

	<b>Curriculum Document</b>			
<b>Curriculum Code</b>	<b>Curriculum Title</b>		[insert image here]	
716105-000-00-00	<b>Intermediate Occupational Certificate: Baking and Confectionery Operator</b>			
	<b>Name</b>	<b>Email</b>	<b>Phone</b>	<b>Logo</b>
<b>Development Quality Partner</b>	FoodBev Seta	chrisk@foodbev.co.za	011 253 7300	

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**Learner QDF Signature**

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**QDF Signature**

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**Date**

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**DQP Representative Signature**

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**Date**

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## **SECTION 1: CURRICULUM SUMMARY**

### **1. Occupational Information**

#### **1.1 Associated Occupation**

716105: Intermediate Occupational Certificate: Baking and Confectionery Operator

#### **1.2 Occupation or Specialisation Addressed by this Curriculum**

716105-000: Intermediate Occupational Certificate: Baking and Confectionery Operator

#### **1.3 Alternative Titles used by Industry**

- None

### **2. Curriculum Information**

#### **2.1 Curriculum Structure**

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

##### **Knowledge Modules:**

- 716105-000-00-KM-01, Personal Mastery and Inter-personal relationships, NQF Level 3, Credits 4
- 716105-000-00-KM-02, Business Studies for Machine Operators, NQF Level 3, Credits 4
- 716105-000-00-KM-03, Manufacturing principles for Machine Operators in a digitalized environment, NQF Level 3, Credits 6
- 716105-000-00-KM-04, Quality, Food Safety, GMP and Food Contamination, NQF Level 3, Credits 8
- 716105-000-00-KM-05, Occupational Health and Safety in the Manufacturing Environment, NQF Level 3, Credits 2
- 716105-000-00-KM-06, Baking and Confectionery processing equipment, NQF Level 3, Credits 6
- 716105-000-00-KM-07, History, background, principles and raw materials of bread and confectionery products, NQF Level 3, Credits 8

Total number of credits for Knowledge Modules: 38

##### **Practical Skill Modules:**

- 716105-000-00-PM-01, Receive input materials for baking and confectionery products, NQF Level 3, Credits 8
- 716105-000-00-PM-02, Prepare input materials for further processing, NQF Level 3, Credits 12
- 716105-000-00-PM-03, Produce bread and flour confectionery products, NQF Level 3, Credits 14
- 716105-000-00-PM-04, Control product and process quality of bread and confectionery products in a large-scale bakery, NQF Level 3, Credits 13

Total number of credits for Practical Skill Modules: 47

This qualification also requires the following **Work Experience Modules**:

- 716105-000-00-WM-01, Processes and procedures to receive baking and confectionery input materials, NQF Level 3, Credits 8
- 716105-000-00-WM-02, Processes and procedures to prepare raw materials for further processing, NQF Level 3, Credits 10
- 716105-000-00-WM-03, Processes and procedures to manufacture bread and confectionery products, NQF Level 3, Credits 10
- 716105-000-00-WM-04, Processes and procedures to control the operation of baking and confectionery processing equipment, NQF Level 3, Credits 10

Total number of credits for Work Experience Modules: 38

## **2.2 Entry Requirements**

NQF Level 2 qualification with mathematics and communication.

## **3. Assessment Quality Partner Information**

Name of body: FoodBev Seta  
Address of body: 7 Wessels Road, Rivonia  
Contact person name: Ntokozo Lwandle  
Contact person work telephone number: 011 253 7300

## **4. Part Qualification Curriculum Structure**

## **SECTION 2: OCCUPATIONAL PROFILE**

### **1. Occupational Purpose**

Operate baking and confectionery Equipment and Perform tasks to produce Products by adjusting, maintaining and overseeing the equipment set up and operating parameters to ensure that quality standards and specifications are met.

### **2. Occupational Tasks**

- Receive input of raw materials for the processing of baking and confectionery products operations according to organisational requirements and specifications. (NQF Level 3)
- Prepare input materials for further processing. (NQF Level 3)
- Process raw materials and related products to organisational requirements and specifications to produce bread and confectionery products in plant processing environment. (NQF Level 3)
- Control the operation of bread and confectionery automated equipment according to organisational requirements and specifications. (NQF Level 3)

### **3. Occupational Task Details**

#### **3.1. Receive input of raw materials for the processing of baking and confectionery products operations according to organisational requirements and specifications. (NQF Level 3)**

##### **Unique Product or Service:**

Received input Materials for Plant Baking operations.

##### **Occupational Responsibilities:**

- To receive Plant Baking input materials according to organisational procedures and specifications.

##### **Occupational Contexts:**

- Operate dedicated Plant Baking equipment by following a production plan while, interfacing with team leader, supervisor or process controller and internal supplier and customer within a national and international regulatory environment according to good manufacturing practices.

#### **3.2. Prepare input materials for further processing. (NQF Level 3)**

##### **Unique Product or Service:**

Prepared Plant Baking input materials for further processing.

##### **Occupational Responsibilities:**

- To prepare Plant Baking input materials for further processing.

##### **Occupational Contexts:**

- Operate dedicated Plant Baking equipment by following a production plan while, interfacing with team leader, supervisor or process controller and internal supplier and customer within a national and international regulatory environment according to good manufacturing practices.

### **3.3. Process raw materials and related products to organisational requirements and specifications to produce bread and confectionery products in plant processing environment. (NQF Level 3)**

#### **Unique Product or Service:**

Processed Plant Baking products.

#### **Occupational Responsibilities:**

- To process Plant Baking products to organisational requirements and specifications.

#### **Occupational Contexts:**

- Operate dedicated Plant Baking equipment by following a production plan while, interfacing with team leader, supervisor or process controller and internal supplier and customer within a national and international regulatory environment according to good manufacturing practices.

### **3.4. Control the operation of bread and confectionery automated equipment according to organisational requirements and specifications. (NQF Level 3)**

#### **Unique Product or Service:**

Controlled operation of Plant Baking production.

#### **Occupational Responsibilities:**

- Perform pre-start up checks, start up, operate, control, communicate, measure performance, record deviations, make corrective actions, maintain process flow, shut down, preventative maintenance and changeovers according to work instructions or standards. Execute start and end of shift procedures and administration. Complete daily written production report. Report all breakdowns, incidents, accidents, material usage and costing as per organisational standard operating procedures and/or work instructions. Plot daily production output according to plan. Execute and complete planned task, observations, safety declarations and equipment checklists.

#### **Occupational Contexts:**

- Operate dedicated plant baking equipment by following a production plan while, interfacing with team leader, supervisor or process controller and internal supplier and customer within a national and international regulatory environment according to good manufacturing practices.

## **SECTION 3: CURRICULUM COMPONENT SPECIFICATIONS**

### **SECTION 3A: KNOWLEDGE MODULE SPECIFICATIONS**

List of Knowledge Modules for which Specifications are included

- 716105-000-00-KM-01, Personal Mastery and Inter-personal relationships, NQF Level 3, Credits 4
- 716105-000-00-KM-02, Business Studies for Machine Operators, NQF Level 3, Credits 4
- 716105-000-00-KM-03, Manufacturing Principles for Machine Operators in a digitalised environment, NQF Level 3, Credits 6
- 716105-000-00-KM-04 Quality, Food Safety, GMP and Food Contamination, NQF Level 3, Credits 8
- 716105-000-00-KM-05, Occupational Health and Safety in the Manufacturing Environment, NQF Level 3, Credits 2
- 716105-000-00-KM-06, Baking and Confectionery processing equipment, NQF Level 3, Credits 6
- 716105-000-00-KM-07, History, background, principles and raw materials of bread and confectionery products, NQF Level 3, Credits 8



## **1. 716100-001-00-KM-01, Personal Mastery and Inter-personal relationships, NQF Level 3, Credits 4**

### **1.1 Purpose of the Knowledge Module**

The main focus of the learning in this knowledge module is to build an understanding of self and all the components required to attain personal mastery. The learning includes references to the typical, self-awareness and development concepts regarding self-improvement and strengthening interpersonal relationships.

The learning will enable learners to demonstrate an understanding of:

- KM-01-KT01: Personal Mastery. (30%)
- KM-01-KT02: Planning and Problem-solving. (30%)
- KM-01-KT03: Personal Productivity and Time Management. (20%)
- KM-01-KT04: Communication Principles. (20%)

### **1.2 Guidelines for Topics**

#### **1.2.1. KM-01-KT01: Personal Mastery (30%)**

***Topic elements to be covered include:***

- KT0101 Principles of personal mastery.
- KT0102 The importance of a personal vision.
- KT0103 Defining certain concepts such as belief, values, emotional intelligence, attitudes, perceptions and stress.
- KT0104 Personal style.
- KT0105 Identifying strengths and weaknesses.

#### ***Internal Assessment Criteria and Weight***

- IAC0101 The principles of personal mastery are explained.
- IAC0102 The concepts of self-awareness, self-esteem and self-value are explained.
- IAC0103 The importance of having a personal vision is justified.
- IAC0104 Personal strengths and weaknesses are evaluated.
- IAC0105 How to develop a personal vision is described.

***(Weight 30%)***

### **1.2.2. KM-01-KT02: Planning and Problem-solving (30%)**

***Topic elements to be covered include:***

- KT0201 Decision-making styles.
- KT0202 Steps in problem-solving.
- KT0203 List and explain 3 problem-solving techniques.
- KT0204 Typical problem-solving methods.
- KT0205 Types of Planning; Strategic, Operational, Tactical.
- KT0206 Consequences of poor planning.
- KT0207 Influences of good planning in the workplace.

***Internal Assessment Criteria and Weight***

- IAC0201 Decision making styles are explained.
- IAC0202 The steps of problem-solving are described.
- IAC0203 Three problem-solving techniques are listed and explained.

***(Weight 30%)***

### **1.2.3. KM-01-KT03: Personal Productivity and Time Management (20%)**

***Topic elements to be covered include:***

- KT0301 Concept of productivity.
- KT0302 Productivity Calculations.
- KT0303 Concept of Time Management.
- KT0304 Eliminating time wasting.

***Internal Assessment Criteria and Weight***

- IAC0301 The concept of productivity is explained.
- IAC0302 Basic productivity calculations are completed.
- IAC0303 The concept of time management is explained.
- IAC0304 Techniques to utilise sound efficiently are described.
- IAC0305 Rationale for productivity improvement in the manufacturing environment is explained.

***(Weight 20%)***

#### **1.2.4. KM-01-KT04: Communication Principles (20%)**

***Topic elements to be covered include:***

- KT0401 Theory and Principles of Personal communication.
- KT0402 Concept of Ethics.
- KT0403 Read and interpret written instructions.
- KT0404 Elements of an effective meeting.
- KT0405 The concept of diversity.

#### ***Internal Assessment Criteria and Weight***

- IAC0401 The theory and principles of interpersonal communication in a manufacturing environment is explained.
- IAC0402 The Concept of Ethics is explained.
- IAC0403 The elements of a technical business report are listed.
- IAC0404 How to interpret written and oral instructions is explained.
- IAC0405 The elements of an effective meeting are described.

***(Weight 20%)***

### **1.3 Provider Programme Accreditation Criteria**

***Physical Requirements:***

- Normal lecture environment with adequate ventilation and lighting, multi-media facilities, posters and break away rooms for small group dynamics and formative assessments.

***Human Resource Requirements:***

- The Trainer: Learner ratio may not exceed 1:20.
- Facilitators must have performed at a supervisory position.
- Facilitators must have a relevant NQF 4 qualification or higher related to the subject level.

***Legal Requirements:***

- The provider must meet all the Occupational Health and Safety Act (OSH Legal Requirements).

