

## National Certificate: Manufacturing, Engineering and Related Activities

SAQA ID: 23253 (124 CREDITS) FULL

### Purpose and Rationale

This qualification specifies the key skills, knowledge and values required to access engineering and manufacturing qualifications in the Further Education and Training Band. It describes the learning outcomes required to participate in workplace-based learning programmes for occupationally focused qualifications in the manufacturing, engineering and assembly sectors.

### Learning assumed to be in place

The credits for this qualification assume that learners have demonstrated communication and numeracy competency at ABET level 3

### Modules / Clusters Covered

#### Module 1 – Communication

- 12462: Engage in a range of speaking and listening interactions for a variety of purposes
- 12473: Identify and respond to selected literary texts
- 12469: Read and respond to a range of text types
- 12470: Write for a variety of different purposes

#### Module 2 – Life Skills

- 13157: Read, interpret and understand information on a payslip
- 12471: Explore and use a variety of strategies to learn
- 7461: Use maps to access and communicate information concerning routes, location and direction
- 7489: Show, explain, discuss and analyse the relationship between society and natural environment

#### Module 3 – Numeracy

- 7447: Working with numbers in various contexts
- 7463: Describe and represent objects and the environment in terms of shape, space, time and motion
- 7452: Describe, represent and interpret mathematical models in different contexts
- 7449: Critically analyse how mathematics is used in social, political and economic relations
- 7451: Collect, analyse, use and communicate numerical data

#### Module 4 – National Qualification Framework

- 13171: Describe and show how the NQF can help me to plan a learning and career pathway

#### Module 5 – Nature of Business

- 13176: Describe and discuss basic issues relating to the nature of business, the stakeholders in a business and business profitability
- 13996: Identify, discuss, describe and compare major economic systems, with emphasis on the South African economy

#### Module 6 – Materials Handling

- 7448: Work with patterns in various contexts
- 7450: Work with measurement in a variety of contexts
- 13159: Care for, select and use hand and measuring tools
- 13167: Identify potential hazards and critical safety issues in the workplace

#### Module 7 – Manufacturing Process

- 13162: Identify and describe inputs, outputs, stages and quality indicators of the manufacturing, assembly or engineering process
- 13998: Demonstrate an understanding of the principles of supply and demand, and the concept: production

#### Module 8 – Science

- 7507: Demonstrate an understanding of the concept of science
- 7508: Conduct an investigation in the natural science
- 7509: Apply basic concepts and principles in the natural sciences
- 7511: Analyse how scientific skills and knowledge contribute to sustainable use of resources
- 7513: Assess the impact of scientific innovation on quality of life

#### Module 9 – Technology

- 13165: Describe the properties of materials found in the workplace and describe their impact on the environment
- 10229: Discuss development, utilisation and management of human and natural resources
- 12471: Explore and use a variety of strategies to learn

#### Module 10 – Work Environment

- 13172: Understand the employer/employee relationship
- 13169: Describe and discuss issues relating to HIV-AIDS, TB and sexually transmitted illnesses and their impact on the workplace
- 13995: Demonstrate an understanding of contracts and their sources
- 13174: Identify and discuss inappropriate behaviours in the workplace
- 12537: Identify personal values and ethics in the workplace