Certificate in Production Technology NQF Level 2

*SAQA Qualification: National Certificate: Production Technology –**NQF Level 2***
Qual. ID: 58781
Accredited by MERSETA –no.

OVERVIEW

The combination of learning outcomes that comprise this qualification will provide the qualifying learner with vocational knowledge and skills appropriate to the context of production technology.

The qualifying learner will be able to:

- ✓Communicate production and manufacturing related operational information to a variety of end users
- ✓Optimise organisational structures, functions and processes in order to contribute to achieving production specifications
- ✓Maintain a safe and healthy work environment through contributions made to production activities individually and in working groups
- ✓Demonstrate an understanding of production technology practices, terminology and systems as applied in
- ✓manufacturing, engineering and technology
- ✓Apply quality standards and procedures in production activities

EXIT LEVEL OUTCOMES

1. Communicate production and manufacturing related operational information to a variety of end users.
   Range: End users include but are not limited to supervisor, serviceman, peers, co-workers.
2. Optimise organisational structures, functions and processes in order to contribute to achieving production specifications.
3. Maintain a safe and healthy work environment through contributions made to production activities individually and in working groups.
4. Demonstrate an understanding of production technology practices, terminology and systems as applied in manufacturing, engineering and technology.
5. Apply quality standards and procedures in production activities.

LEARNING OUTCOMES

Module 1: Communicate in the workplace

1.1 Oral communication accommodates audience and context needs.
Range: Audience can include internal organisation customers such as supervisor, serviceman, peers, co-workers and suppliers and communication can be about materials or product characteristics and quality).
1.2 Interpretation of information from texts is justified in terms of literal and implicit content of text.
Range: Text includes production plans, job instructions, and work procedures, policies.
1.3 Use of information from texts is relevant for specific contexts.
1.4 Written texts are relevant for specified communicative contexts.
Range: Written text pertains to routine maintenance, safety, quality, and production documentation, production data, and process control parameters that are recorded.
1.5 Use of language and communication in occupational learning programmes meet specified requirements.

Module 2: Optimise organisational structures

2.1 The organisational structure and functions is explained to reflect the inter-relationship between the production process and the broader organisation.
2.2 The systems and processes related to the workplace is identified and applied to reflect an understanding of organisational operations.
2.3 The role of the individual is identified and explained in order to impact on the achievement of production specifications and targets.
2.4 The role of individuals and their impact is identified and explained in order to reflect the achievement of quality specifications and targets.

Module 3: Safety in the workplace

3.1 Factors that constitute safe workplace practices are demonstrated to ensure safe work conditions for production.
3.2 Factors that pose a risk are identified and reported to address the specific risk.
3.3 The impact of maintenance on safe machine operations is explained to contribute to a safe and healthy work environment.
3.4 Routine maintenance is conducted and records are kept to meet safety requirements.
3.5 The way in which an individual contributes to health, safety and environmental practices is demonstrated through personal hygiene and adherence to policies and procedures.

Module 4: Demonstrate an understanding of production technology practices

4.1 Production technology practices, terminology and systems are explained in terms of its relationship to production.
4.2 Production in-put, process and output variables and its influence are identified and explained to optimise resource utilisation and the production process.
4.3 Production targets are explained in terms of production requirements and contribution to organisational goals.
Range: Production requirements include given time, cost, quality, quantity, value-add and customer specifications.
4.4 Safety, health and environmental policies, procedures and legislation are complied with during the production process.

Module 5: Apply quality standards and procedures in production activities.

5.1 Quality control principles and practices are interpreted and applied to meet quality specifications in production.
5.2 An understanding of the importance of continuous quality checks are demonstrated to reflect its impact on production.
5.3 Quality problems are solved by comparing and interpreting quality data in the workplace.
5.4 Basic monitoring of production is undertaken to ensure that the product stays within the limits of quality specifications.
Range: Basic monitoring: sensory, simple measurement, defect charts, samples.

Integrated Assessment:

Formative assessments conducted during the learning process will consist of written assessments, simulation in a practical environment and a number of self-assessments.

Summative assessment consists of written assessments, assignments and simulation in a practical environment, integrating the assessment of all unit standards and embedded knowledge. Summative assessments are only conducted once the learner has demonstrated proficiency during formative assessment.

In particular assessors should check that the learner is able to demonstrate the ability to consider a range of options and make decisions about:

- ✓The quality of the observed practical performance as well as the theory and embedded knowledge behind it.

✓The different methods that can be used by the learner to display thinking and decision making in the demonstration
✓of practical performance.
✓Reflexive competencies.