### **1.4 Exemptions**

## **2. 716105-000-00-KM-02, Business Studies for Machine Operators, NQF Level 3, Credits 4**

### **2.1 Purpose of the Knowledge Modules**

The main focus of the learning in this knowledge module is to build an understanding of the key theoretical concepts, principles and processes of business relevant for an automated process machine operator in a bakery and confectionery process. The learning includes references to the typical, management, administrative and reporting processes used in a fast moving consumer goods environment.

The learning will enable learners to demonstrate an understanding of:

- KM-02-KT01: Business Environment. (50%)
- KM-02-KT02: Measurement and Financial Awareness. (50%)

### **2.2 Guidelines for Topics**

#### **2.2.5. KM-02-KT01: Business Environment (50%)**

***Topic elements to be covered include:***

- KT0101 The Elements of a Macro-Environment.
- KT0102 The Concept of an industry value chain.
- KT0103 Definitions of concepts such as customer, consumer, marketing, sales, customer service.
- KT0104 Define the concept of structure and distinguish between line and staff function.
- KT0105 Describe the concepts of purpose, value, working capital, profit, return of investment, cost, expense, value proposition, and competitive advantage.

#### ***Internal Assessment Criteria and Weight***

- IAC0101 The elements of a Macro-environmental analysis are explained.
- IAC0102 The constituents of an industry value chain are listed and described.
- IAC0103 The concepts of sales and marketing and customer and consumer are described.
- IAC0104 The concept of organisation structure and line and staff function are explained.
- IAC0105 The concepts of value, margin and competitive advantage are described.

***(Weight 50%)***

### **2.2.6. KM-02-KT02: Measurement and Financial Awareness (50%)**

***Topic elements to be covered include:***

- KT0201 Effective personal financial management.
- KT0202 Formulation of Budgets.
- KT0203 Concepts of Cost, Working Capital and Variance.
- KT0204 Concepts of Fixed and variable cost and break-even.
- KT0205 Drawings and sketches of cost curves to scale using measuring instruments.

#### ***Internal Assessment Criteria and Weight***

- IAC0201 The principles of effective personal financial management are explained.
- IAC0202 The principles of collecting, organising, analysing and representing data are described.
- IAC0203 Why all elements of a manufacturing process need to be measured is explained.
- IAC0204 With the use of examples, the following concepts, revenue, cost, break-even, gross profit, and net profit are explained.
- IAC0205 A budget using generally accepted techniques is formulated.
- IAC0206 By means of examples fixed, variable, average and marginal costs are described.

***(Weight 50%)***

### **2.3 Provider Programme Accreditation Criteria**

***Physical Requirements:***

- Normal lecture environment with adequate ventilation and lighting, multi-media facilities, posters and break away rooms for small group dynamics and formative assessments.

***Human Resource Requirements:***

- The Trainer: Learner ratio may not exceed 1:20.
- Facilitators must have performed at a supervisory position.
- Facilitators must have a relevant NQF 4 qualification or higher related to the subject level.

***Legal Requirements:***

- The provider must meet all the Occupational Health and Safety Act (OSH Legal Requirements).

### **2.4 Exemptions**

### **3. 716105-000-00-KM-03, Manufacturing Principles for Machine Operators in a digitalised environment, NQF Level 3, Credits 6**

#### **3.1 Purpose of the Knowledge Modules**

The main focus of the learning in this knowledge module is to build an understanding of the key concepts related to production, world class manufacturing, lean, utilities management waste, maintenance and environmental management.

The learning will enable learners to demonstrate an understanding of:

- KM-03-KT01: The task of Manufacturing. (15%)
- KM-03-KT02: Principles of Good Manufacturing. (15%)
- KM-03-KT03: Machinery and Maintenance Management. (30%)
- KM-03-KT04: Work and process flow. (15%)
- KM-03-KT05: Introduction to the factory of the future. (10%)
- KM-03-KT06: Capturing and Processing Data. (15%)

#### **3.2 Guidelines for Topics**

##### **3.2.1. KM-03-KT01: The task of Manufacturing (15%)**

***Topic elements to be covered include:***

- KT0101 Position Manufacturing within the organisation's Value Chain.
- KT0102 The Production Process.
- KT0103 the Role of the process operator.
- KT0104 Shift Production Planning and Scheduling.

##### ***Internal Assessment Criteria and Weight***

- IAC0101 The position of manufacturing within the organisation's value chain is explained.
- IAC0102 The production process is described.
- IAC0103 The role of the process operator is described.
- IAC0104 The elements of shift production planning and scheduling are explained.

***(Weight 15%)***

### **3.2.2. KM-03-KT02: Principles of Good Manufacturing (15%)**

***Topic elements to be covered include:***

- KT0201 The Concept of Good Manufacturing.
- KT0202 Principles and objectives of good manufacturing.
- KT0203 Concept of Lean.
- KT0204 The Concept of Continuous Improvement.
- KT0205 Techniques for Operators.

#### ***Internal Assessment Criteria and Weight***

- IAC0201 The concept world class is explained.
- IAC0202 The principles and objectives of world class manufacturing are defined.
- IAC0203 The concept of lean is defined within a food manufacturing context.
- IAC0204 The concept of continuous improvement is explained.
- IAC0205 Continuous Improvement Techniques are listed (at least three) and described.

***(Weight 15%)***

### **3.2.3. KM-03-KT03: Machinery and Maintenance Management and Cleaning (30%)**

***Topic elements to be covered include:***

- KT0301 Rationale for Maintenance.
- KT0302 Forms of maintenance.
- KT0303 Objectives and Approaches to Maintenance.
- KT0304 Overview of Autonomous Maintenance.
- KT0305 Role of Operator in Autonomous Maintenance.
- KT0306 Maintenance Task Planning.
- KT0307 Tools and their purpose.

**Internal Assessment Criteria and Weight**

- IAC0301 The rationale for maintenance is justified
- IAC0302 Forms of maintenance are described.
- IAC0303 Objectives and Approaches to Maintenance are listed.
- IAC0304 The steps of autonomous maintenance are listed.
- IAC0305 Role of the operator in autonomous maintenance is defined.
- IAC0306 The practice of maintenance task planning is explained.
- IAC0307 The basic hand tools required to complete autonomous maintenance are identified and their purpose are described.

**(Weight 30%)**

**3.2.4. KM-03-KT04: Work and process flow (15%)****Topic elements to be covered include:**

- KT0401 Process and Material Flow.
- KT0402 Concepts of Inputs, Conversion and outputs.
- KT0403 Measures of efficiency and productivity.
- KT0404 Layouts
- KT0406 Concept of Performance to a standard.

**Internal Assessment Criteria and Weight**

- IAC0401 The concepts of process and material flow are described.
- IAC0402 The concepts of inputs, conversion and outputs are described.
- IAC0403 Measures of efficiency are described, and simple computations are completed.
- IAC0404 The concept of a layout for a primary and secondary production process is described.
- IAC0405 The concept of performance to a standard is explained.

**(Weight 15%)**



### **3.2.5. KM-03-KT05: Introduction to the factory of the future (10%)**

#### ***Topic elements to be covered include:***

- KT0501 Understanding the concept of the factory of the future
- KT0502 The concept of a paperless factory
- KT0503 Understanding the concept of using systems to visualise real time production
- KT0504 The concept of Integrated systems
- KT0505 Understanding the concepts of artificial intelligence and robotics

#### ***Internal Assessment Criteria and Weight***

- IAC0501 The concept of the manufacturing factory of the future is explained
- IAC0502 The concept of a paperless manufacturing factory is described
- IAC0503 Visual management systems that are digitally projected are explained
- IAC0504 The concept of integrated management systems is explained
- IAC0505 The concepts of artificial intelligence and robotics are explained

***(Weight 10%)***

### **3.2.6. KM-03-KT06: Capturing and Processing Data (15%)**

#### ***Topic elements to be covered include:***

- KT0601 Business Intelligence
- KT0602 Uses of Business Intelligence
- KT0603 How data becomes knowledge and intelligence
- KT0604 Sources of data
- KT0605 Data warehousing and data mining

#### ***Internal Assessment Criteria and Weight***

- IAC0601 Business Intelligence is defined
- IAC0602 Uses of business intelligence are listed
- IAC0603 The process how data becomes knowledge and intelligence is described
- IAC0604 The sources of data are explained with respect to a manufacturing and supply chain environment
- IAC0605 The concepts of data warehousing and data mining are described

***(Weight 15%)***

### **3.3 Provider Programme Accreditation Criteria**

#### *Physical Requirements:*

- Normal lecture environment with adequate ventilation and lighting, multi-media facilities, posters and break away rooms for small group dynamics and formative assessments. Examples of basic hand tools and lubricants. Diagrams/ Pictures depicting primary and secondary processes. Diagrams of layouts.

#### *Human Resource Requirements:*

- The Trainer: Learner ratio may not exceed 1:20.
- Facilitators must have performed at a supervisory position in a manufacturing environment.
- Facilitators must have a relevant NQF 4 qualification or higher related to the subject level.

#### *Legal Requirements:*

- The provider must meet all the Occupational Health and Safety Act (OSH Legal Requirements).

### **3.4 Exemptions**

#### **4. 716105-000-00-KM-04, Quality, Food Safety, GMP and Food Contamination, NQF Level 3, Credits 8**

##### **4.1 Purpose of the Knowledge Modules**

The focus of learning in this subject is the fundamental theory and concepts of quality and food safety in the food and related products manufacturing environment. The learning includes the concepts and theories associated with the product and process quality, incorporating good manufacturing practice, the regulatory environment, the role of the process operator, contamination, and microbiological infection and cleaning and sanitising.

The learning will enable learners to demonstrate an understanding of:

- KM-04-KT01: The Regulatory Environment. (20%)
- KM-04-KT02: Roles and Duties of Employees. (10%)
- KM-04-KT03: Principles of Good Manufacturing Practice. (20%)
- KM-04-KT04: Quality Management. (15%)
- KM-04-KT05: Food Contamination. (15%)
- KM-04-KT06: Plant Cleaning and Sanitation. (20%)

##### **4.2 Guidelines for Topics**

###### **4.2.1. KM-04-KT01: The Regulatory Environment (20%)**

***Topic elements to be covered include:***

- KT0101 The Main aspect of the legislation that regulates the food manufacturing environment.
- KT0102 Importance of Compliance and Quality Control.
- KT0103 Terminology relevant to Food Safety (Critical Control Points, Hygiene, Good Manufacturing Practice, Quality Control and Quality Assurance and contamination).

###### ***Internal Assessment Criteria and Weight***

- IAC0101 Main aspects that regulates the food manufacturing environment are explained.
- IAC0102 The importance of compliance and quality control is explained.
- IAC0103 An understanding of relevant terminology is demonstrated.

***(Weight 20%)***

###### **4.2.2. KM-04-KT02: Roles and Duties of Employees (10%)**

***Topic elements to be covered include:***

- KT0201 Definition of an effective quality control system.
- KT0202 Fundamentals of Risk Assessment.
- KT0203 General Duties of employees in an effective quality management system.
- KT0204 Personal Protective Equipment, Clothing and Facilities.

**Internal Assessment Criteria and Weight**

- IAC0201 An effective quality control system is defined.
- IAC0202 An understanding of the fundamentals of Risk assessment is demonstrated.
- IAC0203 General Duties of an employee in an effective quality management system is described.
- IAC0204 Personal Protective Equipment, Clothing and Facilities are correct described and identified.

**(Weight 10%)**

**4.2.3. KM-04-KT03: Principles of Good Manufacturing Practice (20%)****Topic elements to be covered include:**

- KT0301 Rationale for the application of Good Manufacturing Practices.
- KT0302 Steps to ensure personal hygiene.
- KT0303 Elements of Good Sanitation Procedure.
- KT0304 Principles of storage of raw materials, work in process and finished goods according to GMP.
- KT0305 Rationale for organisation's to implement process controls.
- KT0306 Characteristics of waste management.

