

Occupational Certificate: Mechanical Fitter

SAQA ID: 94021

NQF 4

Credits: 410

Cost: Contact Training Centre

This qualification is made up of the following compulsory Knowledge and Practical Skill Modules:

Knowledge Modules:

- Basic engineering theory, NQF Level 3, 32 Credits.
- Fitting Theory, NQF Level 4, 38 Credits.

Total number of credits for Knowledge Modules: 70 Credits.

Practical Skill Modules:

- Fabricate simple components or work pieces using basic hand skills and hand tools, NQF Level 2, 6 Credits.
- Fabricate components or work pieces using power tools or machinery, NQF Level 3, 6 Credits.
- Disassemble, clean and inspect mechanical sub-assemblies, NQF Level 3, 6 Credits.
- Replace components and assemble mechanical sub-assemblies and machines, NQF Level 3, 6 Credits.
- Do fault finding on mechanical sub-assemblies and machines, NQF Level 4, 12 Credits.
- Repair mechanical sub-assemblies and machines, NQF Level 4, 12 Credits.
- Install and commission mechanical sub-assemblies and machines, NQF Level 4, 12 Credits.
- Overhaul mechanical sub-assemblies and machines, NQF Level 4, 20 Credits.

Total number of credits for Practical Skills Modules: 80 Credits.

Work Experience Modules:

- Fabrication processes in an engineering workshop, NQF Level 2, 20 Credits.
- Routine mechanical component and machine maintenance processes, NQF Level 3, 40 Credits.
- Maintenance planning and communication processes, NQF Level 3, 10 Credits.
- Repair mechanical faults on mechanical sub-assemblies and machines, NQF Level 4, 60 Credits.
- Overhauling processes in an engineering workshop, NQF Level 4, 60 Credits.
- Structured planning and communication processes in the workplace, NQF Level 4, 60 Credits.
- Engineering workshop control processes, NQF Level 4, 10 Credits.

Total number of credits for Work Experience Modules: 260 Credits.

EXIT LEVEL OUTCOMES

1. The ability to apply hand skills to fabricate mechanical components using engineering tools.
2. The ability to perform engineering maintenance on mechanical components, subassemblies and machines.
3. The ability to repair, install and commission subassemblies and machines.

ASSOCIATED ASSESSMENT CRITERIA

Associated Assessment Criteria for Exit Level Outcome 1:

- Tools and equipment are selected, used and cared for according to accepted standards.
- Safe work procedures, precautions and personal protective equipment required is described and adhered to.
- Fabrication techniques and consequences if not adhered to can be explained for specific applications.

Associated Assessment Criteria for Exit Level Outcome 2:

- Safe work procedures, precautions and personal protective equipment required is described and adhered to.
- Original equipment manufacturer specifications can be read and used for maintenance and quality specifications of subassemblies and machines.
- Components and machines are monitored and maintained at optimal working condition.
- Routine maintenance on components and machines is performed to manufacturer specifications.
- Mechanical sub-assemblies are disassembled, cleaned and inspected for mechanical soundness.
- Components are replaced and mechanical sub-assemblies and machines are assembled.
- Maintenance planning and communication processes are maintained.

Associated Assessment Criteria for Exit Level Outcome 3:

- Safe work procedures, precautions and Personal Protective Equipment required for engineering maintenance tasks can be described.
- Original Equipment Manufacturer specifications can be read and used for repairs and quality specifications of subassemblies and machines.
- Fault finding on mechanical sub-assemblies and machines are performed to manufacturer specifications.
- Mechanical sub-assemblies and machines are repaired to manufacturer specifications.

- Mechanical sub-assemblies and machines are installed and commissioned.
- Mechanical sub-assemblies and machines are overhauled to manufacturer specifications.

Summative Assessment:

The external summative assessment will be a trade test conducted in terms of Section 26 D of the Skills Development Act through an evaluation of written and practical tasks covering critical aspects of the trade and conducted in a simulated environment at an assessment centre accredited by QCTO by an assessor registered by National Artisan Moderation Body. The assessment will take place over a minimum of 2 days.

INTERNATIONAL COMPARABILITY

International comparable qualifications are associated with engineering-related trade's persons,

The South African qualification for the Mechanical Fitter trade compares well with Unit Standards-based qualifications offered in Australia and New Zealand.

- The Australian, Certificate III in Engineering (MEM30205) and Certificate IV in Engineering (MEM40105) is related to the occupation listed in ANZSCO: 323000 des Workers.
- Comparable competency based curricula and training programs developed for the training of trades persons in the United States and Canada were researched on the Internet. The scope and content of these programs are comparable to the South African Mechanical Fitter
- The Canadian and Arab qualifications related to mechanical fitting can be used interchangeably with the qualifications developed for the South African manufacturing and engineering industries, serving a similar purpose.

The curriculum title and code is: Occupational Certificate: Mechanical Fitter, Curriculum Code 653303000.

Trades Covered by this Qualification:

This qualification covers the following trades recorded on the NLRD:

- ID 61033, Fitter and Turner, Automobile Manufacturing.
- ID 61036, Fitter and Turner, Coal.
- ID 61037, Fitter and Turner, ESKOM.
- ID 61040, Fitter and Turner, Explosives.
- ID 61048, Fitter and Turner, Government.
- ID 61109, Fitter and Turner, Carbonated soft drink.
- ID 61068, Fitter and Turner, Mining.
- ID 61073, Fitter and Turner, Motor.
- ID 61084, Fitter and Turner, Aerospace.
- ID 61087, Fitter and Turner, Tyre and Rubber.

- ID 61134, Fitter and Turner, Sugar.
- ID 61137, Fitter and Turner, Mining.