacturing > Furniture > Furniture Making

| ID | Title | Level | Credit |
|------|------------------------------------|-------|--------|
| 2199 | Use hand tools in making furniture | 2 | 4 |

Elective B

A minimum of 20 credits

From anywhere on the NQF

Transition Arrangements

Version 3

This qualification was issued to indicate that this qualification is expiring and will not be replaced. All existing trainees may choose to complete their current programme, or transfer their credits to either of the following qualifications:

- National Certificate in Mechanical Engineering (Level 2) [Ref: 1220]; or
- National Certificate in Mechanical Engineering (Level 4) with strands in Fitting and Machining, General Engineering, Machining, Maintenance Engineering, and Toolmaking [Ref: 1262].

For detailed information see [Review Summaries](#) on the NZQA website.

Previous version of the qualification

Version 2 was issued to reflect the review of standard 2700.

This qualification contains standards that replace an earlier standard. For the purposes of this qualification, people who have gained credit for the following expiring standard are exempt from the requirement to gain credit for the replacement standards – see table below.

| Credit for | Exempt from |
|------------|----------------------------|
| 2700 | 11661, 11662, 11663, 11664 |

In relation to further standard reviews, any version of a standard contained within this qualification which retains its original standard identification number will continue to meet the requirements of this qualification.

It is not intended that anyone be disadvantaged by this review. The above arrangements have been designed for a smooth phasing out of this qualification. However, anyone who feels they have been disadvantaged may appeal to Competenz at the address below.

NQF Registration Information

| Process | Version | Date | Last Date for Assessment |
|--------------|---------|---------------|--------------------------|
| Registration | 1 | July 1997 | December 2012 |
| Revision | 2 | November 1997 | December 2012 |
| Review | 3 | February 2008 | December 2012 |

Standard Setting Body

Competenz
PO Box 62 517
KALMIA STREET
Auckland

Telephone 0800 526 1800
Email qualifications@competenz.org.nz

Other standard setting bodies whose standards are included in the qualification

Forest Industries Training and Education Council (FITEC)

Certification

The certificate will display the logos of NZQA and Competenz.

Classification

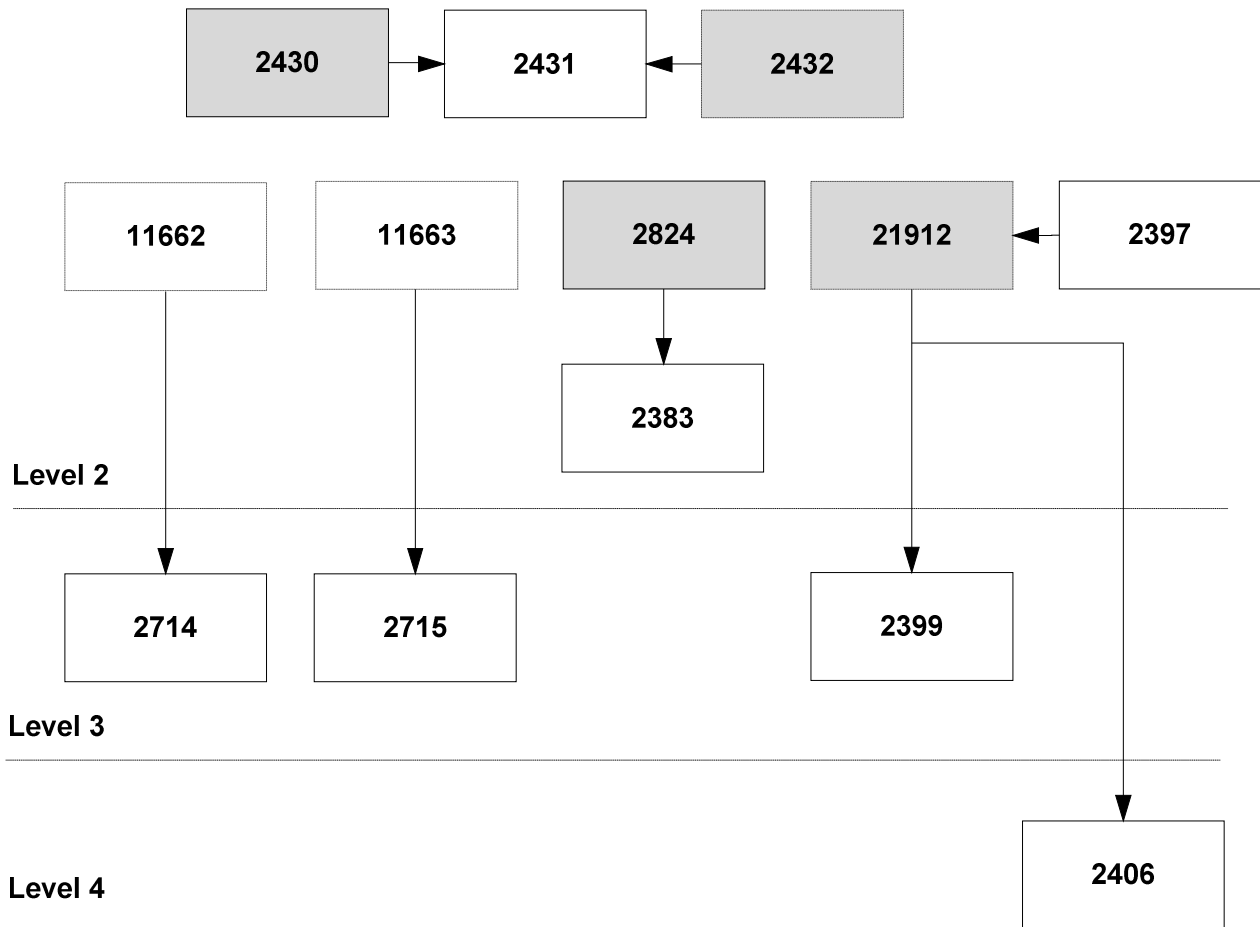
This qualification is classified according to the NQF classification system and the New Zealand Standard Classification of Education (NZSCED) system as specified below.

| NQF Classification | | NZSCED | |
|--------------------|---|--------|---|
| Code | Description | Code | Description |
| 1365 | Engineering and Technology > Mechanical Engineering > Gunsmithing | 0307 | Engineering and Related Technologies > Mechanical and Industrial Engineering and Technology |

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



Key

- Standards suggested as appropriate for meeting the basic machining operations requirements
- Standards recommended for entry
- Standards recommended for entry but not in qualification