**Internal Assessment Criteria and Weight**

- IAC0301 Rationale for the application of Good Manufacturing Practices is explained.
- IAC0302 Steps to ensure personal hygiene is described.
- IAC0303 Elements of Good Sanitation Procedure is described.
- IAC0304 Principles of storage of raw materials, work in process and finished goods according to GMP is explained.
- IAC0305 Rationale for organisations to implement process controls is explained.
- IAC0306 Characteristics of waste management is listed and explained.

**(Weight 20%)**

**4.2.4. KM-04-KT04: Quality Management (15%)****Topic elements to be covered include:**

- KT0401 Principles of a quality management system.
- KT0402 Implications of a quality management system.
- KT0403 Principles of Food Safety.

**Internal Assessment Criteria and Weight**

- IAC0401 Principles of a quality management system is identified.
- IAC0402 Implications of a quality management system explained.
- IAC0403 Principles of Food Safety described.

**(Weight 15%)**

**4.2.5. KM-04-KT05: Food Contamination (15%)****Topic elements to be covered include:**

- KT0501 Physical and Chemical Contamination.
- KT0502 Microbiological and spoilage organisms.
- KT0503 Other organisms that are indicative of contamination.
- KT0504 Detection, monitoring and control procedures.

**Internal Assessment Criteria and Weight**

- IAC0501 Physical and Chemical Contamination are identified and differentiated.
- IAC0502 Microbiological and spoilage organisms are identified and differentiated.
- IAC0503 Other organisms that are indicative of contamination are identified and differentiated.
- IAC0504 Detection, monitoring and control procedures are described.

**(Weight 15%)**

**4.2.6. KM-04-KT06: Plant Cleaning and Sanitation (20%)****Topic elements to be covered include:**

- KT0601 Principles of Plant Cleaning and Sanitising.
- KT0602 Operating Practices for cleaning and sanitising.
- KT0603 Reasons for general plant cleaning.
- KT0604 Cleaning Chemicals.
- KT0605 Characteristics of detergents and sterilants.
- KT0606 Process of Heat Sterilisation.
- KT0607 Principles of the safe use of chemicals.

**Internal Assessment Criteria and Weight**

- IAC0601 Principles of Plant Cleaning and Sanitising are discussed.
- IAC0602 Operating Practices for cleaning and sanitising are described.
- IAC0603 Reasons for general plant cleaning are explained.
- IAC0604 Cleaning Chemicals are identified.

- IAC0605 Characteristics of detergents and sterilants identified and explained.
- IAC0606 Process of Heat Sterilisation is explained.
- IAC0607 Principles of the safe use of chemicals is discussed.

**(Weight 20%)**

### **4.3 Provider Programme Accreditation Criteria**

#### *Physical Requirements:*

- Normal lecture environment with adequate ventilation and lighting, multi-media facilities, posters and break away rooms for small group dynamics and formative assessments. Examples of basic hand tools and lubricants. Diagrams/ Pictures depicting primary and secondary processes. Diagrams of layouts.

#### *Human Resource Requirements:*

- The Trainer: Learner ratio may not exceed 1:20.
- Facilitators must have performed at a supervisory position in a manufacturing environment.
- Facilitators must have a relevant NQF 4 qualification or higher related to the subject level.

#### *Legal Requirements:*

- The provider must meet all the Occupational Health and Safety Act (OSH Legal Requirements).

### **4.4 Exemptions**

## **5. 716105-000-00-KM-05, Occupational Health and Safety in the Manufacturing Environment, NQF Level 3, Credits 2**

### **5.1 Purpose of the Knowledge Modules**

The focus of the learning in this knowledge module is the fundamental principles and practice of occupational health and safety. The learning includes the elements of relevant legislation, employee rights and responsibilities, internationally recognized signs, symbols and colour coding, safe handling and lifting techniques and, emergency procedures for a manufacturing site

The learning will enable learners to demonstrate an understanding of:

- KM-05-KT01: Elements of Legislation. (25%)
- KM-05-KT02: Employees Rights and Responsibilities. (25%)
- KM-05-KT03: Internationally recognized signs, symbols and colour coding for health and safety. (25%)
- KM-05-KT04: Emergency Procedures for a manufacturing site. (25%)

### **5.2 Guidelines for Topics**

#### **5.2.1. KM-05-KT01: Elements of Legislation (25%)**

***Topic elements to be covered include:***

- KT0101 General Duties of Employers.
- KT0102 Duty to Inform.
- KT0103 Role of Safety representatives.

#### ***Internal Assessment Criteria and Weight***

- IAC0101 General Duties of Employers as contained in Legislation is explained.
- IAC0102 Duty to Inform can be explained.
- IAC0103 Role of Safety representatives are explained.

***(Weight 25%)***

#### **5.2.2. KM-05-KT02: Employees Rights and Responsibilities (25%)**

***Topic elements to be covered include:***

- KT0201 Reasonable care.
- KT0202 Rules and procedures.

#### ***Internal Assessment Criteria and Weight***

- IAC0201 Employees Rights and Responsibilities are discussed.

***(Weight 25%)***

**5.2.3. KM-05-KT03: Internationally recognized signs, symbols and colour coding for health and safety (25%)**

***Topic elements to be covered include:***

- KT0301 Rationale for safety signs.
- KT0302 Categories and Types of Signs.
- KT0303 Types of Symbols.
- KT0304 Safety Colours.
- KT0305 Duty to maintain.

***Internal Assessment Criteria and Weight***

- IAC0301 Rationale for and use of safety signs is explained.
- IAC0302 Categories and Types of Signs are identified and explained.
- IAC0305 Duty to maintain is discussed.

***(Weight 25%)***

**5.2.4. KM-05-KT04: Safety Procedures for a manufacturing site (25%)**

***Topic elements to be covered include:***

- KT0401 Safety Procedures.
- KT0402 Shutdown and lock out and vessel entry procedures.
- KT0403 Identification of Hazards.
- KT0404 Role and Duties of Process Operator.

***Internal Assessment Criteria and Weight***

- IAC0401 Safety Procedures are identified and described.
- IAC0402 Shutdown and lock out procedures is described.
- IAC0403 Hazards are identified.
- IAC0404 Role and Duties of Process Operator are discussed.

***(Weight 25%)***



### **5.3 Provider Programme Accreditation Criteria**

#### *Physical Requirements:*

- Normal lecture environment with adequate ventilation and lighting, multi-media facilities, posters and break away rooms for small group dynamics and formative assessments. Examples of basic hand tools and lubricants. Diagrams/ Pictures depicting primary and secondary processes. Diagrams of layouts.

#### *Human Resource Requirements:*

- The Trainer: Learner ratio may not exceed 1:20.
- Facilitators must have performed at a supervisory position in a manufacturing environment.
- Facilitators must have a relevant NQF 4 qualification or higher related to the subject level.

#### *Legal Requirements:*

- The provider must meet all the Occupational Health and Safety Act (OSH Legal Requirements).

### **5.4 Exemptions**

Mandatory safety training as required by industry.

## **6. 716105-000-00-KM-06, Baking and Confectionery Processing Equipment, NQF Level 3, Credits 6**

### **5.1 Purpose of the Knowledge Modules**

The main focus of the learning in this knowledge module is to build an understanding of the nature and role of each type of Baking and Confectionery Processing Equipment.

The learning will enable learners to demonstrate an understanding of:

- KM-06-KT01: Types of Mixers (20%)
- KM-06-KT02: Types of Proving Equipment (20%)
- KM-06-KT03: Types of Panning and Lidding Equipment (20%)
- KM-06-KT04: Types of Ovens (20%)
- KM-06-KT05: Types of Bread Cooling Equipment (20%)

### **6.2 Guidelines for Topics**

#### **6.2.1. KM-06-KT01: Types of Mixers (20%)**

***Topic elements to be covered include:***

- KT0101 Overview including relationship between types of dough and mixers.
- KT0102 Batch Mixers.
- KT0103 Continuous Mixers.

#### ***Internal Assessment Criteria and Weight***

- IAC0101 The relationship between types of dough and mixers is explained and the points to be evaluated when selecting a mixer are listed.
- IAC0102 Types of batch mixers are listed providing the advantages and disadvantages of each.
- IAC0103 Types of continuous mixers are listed providing the advantages and disadvantages of each.

***(Weight 20%)***

#### **6.2.2. KM-06-KT02: Types of Proving Equipment (20%)**

***Topic elements to be covered include:***

- KT0201 Tray Proofer.
- KT0202 Spiral Proofer.
- KT0203 Manual Proofing Equipment.
- KT0204 Proofer Loading Equipment.

**Internal Assessment Criteria and Weight**

- IAC0201 The role and use of types of automated proofing equipment are explained.
- IAC0202 The role and use of manual proofing equipment is explained.
- IAC0203 Examples of integrated automated proofing equipment are explained.

**(Weight 20%)**

**6.2.3. KM-06-KT03: Types of Panning and Lidding Equipment (20%)****Topic elements to be covered include:**

- KT0301 Automated panning and lidding equipment.
- KT0302 Manual panning and lidding equipment.

**Internal Assessment Criteria and Weight**

- IAC0301 The role and use of automated panning and lidding equipment is explained.
- IAC0302 The role and use of manual panning and lidding equipment is explained.

**(Weight 20%)**

**6.2.4. KM-06-KT04: Types of Ovens (20%)****Topic elements to be covered include:**

- KT0401 Direct Fired Ovens.
- KT0402 Indirect Fired ovens.
- KT0403 Hybrid ovens.

**Internal Assessment Criteria and Weight**

- IAC0401 The process of baking in a direct fired oven is explained.
- IAC0402 The process of baking in an indirect or cyclothermic oven is explained.
- IAC0403 Hybrid ovens are described.

**(Weight 20%)**

**6.2.5. KM-06-KT05: Types of Bread Cooling Equipment (20%)****Topic elements to be covered include:**

- KT0501 Bread Cooling Equipment.

### ***Internal Assessment Criteria and Weight***

- IAC0501 Various bread cooling equipment is identified.
- IAC0502 The role and use of various bread cooling equipment is explained.
- IAC0503 The advantages and disadvantages of various bread cooling equipment is discussed.

***(Weight 20%)***

### **6.3 Provider Programme Accreditation Criteria**

#### *Physical Requirements:*

- Normal lecture environment with adequate ventilation and lighting, multi-media facilities, posters and break away rooms for small group dynamics and formative assessments.

#### *Human Resource Requirements:*

- The Trainer: Learner ratio may not exceed 1:20.
- Facilitators must have performed at a supervisory position.
- Facilitators must have a relevant NQF 4 qualification or higher related to the subject level.

#### *Legal Requirements:*

- The provider must meet all the Occupational Health and Safety Act (OSH Legal Requirements).

### **6.4 Exemptions**

## **7. 716105-000-00-KM-07, History, background, principles and raw materials of bread and confectionery products, NQF Level 3, Credits 8**

### **7.1 Purpose of the Knowledge Modules**

The main focus of the learning in this knowledge module is to build an understanding of the history, principles, process technology and raw materials required in the production of bread and confectionery products.

The learning will enable learners to demonstrate an understanding of:

- KM-07-KT01: Bread making in a Plant Baking Processing environment. (40%)
- KM-07-KT02: History and Background of the making of bread. (20%)
- KM-07-KT03: Raw Materials the make-up of bread Dough and Proofing. (40%)

### **7.2 Guidelines for Topics**

#### **7.2.1. KM-07-KT01: Bread making in a Plant Baking Processing environment. (40%)**

***Topic elements to be covered include:***

- KT0101 Overview of Bread making process.
- KT0102 The principles of Mixing and Dough making.
- KT0103 The principles of proofing of dough.
- KT0104 The principles and elements of baking and cooling of bread.

