

National Vocational Certificate in Mechanical Engineering (Precision Machining and Fitting) (Level 4)
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Level of qualification: 4

Total credits available: 128

Total credits required: 128

	Compulsory	Elective
Level 4 credits available	128	None
Minimum totals required	128	None

Registration date: 22 April 2020

Scheduled review date: 22 April 2025

Body responsible for the qualification: Namibia Training Authority through the Manufacturing, Automotive Sales and Arts & Crafts Industry Skills Committee.

Other bodies whose unit standards are included in the qualification: None

1 PURPOSE

This qualification recognises people who have the competencies required for precision machining of components. It is awarded to people who have demonstrated the skills and knowledge required to perform basic lathe and milling machine operation, overhaul cylinder head and engines, line bore cylinder block, re-bore cylinder block sleeves, repair crank shaft, resurface cylinder head, and test engine performance on a dyno meter. They further have a good understanding of establishing a business as part of entrepreneurship operations, implement, control and monitor business operations, apply knowledge of intermediate mathematics in different context, apply advanced knowledge of engineering science in different contexts, and apply knowledge of advanced engineering drawing in different contexts.

This qualification leads horizontally to National Vocational Certificate in Automotive Engineering (Automotive Mechatronics) (Level 4).

2 REGULATIONS FOR THE QUALIFICATION

2.1 Summary of qualification requirements

The entry requirement for this qualification is the National Vocational Certificate in Automotive Engineering (Automotive Mechatronics) Level 3 and the ability to demonstrate basic communication skills in the English language and basic numeracy.

This qualification will be awarded to people who are credited with a minimum of 128 credits and have met the requirements of the compulsory section, as well as all requirements for Workplace Integrated Learning (WIL) as laid out in the National Policy On Work-Integrated Learning for Technical and Vocational Education and Training (TVET).

2.2 Detailed qualification requirements

Compulsory

All the unit standards listed below are required.

FIELD: Manufacturing, Engineering and Technology
Subfield: Mechanical Engineering
Domain: Precision Machining and Fitting

Unit ID	Unit standard title	Level	Credits
2220	Perform basic lathe and milling machine operation	4	8
2221	Overhaul cylinder head	4	11
2222	Line bore cylinder block	4	10
2223	Re-bore cylinder block sleeves	4	9
2224	Repair crank shaft	4	10
2225	Resurface cylinder head	4	12
2226	Overhaul engines	4	15
2227	Test engine performance on a dyno meter	4	8

AND

FIELD: Financial and Business Services
Subfield: Business Development
Domain: Entrepreneurship

Unit ID	Unit Standard Title	Level	Credits
735	Establish a business as part of entrepreneurship operations	4	12
736	Implement, control and monitor business operations	4	15

AND

FIELD: Physical, Mathematics and Computer Science
Subfield: Numeracy
Domain: Foundation Numeracy Skills

Unit ID	Unit Standard Title	Level	Credits
892	Apply knowledge of intermediate mathematics in different context	4	6

AND

FIELD: Manufacturing, Engineering and Technology
Subfield: Foundational Engineering Science and Engineering drawing
Domain: Foundational Engineering Science and Drawing Skills

Unit ID	Unit Standard Title	Level	Credits
896	Apply advanced knowledge of engineering science in different contexts	4	6
902	Apply knowledge of advanced engineering drawing in different contexts	4	6

3 CREDIT RECOGNITION AND TRANSFER ARRANGEMENTS

Credits for any version of a unit standard of the same identification number will be recognised in the award of this qualification.

4 SPECIAL ARRANGEMENTS

4.1 Providers seeking registration and/or accreditation to deliver this qualification must meet the following special arrangements.

4.1.1 This qualification will be offered to trainees **either** including a period of 6 months of **industrial/job attachment**, **or** as an **apprenticeship scheme** of a duration determined and agreed upon by the employer and the training provider on a ratio of 70/30 (70% at workplace and 30% at training institution) basis.

Industrial/job attachment is defined as a period in a workplace setting where a trainee obtains structured practical experience in a specific occupation in order to complement competencies acquired during training at a technical vocational training provider (TVTP).

Apprenticeship refers to the system of work integrated learning, where an apprentice is employed by a company on contractual basis, earning a monthly salary, learning and working side-by-side with an experienced mentor. In this case the employer must be an NTA approved entity (company) to register apprentices and has to identify a suitable training provider to provide the apprentice with the opportunity to gain skills and knowledge from theoretical training.

Employers and training providers are encouraged to consult the **National Policy On Work-Integrated Learning (WIL) for Technical and Vocational Education and Training (TVET) Sector** for further details on WIL implementation.

4.1.2 Providers involved in the assessment of this qualification and the associated unit standards must comply with the national assessment framework for the TVET system up to and including level 5 of the National Qualifications Framework. Assessment will include performance and achievement assessment acquired through work integrated learning periods.

Assessment arrangements apply to all occupations and industries which are encompassed in the technical vocational education and training sector.

- 4.1.3 Providers of this qualification and the associated unit standards must be registered and/or accredited.
- 4.1.4 Providers of this qualification and their associated unit standards must have access to all equipment and facilities detailed in the tools and equipment list of the relevant training program.
- 4.2 Competencies covered in this qualification may be assessed through Recognition of Prior Learning (RPL).
- 4.3 Further relevant information and documentation may be accessed through:

Namibia Training Authority

10 Rand Street

Khomasdal

Namibia

Telephone number: 061 207 8550

Facsimile number: 061 207 8551

5 TRANSITION ARRANGEMENTS

5.1 Non National Qualifications Framework transition

None

5.2 National Qualifications Framework transition

This is the first version of this qualification.