

	Curriculum Document		
Curriculum Code	Curriculum Title		
2017-684305	Quality Controller		
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Development Quality Partner	CHIETA	info@chieta.org.za	011 628 7000
			

Learner QDF Signature

Date

QDF Signature

Date

DQP Representative Signature

Date

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SECTION 1: CURRICULUM SUMMARY

1. Occupational Information

1.1 Associated Occupation

684305: Quality Controller

1.2 Occupation or Specialisation Addressed by this Curriculum

684305000: Quality Controller

1.3 Alternative Titles used by Industry

- Quality Inspector

2. Curriculum Information

2.1 Curriculum Structure

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

Knowledge Modules:

- 684305000-KM-01, Legal and Other Requirements for Quality Control, NQF Level 4, Credits 7
- 684305000-KM-02, Introduction to Quality Control, NQF Level 3, Credits 6
- 684305000-KM-03, Personal Attributes for Interacting Effectively in the Workplace, NQF Level 4, Credits 3
- 684305000-KM-04, Quality Control Principles, NQF Level 4, Credits 6
- 684305000-KM-05, Process, Product/Service and Resource Requirements, NQF Level 4, Credits 7
- 684305000-KM-06, Testing Practices and Resources, NQF Level 4, Credits 7
- 684305000-KM-07, Data and Information Analysis, NQF Level 4, Credits 8
- 684305000-KM-08, Problem Solving for Quality Control, NQF Level 4, Credits 4
- 684305000-KM-09, Quality Inspection Practices, NQF Level 3, Credits 10

Total number of credits for Knowledge Modules: 58

Practical Skill Modules:

- 684305000-PM-01, Conduct Quality Inspections During and at the End of the Process to Verify Product/Service Quality, NQF Level 3, Credits 10
- 684305000-PM-02, Test Input and Process at Various Stages of Operation as well as the Final Product or Service, NQF Level 4, Credits 8
- 684305000-PM-03, Analyse Data and Present Information, NQF Level 4, Credits 8
- 684305000-PM-04, Troubleshoot and Problem-solve Quality Non-conformance, NQF Level 4, Credits 8

- 684305000-PM-05, Adherence to Occupational Health and Safety, Environmental and Risk Requirements, NQF Level 3, Credits 1

Total number of credits for Practical Skill Modules: 35

This qualification also requires the following Work Experience Modules:

- 684305000-WM-01, Induction, Company Processes and Inspection Procedures, NQF Level 3, Credits 16
- 684305000-WM-02, Input and Output Quality Control, NQF Level 4, Credits 20
- 684305000-WM-03, Process Input and Product/Service Testing, NQF Level 4, Credits 22
- 684305000-WM-04, Data Analysis, Fault Finding and Recommendations for Non-conformances, NQF Level 4, Credits 22

Total number of credits for Work Experience Modules: 80

2.2 Entry Requirements

- NQF Level 3 with Mathematical Literacy
or
- Occupational Certificate: Quality Inspector, NQF Level 3 with 2 years' relevant industry experience

3. Assessment Quality Partner Information

Name of body: CHIETA

Address of body: 2 Clamart Road

Richmond 2092

Contact person name: Me T Magonare

Contact person work telephone number: 0116287000

4. Part Qualification Curriculum Structure: Quality Inspector

Part Qualification 1:

Title:

Occupational Certificate: Quality Inspector, NQF Level 3, Credits 43

Purpose:

The purpose of this qualification is to prepare a learner to operate as a Quality Inspector. A Quality Inspector performs measurements using precision and other instruments/resources and compares product/services against set standards to assess any variation to ensure compliance with specifications. He/she collects information and maintains records of inspections, prepares lists of defects/deviations and interacts with other departments to ensure compliance.

Applicable Modules (Rules of Combination)

Knowledge Modules:

- 684305-000-00-01-KM-02 Introduction to Quality Control, NQF Level 3; Credits 6
- 684305-000-00-01-KM-09 Quality Inspection Practices, NQF Level 3; Credits 10

Total number of credits for Knowledge Modules: 16

Practical Skill Modules:

- 684305-000-00-01-PM-01 Conduct Quality Inspections During and at the End of the Process to Verify Product/ Service Quality, NQF Level 3; Credits 10
- 684305-000-00-01-PM-05 Adherence to Occupational Health and Safety, Environmental and Risk Requirements, NQF Level 3; Credits 1

Total number of credits for Practical Skill Modules: 11

This qualification also requires the following Work Experience Modules:

- 684305-000-00-01-WM-01 Induction, Company Processes and Inspection Procedures, NQF Level 3; Credits 16 (Learning contract time 20 days)

Total number of credits for Work Experience Modules: 16

SECTION 2: OCCUPATIONAL PROFILE

1. Occupational Purpose

Quality Controllers conduct quality inspections and/or testing of inputs, work-in-progress and final product/service to ensure compliance with legislation, standards (national and/or international and standard operating procedures (SOP)) and customer requirements.