#### ***Internal Assessment Criteria and Weight***

- IAC0101 The bread making process is described.
- IAC0102 The types of breads and rolls are described.
- IAC0103 The nature of nutrition and bread is explained.
- IAC0104 General conditions for mixing are described.
- IAC0105 The process for the make-up of dough is explained.
- IAC0106 Principles and techniques of proofing are described.
- IAC0107 Changes to the dough during baking are described.

***(Weight 40%)***

#### **7.2.2. KM-07-KT02: History and Background of the making of bread. (20%)**

***Topic elements to be covered include:***

- KT0201 History of Bread making.
- KT0202 Early Bread Manufacturing.
- KT0203 History of types of bread in South Africa and the transformation of bread from a commodity to brand.

### ***Internal Assessment Criteria and Weight***

- IAC0201 A short history of bread making particularly in South Africa is described.
- IAC0202 A short history of plant baking is described.
- IAC0203 A short overview of the de-regulation of bread and the transformation of bread from a commodity to a brand is described.

***(Weight 20%)***

### **7.2.3. KM-07-KT03: Raw Materials the make-up of bread Dough and Proofing. (40%)**

#### ***Topic elements to be covered include:***

- KT0301 Flours
- KT0302 Yeasts, Salt, Fats and oils, Preservatives.

### ***Internal Assessment Criteria and Weight***

- IAC0301 Flours and starches for the making of different classifications of bread are identified.
- IAC0302 Other additives for the making of different classifications of bread are identified.
- IAC0303 The characteristics of different types of doughs and their relationship to types of bread are explained.

***(Weight 40%)***

## **7.3 Provider Programme Accreditation Criteria**

#### ***Physical Requirements:***

- Normal lecture environment with adequate ventilation and lighting, multi-media facilities, posters and break away rooms for small group dynamics and formative assessments.

#### ***Human Resource Requirements:***

- The Trainer: Learner ratio may not exceed 1:20.
- Facilitators must have performed at a supervisory position.
- Facilitators must have a relevant NQF 4 qualification or higher related to the subject level.

#### ***Legal Requirements:***

- The provider must meet all the Occupational Health and Safety Act (OSH Legal Requirements).

## **7.4 Exemptions**

## **SECTION 3B: PRACTICAL SKILL MODULE SPECIFICATIONS**

### List of Practical Skill Module Specifications

- 716105-000-00-PM-01, Receive input materials for baking and confectionery products, NQF Level 3, Credits 8
- 716105-000-00-PM-02, Prepare input materials for further processing, NQF Level 3, Credits 12
- 716105-000-00-PM-03, Produce bread and flour confectionery products, NQF Level 3, Credits 14
- 716105-000-00-PM-04, Control product and process quality of bread and confectionery products in a large scale bakery, NQF Level 3, Credits 13

## **1. 716105-000-00-PM-01, Receive input materials for baking and confectionery products, NQF Level 3, Credits 8**

### **1.1 Purpose of the Practical Skill Modules**

The focus of the learning in this module is on providing the learner an opportunity to under controlled operational or simulated environment, receive input materials into specific identified mixing and dough making Plant Baking equipment.

The learner will be required to:

- PM-01-PS01: Read and interpret relevant production data.
- PM-01-PS02: Check input raw material according to workplace specification and procedures.
- PM-01-PS03: Communicate shift objectives, problem solving solutions, and production plans to internal suppliers, shift supervisor and other identified stakeholders.

### **1.2 Guidelines for Practical Skills**

#### **1.2.1. PM-01-PS01: Read and interpret relevant production data.**

##### ***Scope of Practical Skill***

Given materials, product and equipment under controlled or simulated operating conditions the learner must be able to:

- PA0101 Identify from production data, volumes, products, shift information, bread dough making specific raw material requirements for the shift according to production specifications.
- PA0102 Produce a work schedule from the production data for a specified mixing machine.
- PA0103 Source raw materials according to work schedule.
- PA0104 Prepare a mixer according to the specifications indicated in the work schedule.

##### ***Applied Knowledge***

- AK0101 Read and interpret written instructions.
- AK0102 Process and Material flow.
- AK0103 Concepts of Performance to a standard.
- AK0104 The Production Process.
- AK0105 Shift Production and Planning.
- AK0106 Planning and problem-solving.
- AK0107 Concepts of time management.
- AK0108 Concepts of productivity.

##### ***Internal Assessment Criteria***

- IAC0101 Relevant production data was identified.
- IAC0102 Correct raw materials were identified and picked.
- IAC0103 Production data was correctly interpreted and a work schedule produced.



- IAC0104 Correct materials were sourced according to received production data.
- IAC0105 Mixer is prepared correctly according to submitted work schedule.

### **1.2.2. PM-01-PS02: Check input raw material according to workplace specification and procedures.**

#### ***Scope of Practical Skill***

Given operating procedures, single stage stand-alone equipment and various materials and production requirements, in a controlled or simulated operating environment, the learner must be able to:

- PA0201 Evaluate material according to quality standards provided by operating procedures or work instructions.
- PA0202 Apply sensory cues to recognise deviations from specification.
- PA0203 Respond to identified variances in terms of urgency or potential impact.

#### ***Applied Knowledge***

- AK0201 Measurement and Financial Awareness.
- AK0202 The function of Manufacturing.
- AK0203 The principles of World class and Lean Manufacturing.
- AK0204 Work and Process flow.
- AK0205 Planning and problem-solving.
- AK0206 Concepts of time management.
- AK0207 Concepts of productivity.
- AK0208 Read and interpret written instructions.

#### ***Internal Assessment Criteria***

- IAC0201 Quality standards are identified according to operating procedures or work instructions received.
- IAC0202 Deviations from operating procedures or work instruction are identified, using sensory cues.
- IAC0203 Identified deviations are dealt with correctly according to operating procedures or work instruction received in a timeous manner.

### **1.2.3. PM-01-PS03: Communicate shift objectives, problem solving solutions, and production plans to internal suppliers, shift supervisor and other identified stakeholders.**

#### ***Scope of Practical Skill***

Given operating procedures, single stage stand-alone equipment and various materials and production requirements in a controlled or simulated production environment, the learner must be able to:

- PA0301 Collate data regarding the performance of biscuit Plant Baking processing equipment during shift according to work instructions or operating procedures.
- PA0302 Use documentation provided under organisational procedures to formulate a performance report.

- PA0303 Disseminate report to identified stakeholders in accordance with work instructions or operating procedures.

### ***Applied Knowledge***

- AK0301 Measurement and Financial Awareness.
- AK0302 Work and Process flow.
- AK0303 Planning and problem-solving.
- AK0304 Concepts of time management.
- AK0305 Read and interpret written instructions.

### ***Internal Assessment Criteria***

- IAC0301 Collated data regarding the performance of mixing equipment is presented.
- IAC0302 Documentation provided is used to present a performance report, according to collated data.
- IAC0303 Report is disseminated in accordance with the operating procedures or work instructions received.

## **1.3 Provider Programme Accreditation Criteria**

### ***Physical Requirements:***

- Access to a processing line in a bread and related products manufacturing plant.
- Access to categories of tools and equipment in order for learners to practice skills.

### ***Human Resource Requirements:***

- Facilitators, Assessors and Moderators with competencies related to a recognised occupational qualification Level 4 in professional baking/confectionery as well as an Education, Training and Development (ETD) qualification to facilitate, plan and conduct assessment and/or coaching competency as the minimum requirement.
- Facilitator/learner ratio 1:15
- Assessor/learner ratio 1:6

### ***Legal Requirements:***

- Compliant with Safety, Health, Environmental, Risk and Quality (SHERQ) requirements.
- Compliant with Compensation for Occupational Injuries and Diseases Act (COIDA) requirements.
- Any other statutory requirements relevant to the specific context.

## **1.4 Exemptions**

## **2. 716105-000-00-PM-02, Prepare input materials for further processing, NQF Level 3, Credits 12**

### **2.1 Purpose of the Practical Skill Modules**

The focus of the learning in this module is on providing the learner an opportunity to prepare flour and related input materials for specified products for processing.

The learner will be required to:

- PM-02-PS01: Perform routine maintenance tasks on specified mixing equipment.
- PM-02-PS02: Prevent contamination through effective cleaning and sanitising of specified mixing and dough-making equipment.
- PM-02-PS03: Mix flour and related input materials to produce dough.
- PM-02-PS04: Divide and Form dough pieces.

### **2.2 Guidelines for Practical Skills**

#### **2.2.1. PM-02-PS01: Perform routine maintenance tasks on specified mixing equipment.**

##### ***Scope of Practical Skill***

Given operating procedures, single stage stand-alone equipment and various materials and production requirements in a controlled or simulated production environment, the learner must be able to:

- PA0101 Perform routine maintenance tasks on specified mixing equipment.
- PA0102 Prevent contamination through effective cleaning and sanitising of specified mixing and dough-making equipment.
- PA0103 Mix flour and related input materials to produce dough.
- PA0104 Divide and Form dough pieces.

##### ***Applied Knowledge***

- AK0101 Planning and problem-solving.
- AK0102 Read and interpret written instructions.
- AK0103 Principles of Communication.
- AK0104 Work and Process flow.
- AK0105 Principles and objectives of World Class manufacturing.
- AK0106 Machinery and equipment maintenance.
- AK0107 Quality, Food Safety, GMP and fundamentals of Microbiology.
- AK0108 Occupational Health and Safety in the Manufacturing Environment.

##### ***Internal Assessment Criteria***

- IAC0101 Tasks are correctly identified according to given operating procedures and/or work instructions.
- IAC0102 Tools, equipment, materials and parts are correctly identified and prepared according to given operating procedures and/or work instructions.

- IAC0103 Maintenance on equipment is correctly executed according to given operating procedures and/or work instructions.
- IAC0104 Corrective action is taken and reported to identified stakeholders according to given operating procedures and/or work instructions.
- IAC0105 Deviations are identified and recorded according to given operating procedures and/or work instructions.
- IAC0106 Production documentation is used correctly according to given operating procedures and/or work instructions to report of successful completion of cleaning and sanitising.

### **2.2.2. PM-02-PS02: Prevent contamination through effective cleaning and sanitising of specified mixing and dough-making equipment.**

#### ***Scope of Practical Skill***

Given operating procedures, single stage stand-alone equipment and various materials and production requirements, in a controlled or simulated operating environment, the learner must be able to:

- PA0201 Source cleaning and sanitising material according to regulatory and/or operating procedures and codes.
- PA0202 Clean equipment and surrounding areas in accordance with operating procedures or work instructions.
- PA0203 Recognise and respond appropriately to any breach of regulatory or quality procedure.
- PA0204 Use production documentation to report on successful completion of cleaning and sanitising of equipment.

#### ***Applied Knowledge***

- AK0201 Planning and problem-solving.
- AK0202 Concept of productivity.
- AK0203 Concept of Time-management.
- AK0204 Read and interpret written instructions.
- AK0205 The Role of the Process Operator.
- AK0206 The Concept of World Class manufacturing.
- AK0207 The Regulatory Environment.
- AK0208 Plant Cleaning.

#### ***Internal Assessment Criteria***

- IAC0201 Cleaning materials are identified and sourced according to given regulatory and/or operating procedures.
- IAC0202 Equipment and work area is cleaned according to given operating procedures and/or work instructions.
- IAC0203 Breach in regulatory and quality procedures are recognised and responded to according to given operating procedures and/or work instructions.

- IAC0204 Production documentation is used correctly according to given operating procedures and/or work instructions to report of successful completion of cleaning and sanitising.