QUALIFICATION RULES

✓All fundamental units standards to the value of 36 credits must be completed.

✓All core unit standards to the value of 69 credits must be completed.

✓Learners must complete unit standards to the value of at least 20 credits from the specialisation, sector or general elective unit standards.

Who should attend?

The programme is for people who want to build a solid foundation for future development with a good understanding of production technology within the organisational context:

Learning assumed to be in place

•Communication at Level 1.
•Mathematical literacy NQF Level 1.

UNIT STANDARDS:

	ID	UNIT STANDARD TITLE	NQF LEVEL	CREDITS
Core	14445	Frame and implement an individual action plan to improve productivity within an organisational unit	Level 01	3
Core	13162	Identify and describe inputs, outputs, stages and quality indicators of the manufacturing, assembly or engineering process	Level 01	10
Core	13167	Identify potential hazards and critical safety issues in the workplace	Level 01	2
Core	9964	Apply health and safety to a work area	Level 02	3
Core	114891	Count stock for a stock-take	Level 02	5
Core	13220	Keep the work area safe and productive	Level 02	8
Core	119139	Monitor the quality of the input materials and the manufactured plastic product	Level 02	12
Core	12036	Orientate self in the workplace	Level 02	6
Core	13221	Perform routine maintenance	Level 02	8
Core	12667	Supply raw and processed material to production line	Level 02	3

Core	12463	Understand and deal with HIV/AIDS	Level 02	3
Core	12456	Explain and use organisational procedures	Level 03	6
Fundamental	119463	Access and use information from texts	Level 02	5
Fundamental	9009	Apply basic knowledge of statistics and probability to influence the use of data and procedures in order to investigate life related problems	Level 02	3
Fundamental	7480	Demonstrate understanding of rational and irrational numbers and number systems	Level 02	3
Fundamental	119454	Maintain and adapt oral/signed communication	Level 02	5
Fundamental	12444	Measure, estimate and calculate physical quantities and explore, describe and represent geometrical relationships in 2-dimensions in different life or workplace contexts	Level 02	3
Fundamental	119460	Use language and communication in occupational learning programmes	Level 02	5
Fundamental	7469	Use mathematics to investigate and monitor the financial aspects of personal and community life	Level 02	2
Fundamental	9007	Work with a range of patterns and functions and solve problems	Level 02	5
Fundamental	119456	Write/present for a defined context	Level 02	5
Elective	14444	Demonstrate an understanding of a general business plan and adapt it to a selected business idea	Level 01	7
Elective	110076	Prepare for freight storage	Level 01	2
Elective	9877	Assemble components	Level 02	12
Elective	265000	Complete post-production and finishing operations	Level 02	6
Elective	9878	Complete post-production and finishing operations	Level 02	12
Elective	117416	Comply with good housekeeping practices	Level 02	4
Elective	7106	Conduct minor routine and breakdown maintenance on equipment and machines	Level 02	6
Elective	13222	Deal with safety, health and environmental emergencies in the workplace	Level 02	4
Elective	12465	Develop a learning plan and a portfolio for assessment	Level 02	6

Elective	119074	Erect and dismantle scaffolding	Level 02	4
Elective	260160	Maintain spray painting equipment	Level 02	4
Elective	265001	Maintain stock levels of equipment and consumables	Level 02	4
Elective	9881	Mark off basic regular engineering shapes	Level 02	6
Elective	117898	Move, pack and maintain stock in a distribution centre/warehouse	Level 02	12
Elective	244338	Operate a production process	Level 02	15
Elective	12484	Perform basic fire fighting	Level 02	4
Elective	12483	Perform basic first aid	Level 02	4
Elective	119737	Perform basic spray painting	Level 02	10
Elective	119753	Perform basic welding/joining of metals	Level 02	8
Elective	114881	Prepare, use and operate equipment to support a manufacturing process	Level 02	32
Elective	9882	Read and interpret basic engineering drawings	Level 02	8
Elective	119744	Select, use and care for engineering hand tools	Level 02	8
Elective	12476	Select, use and care for engineering measuring equipment	Level 02	4
Elective	10255	Select, use and care for power tools	Level 02	5
Elective	12481	Sling loads	Level 02	4
Elective	9879	Use and care for tools and equipment	Level 02	10
Elective	244504	Describe and explain the principles of logistics support in a specific context	Level 03	6
Elective	117897	Maintain stock balances in a distribution centre	Level 03	8
Elective	14625	Manufacture concrete products	Level 03	10
Elective	117901	Receive stock in a DC/Warehouse	Level 03	15

Certification

Learners who successfully complete all portfolios per POE will be awarded the full qualification certificate for that NQF Level.