2. Occupational Tasks

- Conduct input and/or output quality inspections for conformity to specifications and standards (NQF Level 3).
- Conduct testing of input, product/service in various stages of operation and final processed product/service to ensure conformance to customer specification, GMP, SANS codes and national and international standards (NQF Level 4).
- Identify and investigate causes of non-conformance (process deviation and non-conforming product/service), identify risks to product/service and recommend corrective action to address non-conformance (NQF Level 4).

3. Occupational Task Details

3.1. Conduct input and/or output quality inspections for conformity to specifications and standards (NQF Level 3).

Unique Product or Service:

- Conformance to specifications established

Occupational Responsibilities:

- Conduct inline and/or end line quality inspections to control product/service quality

Occupational Contexts:

- Inline and/or end line quality inspections

3.2. Conduct testing of input, product/service in various stages of operation and final processed product/service to ensure conformance to customer specification, GMP, SANS codes and national and international standards (NQF Level 4).

Unique Products or Service:

- Input, product/service in various stages of operation and final processed product/service tested for establishing conformance

Occupational Responsibilities:

- Test input and product/service at various stages of operation as well as the final product/service to ensure conformance to quality

Occupational Contexts:

- Input and product/service testing

3.3. Identify and investigate causes of non-conformance (process deviation and non-conforming product/service), identify risks to product/service and recommend corrective action to address non-conformance (NQF Level 4).

Unique Product or Service:

- Non-conformance identified

Occupational Responsibilities:

- Troubleshoot and Problem-solve Quality Non-conformance and Problems

Occupational Contexts:

- Data Analysis, Fault Finding and Recommendations for Non-conformances

SECTION 3: CURRICULUM COMPONENT SPECIFICATIONS

SECTION 3A: KNOWLEDGE MODULE SPECIFICATIONS

List of Knowledge Modules for which Specifications are included

- 684305000-KM-01, Legal and Other Requirements for Quality Control, NQF Level 4, Credits 7
- 684305000-KM-02, Introduction to Quality Control, NQF Level 3, Credits 6
- 684305000-KM-03, Personal Attributes for Interacting Effectively in the Workplace, NQF Level 4, Credits 3
- 684305000-KM-04, Quality Control Principles, NQF Level 4, Credits 6
- 684305000-KM-05, Process, Product/Service and Resource Requirements, NQF Level 4, Credits 7
- 684305000-KM-06, Testing Practices and Resources, NQF Level 4, Credits 7
- 684305000-KM-07, Data and Information Analysis, NQF Level 4, Credits 8
- 684305000-KM-08, Problem Solving for Quality Control, NQF Level 4, Credits 4
- 684305000-KM-09, Quality Inspection Practices, NQF Level 3, Credits 10

1. 684305000-KM-01: Legal and Other Requirements for Quality Control, NQF Level 4, Credits 7

1.1 Purpose of the Knowledge Modules

The main focus of the learning in this knowledge module is to build an understanding of all applicable legislation, customer requirements, product/service specifications, standards and codes and its implication for quality control and operation and services processes.

The learning will enable learners to demonstrate an understanding of:

- KM-01-KT01: Legislation (15%)
- KM-01-KT02: Occupational Health and Safety Act 85 of 1993 (OHSA) (as amended) and the responsibilities of management in terms of the Act (10%)
- KM-01-KT03: Basic introduction to occupational health, safety and environmental protection and industry regulations (10%)
- KM-01-KT04: General rules and principles of safe work practices (10%)
- KM-01-KT05: Green practices (10%)
- KM-01-KT06: National and international standards and codes (15%)
- KM-01-KT07: Customer requirements (10%)
- KM-01-KT08: Product/service specifications (10%)
- KM-01-KT09: Workplace, operation and services procedures (10%)

1.2 Guidelines for Topics

1.2.1. KM-01-KT01: Legislation (15%)

Topic elements to be covered include:

- KT0101 Concepts of compliance and non-compliance
- KT0102 Legislation: Industry/product/service specific
- KT0103 Implications of legislation on operation, processes, quality, storage and transportation
- KT0103 Storage of samples (Examples: flammable, drugs, explosives, transportation, hazardous product/service, storage conditions, records and product/service)
- KT0104 Transportation and storage of samples, records and product/service (Example: chemicals, explosives)
- KT0105 Disposal of the remainder of samples and records according to retention period
- KT0106 Product/service liability and responsibility

Internal Assessment Criteria and Weight

- IAC0101 The implication of applicable legislation on quality and product/service is understood

(Weight 15%)

1.2.3. KM-01-KT02: Occupational Health and Safety Act 85 of 1993 (OHSA) (as amended) and the responsibilities of management in terms of the Act (10%)

Topic elements to be covered include:

- KT0201 Explain the basic principles of the Act and the accompanying Regulations.
- KT0202 Explain the requirements for minimum compliance stipulated in the Act.
- KT0203 Interpret the management controls required to achieve compliance.
- KT0204 Explain the obligations of managers in terms of communication and training.

Internal Assessment Criteria and Weight

- IAC0201 The concepts of civil liability and criminal liability are explained with examples.
- IAC0202 Reasons for the existence of the Act are explained with reference to health, safety and good corporate governance.
- IAC0203 The responsibility of an organisation to ensure compliance within the generic framework of the Act is explained and an indication is given of the legal implications of non-compliance.
- IAC0204 The structures required to facilitate application of the Act in an organisation are named and an indication is given of the appointments required to achieve compliance.
- IAC0205 The duties of selected designated appointments are explained with reference to responsibilities and accountability.
- IAC0206 The obligations of the employer to provide the means to comply with the Act are explained with reference to resources and financing.
- IAC0207 The use of documents and records in a management audit to support legal defence, compliance, and corporate governance is explained with reference to the evidence each document provides.
- IAC0208 The obligations of management to communicate policies and procedures relating to OHSA are explained with examples.
- IAC0209 The legal requirements in respect of training are explained for a specific workplace.
- IAC0210 The duties of employees to comply with safety requirements and report health and safety risks or threats to themselves are explained and a process is proposed to ensure compliance.

(Weight 10%)

1.2.3. KM-01-KT03: Occupational health, safety and environmental protection and industry regulations (10%)

Topic elements to be covered include:

- KT0301 Occupational health, safety and environmental control legislation
- KT0302 Employee health and wellness in a work-related environment

Internal Assessment Criteria and Weight

- IAC0301 A basic understanding of the legislative and statutory provisions that regulate work in a quality environment can be demonstrated

- IAC0302 Variables impacting on employee health and wellness in a work-related environment are explained and measures to address these are listed
- IAC0303 General safety rules for workplaces are explained and linked to duties and responsibilities and safe work practices (industry specific where applicable)

(Weight 10%)

1.2.4. KM-01-KT04: General rules and principles of safe work practices (10%)

Topic elements to be covered include:

- KT0401 Good housekeeping practices and risks
- KT0402 Personal protective resources
- KT0403 Safety signs and colour coding
- KT0404 Rules related to specific procedures and risks, including emergencies, restricted entrance, fire prevention, and injuries on duty
- KT0405 Universal precautions when attending to injured persons
- KT0406 Provisions related to intoxication, unauthorised use of motorised or mobile resources

Internal Assessment Criteria and Weight

- IAC0401 General safety rules for workplaces are explained and linked to duties and responsibilities and safe work practices

(Weight 10%)

1.2.5. KM-01-KT05: Green practices (10%)

Topic elements to be covered include:

- KT0501 Green quality management practices
- KT0502 Environmental and sustainability issues
- KT0503 Waste control
- KT0504 Recycling, reusing and reworking

Internal Assessment Criteria and Weight

- IAC0501 An understanding of green practices is demonstrated
- IAC0502 The importance of green practices and the consequences of non-adherence to green practices are explained

(Weight 10%)

1.2.4. KM-01-KT06: National and international standards and codes (15%)

Topic elements to be covered include:

- KT0601 International standards

- KT0602 National standards
- KT0603 Implications of international standards for workplace practices
- KT0604 SANS codes (where applicable)
- KT0605 Industry standards
- KT0606 Good processing practices (GMP) (hygiene, housekeeping, waste, environment, safety)
- KT0607 Certification processes

Internal Assessment Criteria and Weight

- IAC0601 The implication of applicable national and international standards and codes on quality, products and services is explained and understood

(Weight 15%)

1.2.5. KM-01-KT07: Customer requirements (10%)

Topic elements to be covered include:

- KT0701 Company/customer requirements (customer specifications)
- KT0702 Relationship between quality assurance and customer satisfaction
- KT0703 Relationship between quality requirements and customer requirements
- KT0704 Commitment to quality (which may be explicit such as a written contract or it may be implied in terms of the expectations of the average consumer of the product/service)
- KT0705 Product/service performance (relating to the ultimate functions and services which the final product/service must provide to the consumer)

Internal Assessment Criteria and Weight

- IAC0701 The relationship between customer requirements and commitment to quality is understood

(Weight 10%)

1.2.6. KM-01-KT08: Product/service specifications (10%)

Topic elements to be covered include:

- KT0801 Products and service specifications
- KT0802 Process specifications
- KT0803 Input specifications
- KT0804 Specifications for resources
- KT0805 The quality of a product and service is often impacted by deviations from target standards and by the high variability around target specifications

Internal Assessment Criteria and Weight

- IAC0801 The implication of product and service specifications on process, input and resources is understood

(Weight 10%)

1.2.7. KM-01-KT09: Workplace, operation and services procedures (10%)

Topic elements to be covered include:

- KT0901 Health and safety procedures
- KT0902 Standard operating procedures (SOP)
- KT0903 Housekeeping and maintenance
- KT0904 Emergency procedures
- KT0905 Procedures for ensuring safety and limiting damage

Internal Assessment Criteria and Weight

- IAC0901 The importance of quality on workplace and operation procedures is understood

(Weight 10%)

1.3 Provider Programme Accreditation Criteria

Physical Requirements:

- The provider must have lesson plans and structured learning material or provide learners with access to structured learning material that addresses all the topics in all the knowledge modules.

Human Resource Requirements:

- Facilitator/learner ratio of 1:30 (Maximum)

Legal Requirements:

- OHS compliance
- Compliance with products/process/service regulatory requirements

1.4 Exemptions

- None, but the module can be achieved in full through a normal RPL process.

2. 684305000-KM-02, Introduction to Quality Control, NQF Level 3, Credits 6

2.1 Purpose of the Knowledge Modules

The main focus of the learning in this knowledge module is to build an understanding of quality control concepts and terminology as it is applicable in the workplace and as it relates to the world of business

The learning will enable learners to demonstrate an understanding of:

- KM-02-KT01: Quality (35%)
- KM-02-KT02: Risk assessment (20%)
- KM-02-KT03: Careers and learning opportunities in quality (10%)
- KM-02-KT04: Business environment and quality (20%)
- KM-02-KT05: Business ethics (15%)

2.2 Guidelines for Topics

2.2.1. KM-02-KT01: Quality (35%)

Topic elements to be covered include:

- KT0101 Concepts and terminology
- KT0102 Quality assurance and quality assurance system
- KT0103 QA policy, goal and objectives
- KT0104 Difference between quality control and quality assurance
- KT0105 Role of quality controller
- KT0106 Role of the quality assurer
- KT0107 Function of quality control in the workplace
- KT0108 Improving operational cost (minimise waste and cost optimisation)

Internal Assessment Criteria and Weight

- IAC0101 The concepts of quality control, quality assurance and quality management are differentiated

(Weight 35%)

1.2.2. KM-02-KT02: Risk assessment (20%)

Topic elements to be covered include:

- KT0201 Concept (FMECA, HCCOP, HCCAP and other applicable concepts)
- KT0202 Methods
- KT0203 Role of risk assessment in quality control

Internal Assessment Criteria and Weight

- IAC0201 The concept of risk assessment and its role in quality control is understood

(Weight 20%)

1.2.3. KM-02-KT03: Careers and learning opportunities in quality (10%)

Topic elements to be covered include:

- KT0301 Career opportunities in quality (professional bodies and institutes)

- KT0302 The skills development landscape (world of work)
- KT0303 The structure and focus of this qualification
- KT0304 The final assessment and certification

Internal Assessment Criteria and Weight

- IAC0301 The structure and focus of the qualification is explained
- IAC0302 Career opportunities in quality management are linked to personal goals and motivated
- IAC0303 An understanding of careers and learning opportunities in quality is demonstrated

(Weight 10%)

1.2.4. KM-02-KT04: Business environment and quality (20%)

Topic elements to be covered include:

- KT0401 Customer focus
- KT0402 Business objectives, business processes, and organisational culture
- KT0403 PESTLE strategic business environment
- KT0404 Quality, productivity and efficiency (quality, costs, delivery, infrastructure and people)
- KT0405 Basic business finance (cost of quality – PAF and PCM)
- KT0406 SIPOC (supplier, inputs, process, outputs, customer) value chain

Internal Assessment Criteria and Weight

- IAC0401 An understanding of all the variables that play a role in the business environment relating to quality is demonstrated
- IAC0402 The consequences of not observing quality measures in a business environment are explained (loss of business, loss in revenue, impact on processes, increase in cost, etc.)