### **2.2.3. PM-02-PS03: Mix flour and related input materials to produce dough.**

#### ***Scope of Practical Skill***

Given operating procedures, single stage stand-alone equipment and various materials and production requirements in a controlled or simulated production environment, the learner must be able to:

- PA0301 Specified Mixing equipment is inspected according to standard operating procedures.
- PA0302 Raw materials are checked and introduced into the mixing equipment.
- PA0303 Specified Mixing equipment is operate to produce dough according to standard operating procedures.
- PA0304 Deviations are identified, recorded and proactive action is taken as per standard operating procedures.

#### ***Applied Knowledge***

- AK0301 Planning and problem-solving.
- AK0302 Read and interpret written instructions.
- AK0303 Principles of Communication.
- AK0304 Work and Process flow.
- AK0305 Principles and objectives of World Class manufacturing.
- AK0306 Machinery and equipment maintenance.
- AK0307 Quality, Food Safety, GMP and fundamentals of Microbiology.
- AK0308 Occupational Health and Safety in the Manufacturing Environment.

#### ***Internal Assessment Criteria***

- IAC0301 Tasks are correctly identified according to given operating procedures and/or work instructions.
- IAC0302 Tools, equipment, materials and parts are correctly identified and prepared according to given operating procedures and/or work instructions.
- IAC0303 Maintenance on equipment is correctly executed according to given operating procedures and/or work instruction.
- IAC0304 Corrective action is taken and reported to identified stakeholders according to given operating procedures and/or work instructions.
- IAC0305 Deviations is identified and recorded according to given operating procedures and/or work instructions.
- IAC0306 Maintenance of equipment report is completed according to given operating procedures and/or work instructions.

#### **2.2.4. PM-02-PS04: Divide and Form dough pieces.**

##### ***Scope of Practical Skill***

Given operating procedures, single stage stand-alone equipment and various materials and production requirements in a controlled or simulated production environment, the learner must be able to:

- PA0401 Specified dividing equipment is inspected according to standard operating procedures.
- PA0402 Specified dividing equipment is operated according to standard operating procedures.
- PA0403 Deviations are identified, recorded and proactive action is taken as per standard operating procedures.

##### ***Applied Knowledge***

- AK0401 Planning and problem-solving.
- AK0402 Read and interpret written instructions.
- AK0403 Principles of Communication.
- AK0404 Work and Process flow.
- AK0405 Principles and objectives of World Class manufacturing.
- AK0406 Machinery and equipment maintenance.
- AK0407 Quality, Food Safety, GMP and fundamentals of Microbiology.
- AK0408 Occupational Health and Safety in the Manufacturing Environment.

##### ***Internal Assessment Criteria***

- IAC0401 Tasks are correctly identified according to given operating procedures and/or work instructions.
- IAC0402 Tools, equipment, materials and parts are correctly identified and prepared according to given operating procedures and/or work instructions.
- IAC0403 Maintenance on equipment is correctly executed according to given operating procedures and/or work instructions.
- IAC0404 Corrective action is taken and reported to identified stakeholders according to given operating procedures and/or work instructions.
- IAC0405 Deviations are identified and recorded according to given operating procedures and/or work instructions.
- IAC0406 Maintenance of equipment report is completed according to given operating procedures and/or work instructions.

## **2.3 Provider Programme Accreditation Criteria**

### *Physical Requirements:*

- Access to a processing line in a bread and related products manufacturing plant.
- Access to categories of tools and equipment in order for learners to practice skills.

### *Human Resource Requirements:*

- Facilitators, Assessors and Moderators with competencies related to a recognised occupational qualification Level 4 in professional baking/confectionery as well as an Education, Training and Development (ETD) qualification to facilitate, plan and conduct assessment and/or coaching competency as the minimum requirement.
- Facilitator/learner ratio 1:15
- Assessor/learner ratio 1:6

### *Legal Requirements:*

- Compliant with Safety, Health, Environmental, Risk and Quality (SHERQ) requirements.
- Compliant with Compensation for Occupational Injuries and Diseases Act (COIDA) requirements.
- Any other statutory requirements relevant to the specific context.

## **2.4 Exemptions**

### **3. 716105-000-00-PM-03, Produce bread and flour confectionery products, NQF Level 3, Credits 14**

#### **3.1 Purpose of the Practical Skill Modules**

The focus of the learning in this module is on providing the learner an opportunity to operate specified bread product production equipment.

The learner will be required to:

- PM-03-PS01: Start-up, operate and shutdown proving equipment.
- PM-03-PS02: Start-up, operate and shutdown plant ovens.
- PM-03-PS03: Monitor bread characteristics before, during and after proving and baking and perform corrective actions if deviations are identified.
- PM-03-PS04: Cool bread and transfer to packaging operations.

#### **3.2 Guidelines for Practical Skills**

##### **3.2.1. PM-03-PS01: Start-up, operate and shutdown proving equipment.**

###### ***Scope of Practical Skill***

Given operating procedures, single stage stand-alone equipment and various materials and production requirements, in a controlled or simulated production environment, the learner must be able to:

- PA0101 Complete all running checks and identify all faults.
- PA0102 Adjust settings for a range of specifications.
- PA0103 Change setting in response to instrument readings and a range of operating variations.
- PA0104 Execute emergency stop and shutdown procedures according to given operating procedures.
- PA0105 Recognise and respond timeously and appropriately to a set of equipment and production problems and/or deviations.

###### ***Applied Knowledge***

- AK0101 Planning and problem-solving.
- AK0102 Read and interpret written instructions.
- AK0103 Principles of Communication.
- AK0104 Work and Process flow.
- AK0105 Principles and objectives of World Class manufacturing.
- AK0106 Machinery and equipment maintenance.
- AK0107 Quality, Food Safety, GMP and fundamentals of Microbiology.
- AK0108 Occupational Health and Safety in the Manufacturing Environment.

###### ***Internal Assessment Criteria***

- IAC0101 Running checks are completed according to given operating procedures and/or work instructions.



- IAC0102 Faults are identified during the running of equipment.
- IAC0103 Settings are changed in response to instruments readings under a range of operating variations.
- IAC0104 Setting are adjusted for a range of specifications according to data provided.
- IAC0105 Emergency stop and shutdown is executed according to given operating procedures and/or work instructions.
- IAC0106 Given a range of equipment productions and/or deviations, the problem is recognised and responded to timeously and in accordance to given operating procedures and/or work instructions.

### **3.2.2. PM-03-PS02: Start-up, operate and shutdown plant ovens.**

#### ***Scope of Practical Skill***

Given operating procedures, single stage stand-alone equipment and various materials and production requirements, in a controlled or simulated production environment, the learner must be able to:

- PA0201 Complete all running checks and identify all faults.
- PA0202 Adjust settings for a range of specifications.
- PA0203 Change setting in response to instrument readings and a range of operating variations.
- PA0204 Execute emergency stop and shutdown procedures according to given operating procedures.
- PA0205 Recognise and respond timeously and appropriately to a set of equipment and production problems and/or deviations.

#### ***Applied Knowledge***

- AK0201 Planning and problem-solving.
- AK0202 Read and interpret written instructions.
- AK0203 Principles of Communication.
- AK0204 Work and Process flow.
- AK0205 Principles and objectives of World Class manufacturing.
- AK0206 Machinery and equipment maintenance.
- AK0207 Quality, Food Safety, GMP and fundamentals of Microbiology.
- AK0208 Occupational Health and Safety in the Manufacturing Environment.

#### ***Internal Assessment Criteria***

- IAC0201 Running checks are completed according to given operating procedures and/or work instructions.
- IAC0202 Faults are identified during the running of equipment.
- IAC0203 Settings are changed in response to instruments readings under a range of operating variations.
- IAC0204 Setting are adjusted for a range of specifications according to data provided.

- IAC0205 Emergency stop and shutdown is executed according to given operating procedures and/or work instructions.
- IAC0206 Given a range of equipment productions and/or deviations, the problem is recognised and responded to timeously and in accordance to given operating procedures and/or work instructions.

### **3.2.3. PM-03-PS03: Monitor bread characteristics before, during and after proving and baking and perform corrective actions if deviations are identified.**

#### ***Scope of Practical Skill***

Given operating procedures, single stage stand-alone equipment and various materials and production requirements, in a controlled or simulated production environment, the learner must be able to:

- PA0301 Monitor and record bread characteristics before, during and after proofing and baking.
- PA0302 Check quality in accordance with operating procedures or work instructions.
- PA0303 Identify and record deviations in accordance with operating procedures or work instructions.
- PA0304 Use a set of problem-solving techniques to respond to recorded deviations.
- PA0305 Take corrective action where appropriate, or report to identified stakeholders.

#### ***Applied Knowledge***

- AK0301 Planning and problem-solving.
- AK0302 Read and interpret written instructions.
- AK0303 Principles of Communication.
- AK0304 Work and Process flow.
- AK0305 Principles and objectives of World Class manufacturing.
- AK0306 Machinery and equipment maintenance.
- AK0307 Quality, Food Safety, GMP and fundamentals of Microbiology.
- AK0308 Occupational Health and Safety in the Manufacturing Environment.

#### ***Internal Assessment Criteria***

- IAC0301 Measurement and performance of equipment is correctly recorded on specified equipment according to given operating procedures and/or work instructions.
- IAC0302 Quality is checked and recorded according to given operating procedures and/or work instructions.
- IAC0303 Deviations are identified and recorded according to given operating procedures and/or work instructions.
- IAC0304 Explanation is given of the problem-solving technique used for identifying deviations.
- IAC0305 Corrective action is taken and/or reported in accordance with given operating procedures and/or work instructions.

### **3.2.4. PM-03-PS04: Cool bread and transfer to packaging operations.**

#### ***Scope of Practical Skill***

Given operating procedures, single stage stand-alone equipment and various materials and production requirements, in a controlled or simulated production environment, the learner must be able to:

- PA0401 Use production data to manage cooling and transfer of bread process.
- PA0402 Execute cooling and transfer process in accordance with operating procedure or work instruction.
- PA0403 Identify and record deviations, if any, in accordance with operating procedures or work instructions.
- PA0404 Take corrective action, where appropriate, or report to identified stakeholders.
- PA0405 Use production documentation to report successful transfer of finished product to packaging operations in accordance with operation procedures or work instructions.

#### ***Applied Knowledge***

- AK0401 Planning and problem-solving.
- AK0402 Read and interpret written instructions.
- AK0403 Principles of Communication.
- AK0404 Work and Process flow.
- AK0405 Principles and objectives of World Class manufacturing.
- AK0406 Machinery and equipment maintenance.
- AK0407 Quality, Food Safety, GMP and fundamentals of Microbiology.
- AK0408 Occupational Health and Safety in the Manufacturing Environment.

#### ***Internal Assessment Criteria***

- IAC0401 Given production data, the changeover required is correctly identified.
- IAC0402 Tools, equipment, materials and parts are correctly identified and prepared according to given operating procedures and/or work instructions.
- IAC0403 Changeover on equipment is correctly executed according to given operating procedures and/or work instruction.
- IAC0404 Corrective action is taken and reported to identified stakeholders according to given operating procedures and/or work instructions.
- IAC0405 Deviations is identified and recorded according to given operating procedures and/or work instructions.
- IAC0406 Maintenance of equipment report is completed according to given operating procedures and/or work instructions.

### **3.3 Provider Programme Accreditation Criteria**

#### *Physical Requirements:*

- Access to a processing line in a bread and related products manufacturing plant.
- Access to categories of tools and equipment in order for learners to practice skills.

#### *Human Resource Requirements:*

- Facilitators, Assessors and Moderators with competencies related to a recognised occupational qualification Level 4 in professional baking/confectionery as well as an Education, Training and Development (ETD) qualification to facilitate, plan and conduct assessment and/or coaching competency as the minimum requirement.
- Facilitator/learner ratio 1:15
- Assessor/learner ratio 1:6

#### *Legal Requirements:*

- Compliant with Safety, Health, Environmental, Risk and Quality (SHERQ) requirements.
- Compliant with Compensation for Occupational Injuries and Diseases Act (COIDA) requirements.
- Any other statutory requirements relevant to the specific context.

### **3.4 Exemptions**

## **4. 716105-000-00-PM-04, Control product and process quality of bread and confectionery products in a large-scale bakery, NQF Level 3, Credits 13**

### **4.1 Purpose of the Practical Skill Modules**

The focus of the learning in this module is on providing the learner an opportunity to control the output of specified plant baking equipment.

The learner will be required to:

- PM-04-PS01: Achieve consistent flow of material.
- PM-04-PS02: Record data and maintain production records.
- PM-04-PS03: Recognise and report out of specification material, product and/or equipment.
- PM-04-PS04: Communicate with internal customers, supervisor or process controller and other identified stakeholders.

### **4.2 Guidelines for Practical Skills**

#### **4.2.1. PM-04-PS01: Achieve consistent flow of material.**

##### ***Scope of Practical Skill***

Given production targets in a controlled operational environment for single stage stand-alone plant baking equipment and various materials and production requirements the learner must be able to:

- PA0101 Monitor flow and availability of material.
- PA0102 Address variations in availability to maintain consistent flow.
- PA0103 Identify and record deviations, if any, in accordance with operating procedures and work instructions.
- PA0104 Take corrective action where appropriate or report to identified stakeholders.
- PA0105 Adjust equipment in response to production targets.
- PA0106 Recognise the impact on changes made on upstream and downstream operational standards.

##### ***Applied Knowledge***

- AK0101 Planning and problem-solving.
- AK0102 Read and interpret written instructions.
- AK0103 Principles of Communication.
- AK0104 Work and Process flow.
- AK0105 Principles and objectives of World Class manufacturing.
- AK0106 Machinery and equipment maintenance.
- AK0107 Occupational Health and Safety in the Manufacturing Environment.

### ***Internal Assessment Criteria***

- IAC0101 Given a production plan, correct and consistent flow is achieved.
- IAC0102 Variations and deviations are identified and addressed correctly according to given operating procedures and/or work instructions.
- IAC0103 Variations and deviations are recorded according to given operating procedures and/or work instructions.
- IAC0104 Equipment is adjusted correctly according to given production data.
- IAC0105 The impact of changes made on upstream and downstream operational standards are explained.

### **4.2.2. PM-04-PS02: Record data and maintain production records.**

#### ***Scope of Practical Skill***

Given that equipment is monitored, that production data is obtained under work instructions in a controlled or simulated operational environment the learner must be able to:

- PA0201 Interpret, summarise and report on performance on specified Plant Baking equipment.
- PA0202 Analyse data and make calculations to report on the performance of specified Plant Baking equipment.
- PA0203 Use production documentation to report production outputs against production targets and any recorded deviations or changes.

#### ***Applied Knowledge***

- AK0201 Planning and problem-solving.
- AK0202 Read and interpret written instructions.
- AK0203 Principles of Communication.
- AK0204 Work and Process flow.
- AK0205 Principles and objectives of World Class manufacturing.
- AK0206 Machinery and equipment maintenance.
- AK0207 Quality, Food Safety, GMP and fundamentals of Microbiology.
- AK0208 Occupational Health and Safety in the Manufacturing Environment.

### ***Internal Assessment Criteria***

- IAC0201 A correctly interpreted and summarised report if delivered on specified equipment.
- IAC0202 Data is analysed and calculations correctly made during reporting of performance on specified equipment.
- IAC0203 Given production documentation is used to report on deviations and/or changes of production outputs achieved against production targets.

#### **4.2.3. PM-04-PS03: Recognise and report out of specification material, product and/or equipment.**

##### ***Scope of Practical Skill***

Given production targets in a controlled or simulated operational environment for single stage stand-alone plant baking equipment and various materials and production requirements, the learner must be able to:

- PA0301 Identify and record deviations if any according to operation procedures or working instructions.
- PA0302 Take corrective action, where appropriate, or report to identified stakeholders.
- PA0303 Use production documentation to report identified deviations and/or changes.

##### ***Applied Knowledge***

- AK0301 Planning and problem-solving.
- AK0302 Read and interpret written instructions.
- AK0303 Principles of Communication.
- AK0304 Work and Process flow.
- AK0305 Principles and objectives of World Class manufacturing.
- AK0306 Machinery and equipment maintenance.
- AK0307 Quality, Food Safety, GMP and fundamentals of Microbiology.
- AK0308 Occupational Health and Safety in the Manufacturing Environment.

##### ***Internal Assessment Criteria***

- IAC0301 Deviations correctly identified and recorded according to given operational procedures and/or work instructions.
- IAC0302 Corrective action is taken if appropriate and reported according to given operational procedures and/or work instructions.
- IAC0303 Correct documentation is used to report identified deviations and/or changes according to given operational procedures and/or work instructions.

#### **4.2.4. PM-04-PS04: Communicate with internal customers, supervisor or process controller and other identified stakeholders.**

##### ***Scope of Practical Skill***

Given materials, product and equipment in a controlled or simulated operating environment the learner must be able to:

- PA0401 Collate data regarding performance of equipment during shift or operation according to work instruction or operating procedures.
- PA0402 Using documentation provided under organisational procedures formulate a report.
- PA0403 Disseminate report to identified stakeholders in accordance with operational procedures or work instructions.

### ***Applied Knowledge***

- AK0401 Measurement and Financial Awareness.
- AK0402 Work and Process flow.
- AK0403 Planning and problem-solving.
- AK0404 Concepts of time management.
- AK0405 Read and interpret written instructions.

### ***Internal Assessment Criteria***

- IAC0401 Collated data regarding the performance of equipment is presented.
- IAC0402 Documentation provided is used to present a performance report, according to collated data.
- IAC0403 Report is disseminated in accordance with the operating procedures or work instructions received.

## **4.3 Provider Programme Accreditation Criteria**

### ***Physical Requirements:***

- Access to a processing line in a bread and related products manufacturing plant.
- Access to categories of tools and equipment in order for learners to practice skills.

### ***Human Resource Requirements:***

- Facilitators, Assessors and Moderators with competencies related to a recognised occupational qualification Level 4 in professional baking/confectionery as well as an Education, Training and Development (ETD) qualification to facilitate, plan and conduct assessment and/or coaching competency as the minimum requirement.
- Facilitator/learner ratio 1:15
- Assessor/learner ratio 1:6

### ***Legal Requirements:***

- Compliant with Safety, Health, Environmental, Risk and Quality (SHERQ) requirements.
- Compliant with Compensation for Occupational Injuries and Diseases Act (COIDA) requirements.
- Any other statutory requirements relevant to the specific context.

## **4.4 Exemptions**



## SECTION 3C: WORK EXPERIENCE MODULE SPECIFICATIONS

### List of Work Experience Module Specifications

- 716105-000-00-WM-01, Processes and procedures to receive baking and confectionery input materials, NQF Level 3, Credits 8
- 716105-000-00-WM-02, Processes and procedures to prepare raw materials for further processing, NQF Level 3, Credits 10
- 716105-000-00-WM-03, Processes and procedures to manufacture bread and confectionery products, NQF Level 3, Credits 10
- 716105-000-00-WM-04, Processes and procedures to control the operation of baking and confectionery processing equipment, NQF Level 3, Credits 10

## **1. 716105-000-00-WM-01, Processes and procedures to receive baking and confectionery input materials, NQF Level 3, Credits 8**

### **1.1 Purpose of the Work Experience Modules**

The focus of the work experience is on providing the learner an opportunity to: gain experience in receiving input material while operating plant baking equipment as part of a processing team at a particular stage in the production line so that the learner obtains practice in responding to common deviations in material production demands and product specifications.

The learner will be required to:

- WM-01-WE01: Source and receive raw materials for specified mixing equipment.
- WM-01-WE02: Observe and assist the interaction with internal suppliers such as store, inventory managers, clerks, production supervisors, production planners, etc.
- WM-01-WE03: Analyse production plans indicating volumes, products, shift information, packaging material requirements, etc.

### **1.2 Guidelines for Work Experiences**

#### **1.2.1. WM-01-WE01: Source and receive raw materials for specified mixing equipment.**

##### ***Scope of Work Experience***

The person will be expected to engage in the following work activities:

- WA0101 Complete documentation with regards to drawing raw materials from the store.
- WA0102 Draw raw materials from the store.
- WA0103 Handle raw materials prior to start-up of mixing equipment.

##### ***Supporting Evidence***

- SE0101 Records signed off and authenticated by coach/SME that learner has achieved expected workplace standard.
- SE0102 Production records to highlight learner's performance on specific equipment on specific shifts.
- SE0103 Third party witness statements related to the execution of specific activities such as reports from internal stakeholders.

#### **1.2.2. WM-01-WE02: Observe and assist the interaction with internal suppliers such as store, inventory managers, clerks, production supervisors, production planners, etc.**

##### ***Scope of Work Experience***

The person will be expected to engage in the following work activities:

- WA0201 Apply workplace related policies and procedures with respect to the interaction with internal suppliers.
- WA0202 Receive and execute work instructions.
- WA0203 Actively participate in start of shift meetings.

### ***Supporting Evidence***

- SE0201 Records signed off and authenticated by coach/SME that learner has achieved expected workplace standard.
- SE0202 Production records to highlight learner's performance on specific equipment on specific shifts.
- SE0203 Third party witness statements related to the execution of specific activities such as reports from internal stakeholders.

### **1.2.3. WM-01-WE03: Analyse production plans indicating volumes, products, shift information, packaging material requirements, etc.**

#### ***Scope of Work Experience***

The person will be expected to engage in the following work activities:

- WA0301 Analyse information from reports.
- WA0302 Complete all documentation required in connection with the receipt of materials.

### ***Supporting Evidence***

- SE0301 Records signed off and authenticated by coach/SME that learner has achieved expected workplace standard.
- SE0302 Production records to highlight learner's performance on specific mixing equipment on specific shifts.
- SE0303 Third party witness statements related to the execution of specific activities such as reports from internal stakeholders.

## **1.3 Contextualised Workplace Knowledge**

1 Material and product knowledge.

2 Standard operating procedures and work instructions.

3 Safety policies and practices.

4 HACCP and GMP principles and practice.

## **1.4 Criteria for Workplace Approval**

### *Physical Requirements:*

- Processing line in a bread and related products manufacturing plant.

### *Human Resource Requirements:*

- It is accepted that learners will perform specific activities under the guidance and with support of a person experienced in the operation of plant baking equipment.

### *Legal Requirements:*

- A workplace that adheres to legal requirements. The following Acts and/or codes, current and future regulations will be applicable. Foodstuffs, Cosmetics and Disinfectants Act No. 54 of 1972; The Health Act No. 63 of 1977; Occupational Health and Safety Act No. 85 of 1993; SABS Food Hygiene Management Code 49 of 1989. (Refer to GMP; Monitoring CCPS; HACCP practices against food product contamination and personal hygiene.)

## **1.5 Additional Assignments to be Assessed Externally**

## **2. 716105-000-00-WM-02, Processes and procedures to prepare raw materials for further processing, NQF Level 3, Credits 10**

### **2.1 Purpose of the Work Experience Modules**

The focus of the work experience is on providing the learner an opportunity to: execute specific operating procedures that are required on specific baking plant equipment before start-up.

The learner will be required to:

- WM-02-WE01: Mix raw materials to produce dough.
- WM-02-WE02: Form dough pieces.
- WM-02-WE03: Perform routine maintenance on specified Plant Baking equipment.
- WM-02-WE04: Perform minor adjustments and change-overs on specified Plant Baking equipment.
- WM-02-WE05: Clean and sanitise specified Plant Baking equipment.

### **2.2 Guidelines for Work Experiences**

#### **2.2.1. WM-02-WE01: Mix raw materials to produce dough.**

##### ***Scope of Work Experience***

The person will be expected to engage in the following work activities:

- WA0101 Check raw materials.
- WA0102 Complete all checklists with regards to quality prior to start-up of specified mixing equipment.
- WA0103 Operate specified mixing equipment.
- WA0104 Complete all operations with regards to shutdown of specified mixing equipment.

##### ***Supporting Evidence***

- SE0101 Production schedule; Shift report; etc.

#### **2.2.2. WM-02-WE02: Form dough pieces.**

##### ***Scope of Work Experience***

The person will be expected to engage in the following work activities:

- WA0201 Quality checks completed on dough according to standard operating procedures.
- WA0202 Specified dough making and proving equipment is inspected according to standard operating procedures.
- WA0203 Operate specified dough making equipment.
- WA0204 Complete all operations with regards to shutdown of specified dough making and proving equipment.

##### ***Supporting Evidence***

- SE0201 Production schedules and inspection reports
- SE0202 Coach/Supervisor evaluation.

### **2.2.3. WM-02-WE03: Perform routine maintenance on specified Plant Baking equipment.**

#### ***Scope of Work Experience***

The person will be expected to engage in the following work activities:

- WA0301 Lubricants are applied to specific Plant Baking equipment as required.
- WA0302 FLM is conducted according to work instruction and maintenance schedule.
- WA0303 Inspect equipment to identify faults or possible maintenance requirements.
- WA0304 Maintenance issues are solved or reported to the engineering department as per work instructions.

#### ***Supporting Evidence***

- SE0301 Maintenance Schedule.
- SE0302 Start-up procedures.

### **2.2.4. WM-02-WE04: Perform minor adjustments and change-overs on specified Plant Baking equipment.**

#### ***Scope of Work Experience***

The person will be expected to engage in the following work activities:

- WA0401 Read production schedule and identify product changes.
- WA0402 Prepare materials tools and equipment to perform minor adjustments and change overs.
- WA0403 Perform changeovers according to work instructions.
- WA0404 Evaluate changeover has been completed.
- WA0405 Record documentation indicating changeover completed according to work instructions.

#### ***Supporting Evidence***

- SE0401 Production schedule; Shift report; etc.
- SE0402 Learner Logbook.

### **2.2.5. WM-02-WE05: Clean and sanitise specified Plant Baking equipment.**

#### ***Scope of Work Experience***

The person will be expected to engage in the following work activities:

- WA0501 Cleaning and sanitising agents are received according to standard operating procedures.
- WA0502 Clean and sanitise materials according to standard operating procedures.
- WA0503 Any problems arising during cleaning and sanitising are solved or reported.
- WA0504 Specified baking plant equipment is inspected to ensure all parts have been cleaned according to standard operating procedures.
- WA0505 Cleaning equipment is stored in designated areas.

- WA0506 Waste from the cleaning process is disposed of according to work instructions or standard operating procedures.

### ***Supporting Evidence***

- SE0501 Cleaning schedules and inspection reports.
- SE0502 Coach/Supervisor evaluation.

## **2.3 Contextualised Workplace Knowledge**

- 1 Material and product knowledge.
- 2 Standard operating procedures and work instructions.
- 3 Safety policies and practices.
- 4 HACCP and GMP principles and practice.

## **2.4 Criteria for Workplace Approval**

### *Physical Requirements:*

- Processing line in a bread and related products manufacturing plant.

### *Human Resource Requirements:*

- It is accepted that learners will perform specific activities under the guidance and with support of a person experienced in the operation of plant baking equipment.

### *Legal Requirements:*

- A workplace that adheres to legal requirements. The following Acts and/or codes, current and future regulations will be applicable. Foodstuffs, Cosmetics and Disinfectants Act No. 54 of 1972; The Health Act No. 63 of 1977; Occupational Health and Safety Act No. 85 of 1993; SABS Food Hygiene Management Code 49 of 1989. (Refer to GMP; Monitoring CCPS; HACCP practices against food product contamination and personal hygiene.)

## **2.5 Additional Assignments to be Assessed Externally**

### **3. 716105-000-00-WM-03, Processes and procedures to manufacture bread and confectionery products, NQF Level 3, Credits 10**

#### **3.1 Purpose of the Work Experience Modules**

The focus of the work experience is on providing the learner an opportunity to: start-up, operate and shutdown specific equipment in a baking plant line under normal operational conditions.

The learner will be required to:

- WM-03-WE01: Start-up, operate and shutdown specified plant ovens.
- WM-03-WE02: Execute specific sensory cues and sampling techniques.
- WM-03-WE03: Participate in shift meetings.
- WM-03-WE04: Maintain statistical process control measures according to standard operating procedures.
- WM-03-WE05: Conduct and record problem solving and diagnostic activities on specific plant baking equipment.

#### **3.2 Guidelines for Work Experiences**

##### **3.2.1. WM-03-WE01: Start-up, operate and shutdown specified plant ovens.**

###### ***Scope of Work Experience***

The person will be expected to engage in the following work activities:

- WA0101 Equipment is operated as per standard operating procedure.
- WA0102 Production inputs and outputs are recorded as per standard operating procedures.
- WA0103 Operating deviations are identified, recorded and corrective actions are taken as per standard operating procedure.
- WA0104 Health, Safety and Environmental standards are adhered to as per legislation.

###### ***Supporting Evidence***

- SE0101 Production Plan.
- SE0102 Shift Reports.
- SE0103 Authenticated Logbook.

##### **3.2.2. WM-03-WE02: Execute specific sensory cues and sampling techniques.**

###### ***Scope of Work Experience***

The person will be expected to engage in the following work activities:

- WA0201 Complete all checklist with regards to Quality control of material, product and equipment during operation of specified equipment.
- WA0202 Complete all quality evaluations and sampling techniques on products as per organisational requirements or operating procedures.
- WA0203 Complete all documentation relating to reporting quality control evaluations.



***Supporting Evidence***

- SE0201 Quality control documentation.
- SE0202 Shift Reports.
- SE0203 Authenticated Logbook.

**3.2.3. WM-03-WE03: Participate in shift meetings.*****Scope of Work Experience***

The person will be expected to engage in the following work activities:

- WA0301 Prepare for shift meeting.
- WA0302 Contribute to meeting discussions regarding quality of product and performance of specified equipment.

***Supporting Evidence***

- SE0301 Shift Reports.
- SE0302 Authenticated Logbook.

**3.2.4. WM-03-WE04: Maintain statistical process control measures according to standard operating procedures.*****Scope of Work Experience***

The person will be expected to engage in the following work activities:

- WA0401 Complete all statistical requirements on specified equipment as per organisational requirements.
- WA0402 Calculate actual performance to specification on key parameters according to organisational requirements (Key parameters such as machine efficiencies, quality and waste).
- WA0403 Calculate machine efficiency per shift according to organisational requirement.

***Supporting Evidence***

- SE0401 Production Plan.
- SE0402 Shift Reports.
- SE0403 Authenticated Logbook.

### **3.2.5. WM-03-WE05: Conduct and record problem solving and diagnostic activities on specific plant baking equipment.**

#### ***Scope of Work Experience***

The person will be expected to engage in the following work activities:

- WA0501 Conduct problem-solving and diagnostic activities, according to organisational operating procedures.
- WA0502 Record problem-solving and diagnostic activities on specified equipment as per organisational operating procedures.

#### ***Supporting Evidence***

- SE0501 Shift Reports
- SE0502 Authenticated Logbook.

### **3.3 Contextualised Workplace Knowledge**

- 1 Material and product knowledge.
- 2 Standard operating procedures and work instructions.
- 3 Safety policies and practices.
- 4 HACCP and GMP principles and practice.
- 5 Organisational Quality Standards.

### **3.4 Criteria for Workplace Approval**

#### ***Physical Requirements:***

- Processing line in a bread and related products manufacturing plant.

#### ***Human Resource Requirements:***

- It is accepted that learners will perform specific activities under the guidance and with support of a person experienced in the operation of plant baking equipment.

#### ***Legal Requirements:***

- A workplace that adheres to legal requirements. The following Acts and/or codes, current and future regulations will be applicable. Foodstuffs, Cosmetics and Disinfectants Act No. 54 of 1972; The Health Act No. 63 of 1977; Occupational Health and Safety Act No. 85 of 1993; SABS Food Hygiene Management Code 49 of 1989. (Refer to GMP; Monitoring CCPS; HACCP practices against food product contamination and personal hygiene.)

### **3.5 Additional Assignments to be Assessed Externally**

## **4. 716105-000-00-WM-04, Processes and procedures to control the operation of baking and confectionery processing equipment, NQF Level 3, Credits 10**

### **4.1 Purpose of the Work Experience Modules**

The focus of the work experience is on providing the learner an opportunity to: control the operation of Plant Baking equipment as part of a team at a particular stage in a baking line so that the learner practices responding to deviations in material, quality, production demands and product specifications.

The learner will be required to:

- WM-04-WE01: Input data into process control system.
- WM-04-WE02: Quality testing and evaluation processes.
- WM-04-WE03: Record deviations from performance standards.

### **4.2 Guidelines for Work Experiences**

#### **4.2.1. WM-04-WE01: Input data into process control system.**

##### ***Scope of Work Experience***

The person will be expected to engage in the following work activities:

- WA0101 Complete all documentation regarding end of shift administration according to organisational requirements.
- WA0102 Provide feedback to relevant management with regards to performance of equipment according to organisational requirements.
- WA0103 Update control charts as determined by organisational requirements.

##### ***Supporting Evidence***

- SE0101 Shift Reports.
- SE0102 Visible control charts.

#### **4.2.2. WM-04-WE02: Quality testing and evaluation processes.**

##### ***Scope of Work Experience***

The person will be expected to engage in the following work activities:

- WA0201 Respond according to organisational requirements to any product quality non-conformance.
- WA0202 Respond according to organisational requirements to any process quality non-conformances.
- WA0203 Report to management where required according to organisational requirements.
- WA0204 Execute fault finding problem solving techniques according to organisational requirements.

##### ***Supporting Evidence***

- SE0201 Quality control documentation.
- SE0202 Minutes of shift meetings.
- SE0203 Shift Reports.

#### **4.2.3. WM-04-WE03: Record deviations from performance standards.**

##### ***Scope of Work Experience***

The person will be expected to engage in the following work activities:

- WA0301 Operating deviations are identified, recorded and corrective action is taken as per organisational requirements (Deviations regarding product quality, process quality and equipment performance may be recorded).
- WA0302 Other operating deviations as determined by organisational requirements may be recorded.
- WA0303 Reports and feedback provided as per organisational requirements.

##### ***Supporting Evidence***

- SE0301 Minutes of shift meetings.
- SE0302 Shift Reports.

#### **4.3 Contextualised Workplace Knowledge**

- 1 Material and product knowledge.
- 2 Standard operating procedures and work instructions.
- 3 Safety policies and practices.
- 4 HACCP and GMP principles and practice.

#### **4.4 Criteria for Workplace Approval**

##### ***Physical Requirements:***

- Processing line in a bread and related products manufacturing plant.

##### ***Human Resource Requirements:***

- It is accepted that learners will perform specific activities under the guidance and with support of a person experienced in the operation of plant baking equipment.

##### ***Legal Requirements:***

- A workplace that adheres to legal requirements. The following Acts and/or codes, current and future regulations will be applicable. Foodstuffs, Cosmetics and Disinfectants Act No. 54 of 1972; The Health Act No. 63 of 1977; Occupational Health and Safety Act No. 85 of 1993; SABS Food Hygiene Management Code 49 of 1989. (Refer to GMP; Monitoring CCPS; HACCP practices against food product contamination and personal hygiene.)

#### **4.5 Additional Assignments to be Assessed Externally**

#### SECTION 4: STATEMENT OF WORK EXPERIENCE

<b>Curriculum Number:</b>	716105-000-00-00
<b>Curriculum Title:</b>	Intermediate Occupational Certificate: Baking and Confectionery Operator

<b>Learner Details</b>	
<b>Name:</b>	
<b>ID Number:</b>	

<b>Employer Details</b>	
<b>Company Name:</b>	
<b>Address:</b>	
<b>Supervisor Name:</b>	
<b>Work Telephone:</b>	
<b>E-Mail:</b>	

**716105-000-00-WM-01, Processes and procedures to receive baking and confectionery input materials, NQF Level 3, Credits 8**

WM-01-WE01	Source and receive raw materials for specified mixing equipment.		
	<b>Scope Work Experience</b>	Date	Signature
WA0101	Complete documentation with regards to drawing raw materials from the store.		
WA0102	Draw raw materials from the store.		
WA0103	Handle raw materials prior to start-up of mixing equipment.		
	<b>Supporting Evidence</b>	Date	Signature
SE0101	Records signed off and authenticated by coach/SME that learner has achieved expected workplace standard.		
SE0102	Production records to highlight learner's performance on specific equipment on specific shifts.		
SE0103	Third party witness statements related to the execution of specific activities such as reports from internal stakeholders.		
WM-01-WE02	Observe and assist the interaction with internal suppliers such as store, inventory managers, clerks, production supervisors, production planners, etc.		
	<b>Scope Work Experience</b>	Date	Signature
WA0201	Apply workplace related policies and procedures with respect to the interaction with internal suppliers.		
WA0202	Receive and execute work instructions.		
WA0203	Actively participate in start of shift meetings.		
	<b>Supporting Evidence</b>	Date	Signature
SE0201	Records signed off and authenticated by coach/SME that learner has achieved expected workplace standard.		
SE0202	Production records to highlight learner's performance on specific equipment on specific shifts.		

SE0203	Third party witness statements related to the execution of specific activities such as reports from internal stakeholders.		
WM-01-WE03	Analyse production plans indicating volumes, products, shift information, packaging material requirements, etc.		
	<b>Scope Work Experience</b>	Date	Signature
WA0301	Analyse information from reports.		
WA0302	Complete all documentation required in connection with the receipt of materials.		
	<b>Supporting Evidence</b>	Date	Signature
SE0301	Records signed off and authenticated by coach/SME that learner has achieved expected workplace standard.		
SE0302	Production records to highlight learner's performance on specific mixing equipment on specific shifts.		
SE0303	Third party witness statements related to the execution of specific activities such as reports from internal stakeholders.		

	<b>Contextualised Workplace Knowledge</b>	Date	Signature
1	Material and product knowledge.		
2	Standard operating procedures and work instructions.		
3	Safety policies and practices.		
4	HACCP and GMP principles and practice.		

	<b>Additional Assignments to be Assessed Externally</b>	Date	Signature
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**716105-000-00-WM-02, Processes and procedures to prepare raw materials for further processing, NQF Level 3, Credits 10**

WM-02-WE01	Mix raw materials to produce dough.		
	<b>Scope Work Experience</b>	Date	Signature
WA0101	Check raw materials.		
WA0102	Complete all checklists with regards to quality prior to start-up of specified mixing equipment.		
WA0103	Operate specified mixing equipment.		
WA0104	Complete all operations with regards to shutdown of specified mixing equipment.		
	<b>Supporting Evidence</b>	Date	Signature
SE0101	Production schedule; Shift report; etc.		
WM-02-WE02	Form dough pieces.		
	<b>Scope Work Experience</b>	Date	Signature
WA0201	Quality checks completed on dough according to standard operating procedures.		
WA0202	Specified dough making and proving equipment is inspected according to standard operating procedures.		
WA0203	Operate specified dough making equipment.		
WA0204	Complete all operations with regards to shutdown of specified dough making and proving equipment.		
	<b>Supporting Evidence</b>	Date	Signature
SE0201	Production schedules and inspection reports		
SE0202	Coach/Supervisor evaluation.		
WM-02-WE03	Perform routine maintenance on specified Plant Baking equipment.		



	<b>Scope Work Experience</b>	Date	Signature
WA0301	Lubricants are applied to specific Plant Baking equipment as required.		
WA0302	FLM is conducted according to work instruction and maintenance schedule.		
WA0303	Inspect equipment to identify faults or possible maintenance requirements.		
WA0304	Maintenance issues are solved or reported to engineering department as per work instructions.		
	<b>Supporting Evidence</b>	Date	Signature
SE0301	Maintenance Schedule		
SE0302	Start-up procedures.		
WM-02-WE04	Perform minor adjustments and change-overs on specified Plant Baking equipment.		
	<b>Scope Work Experience</b>	Date	Signature
WA0401	Read production schedule and identify product changes.		
WA0402	Prepare materials tools and equipment to perform minor adjustments and change overs.		
WA0403	Perform changeovers according to work instructions.		
WA0404	Evaluate changeover has been completed.		
WA0405	Record documentation indicating changeover completed according to work instructions.		
	<b>Supporting Evidence</b>	Date	Signature
SE0401	Production schedule; Shift report; etc.		
SE0402	Learner Logbook		
WM-02-WE05	Clean and sanitise specified Plant Baking equipment.		

	<b>Scope Work Experience</b>	Date	Signature
WA0501	Cleaning and sanitising agents are received according to standard operating procedures.		
WA0502	Clean and sanitise materials according to standard operating procedures.		
WA0503	Any problems arising during cleaning and sanitising is solved or reported.		
WA0504	Specified baking plant equipment is inspected to ensure all parts have been cleaned according to standard operating procedures.		
WA0505	Cleaning equipment is stored in designated areas.		
WA0506	Waste from the cleaning process is disposed of according to work instructions or standard operating procedures.		
	<b>Supporting Evidence</b>	Date	Signature
SE0501	Cleaning schedules and inspection reports.		
SE0502	Coach/Supervisor evaluation.		

	<b>Contextualised Workplace Knowledge</b>	Date	Signature
1	Material and product knowledge.		
2	Standard operating procedures and work instructions.		
3	Safety policies and practices.		
4	HACCP and GMP principles and practice.		

	<b>Additional Assignments to be Assessed Externally</b>	Date	Signature

**716105-000-00-WM-03, Processes and procedures to manufacture bread and confectionery products, NQF Level 3, Credits 10**

WM-03-WE01	Start-up, operate and shutdown specified plant ovens.		
	<b>Scope Work Experience</b>	Date	Signature
WA0101	Equipment is operated as per standard operating procedure.		
WA0102	Production inputs and outputs are recorded as per standard operating procedures.		
WA0103	Operating deviations are identified, recorded and corrective actions are taken as per standard operating procedure.		
WA0104	Health, Safety and Environmental standards are adhered to as per legislation.		
	<b>Supporting Evidence</b>	Date	Signature
SE0101	Production Plan		
SE0102	Shift Reports		
SE0103	Authenticated Logbook.		
WM-03-WE02	Execute specific sensory cues and sampling techniques.		
	<b>Scope Work Experience</b>	Date	Signature
WA0201	Complete all checklist with regards to Quality control of material, product and equipment during operation of specified equipment.		
WA0202	Complete all quality evaluations and sampling techniques on products as per organisational requirements or operating procedures.		
WA0203	Complete all documentation relating to reporting quality control evaluations.		

	<b>Supporting Evidence</b>	<b>Date</b>	<b>Signature</b>
SE0201	Quality control documentation.		
SE0202	Shift Reports		
SE0203	Authenticated Logbook.		
WM-03-WE03	Participate in shift meetings.		
	<b>Scope Work Experience</b>	<b>Date</b>	<b>Signature</b>
WA0301	Prepare for shift meeting.		
WA0302	Contribute to meeting discussions regarding quality of product and performance of specified equipment.		
	<b>Supporting Evidence</b>	<b>Date</b>	<b>Signature</b>
SE0301	Shift Reports		
SE0302	Authenticated Logbook.		
WM-03-WE04	Maintain statistical process control measures according to standard operating procedures.		
	<b>Scope Work Experience</b>	<b>Date</b>	<b>Signature</b>
WA0401	Complete all statistical requirements on specified equipment as per organisational requirements.		
WA0402	Calculate actual performance to specification on key parameters according to organisational requirements (Key parameters such as machine efficiencies, quality and waste).		
WA0403	Calculate machine efficiency per shift according to organisational requirement.		
	<b>Supporting Evidence</b>	<b>Date</b>	<b>Signature</b>
SE0401	Production Plan		
SE0402	Shift Reports		
SE0403	Authenticated Logbook.		
WM-03-WE05	Conduct and record problem solving and diagnostic activities on specific plant baking equipment.		

	<b>Scope Work Experience</b>	Date	Signature
WA0501	Conduct problem-solving and diagnostic activities, according to organisational operating procedures.		
WA0502	Record problem-solving and diagnostic activities on specified equipment as per organisational operating procedures.		
	<b>Supporting Evidence</b>	Date	Signature
SE0501	Shift Reports		
SE0502	Authenticated Logbook.		

	<b>Contextualised Workplace Knowledge</b>	Date	Signature
1	Material and product knowledge.		
2	Standard operating procedures and work instructions.		
3	Safety policies and practices.		
4	HACCP and GMP principles and practice.		
5	Organisational Quality Standards.		

	<b>Additional Assignments to be Assessed Externally</b>	Date	Signature

**716105-000-00-WM-04, Processes and procedures to control the operation of baking and confectionery processing equipment, NQF Level 3, Credits 10**

WM-04-WE01	Input data into process control system.		
	<b>Scope Work Experience</b>	Date	Signature
WA0101	Complete all documentation regarding end of shift administration according to organisational requirements.		
WA0102	Provide feedback to relevant management with regards to performance of equipment according to organisational requirements.		
WA0103	Update control charts as determined by organisational requirements.		
	<b>Supporting Evidence</b>	Date	Signature
SE0101	Shift Reports		
SE0102	Visible control charts.		
WM-04-WE02	Quality testing and evaluation processes.		
	<b>Scope Work Experience</b>	Date	Signature
WA0201	Respond according to organisational requirements to any product quality non-conformance.		
WA0202	Respond according to organisational requirements to any process quality non-conformances.		
WA0203	Report to management where required according to organisational requirements.		
WA0204	Execute fault-finding problem-solving techniques according to organisational requirements.		
	<b>Supporting Evidence</b>	Date	Signature
SE0201	Quality control documentation.		
SE0202	Minutes of shift meetings.		
SE0203	Shift Reports		
WM-04-WE03	Record deviations from performance standards.		

	<b>Scope Work Experience</b>	Date	Signature
WA0301	Operating deviations are identified, recorded and corrective action is taken as per organisational requirements (Deviations regarding product quality, process quality and equipment performance may be recorded).		
WA0302	Other operating deviations as determined by organisational requirements may be recorded.		
WA0303	Reports and feedback provided as per organisational requirements.		
	<b>Supporting Evidence</b>	Date	Signature
SE0301	Minutes of shift meetings.		
SE0302	Shift Reports		

	<b>Contextualised Workplace Knowledge</b>	Date	Signature
1	Material and product knowledge.		
2	Standard operating procedures and work instructions.		
3	Safety policies and practices.		
4	HACCP and GMP principles and practice.		

	<b>Additional Assignments to be Assessed Externally</b>	Date	Signature