(Weight 20%)

1.2.5. KM-02-KT05: Business ethics (15%)

Topic elements to be covered include:

- KT0501 Codes of conduct
- KT0502 Values and ethics
- KT0503 Consumer rights and protection
- KT0504 Customer services
- KT0505 Customer expectations
- KT0506 Social responsibility (SHEQ)

Internal Assessment Criteria and Weight

- IAC0501 Ethics can be explained and motivated
- IAC0502 Measures to meet regulatory and statutory requirements on ethics can be listed
- IAC0503 The ethical focus of codes of conduct can be explained
- IAC0504 The key elements of customer services and expectations can be explained

(Weight 15%)

2.3 Provider Programme Accreditation Criteria

Physical Requirements:

- The provider must have lesson plans and structured learning material or provide learners with access to structured learning material that addresses all the topics in all the knowledge modules.

Human Resource Requirements:

- Lecturer/learner ratio of 1:30 (Maximum)

Legal Requirements:

- OHS compliance
- Compliance with products/process/service regulatory requirements

2.4 Exemptions

- None, but the module can be achieved in full through a normal RPL process.

3. 684305000-KM-03, Personal Attributes for Interacting Effectively in the Workplace, NQF Level 4, Credits 3

3.1 Purpose of the Knowledge Modules

The main focus of the learning in this knowledge module is to build an understanding of effective communication skills and methods, planning and prioritisation, time management basic financial concepts and interpersonal relations to be used by the quality controller.

The learning will enable learners to demonstrate an understanding of:

- KM-03-KT01: Effective communication skills (20%)
- KM-03-KT02: Basic communication (10%)
- KM-03-KT03: Effective electronic communication (20%)
- KM-01-KT04: Self-management (10%)
- KM-03-KT05: Planning, prioritisation and time management (20%)
- KM-03-KT06: Interpersonal relations (20%)

3.2 Guidelines for Topics

3.2.1. KM-03-KT01: Effective communication skills (20%)

Topic elements to be covered include:

- KT0101 Written communication (formats, language, business writing)
- KT0102 Verbal communication
- KT0103 Target group
- KT0104 Getting the message across
- KT0105 Communication tools
- KT0106 Presentations, tools and methods

Internal Assessment Criteria and Weight

- IAC0101 Principles and methods of effective communication in the workplace and as it pertains to quality control are explained

(Weight 20%)

3.2.2. KM-03-KT02: Basic communication (10%)

Topic elements to be covered include:

- KT0201 Communication concepts (including principles, communication process, listening, barriers)
- KT0202 Quality-related communication (including Meetings and meeting procedures, electronic communication, reporting, documents and records, quality system and product/service audits, and questioning techniques)
- KT0203 Non-verbal communication (including Body language, facial expressions, voice control, dress code, cultural diversity)

Internal Assessment Criteria and Weight

- IAC0201 An understanding of basic communication concepts is demonstrated
- IAC0202 An understanding of the elements and practical application of quality-related communication is demonstrated
- IAC0203 An understanding of non-verbal communication is demonstrated

(Weight 10%)

3.2.3. KM-03-KT03: Effective electronic communication (20%)

Topic elements to be covered include:

- KT0301 Computer literacy
- KT0302 Spreadsheets, (graphs, tables, charts, flow diagrams), word processing and presentations
- KT0303 Using email
- KT0304 Internet for researching information and innovation
- KT0305 Technology and any applicable software
- KT0306 Management reporting programme (MRP)

Internal Assessment Criteria and Weight

- IAC0301 Principles and methods of effective electronic communication in the workplace and as it pertains to quality control are explained

(Weight 20%)

3.2.4. KM-03-KT04: Self-management (10%)

Topic elements to be covered include:

- KT0401 Team work
- KT0402 Goal setting
- KT0403 Time management (diarising, scheduling and prioritising)
- KT0404 Interpersonal skills (conflict resolution, negotiation, assertiveness)

Internal Assessment Criteria and Weight

- IAC0401 The role of team work and goal setting in self-management is explained
- IAC0402 The principles and applications of time management are explained
- IAC0403 A range of interpersonal skills and role thereof in self-management is explained

(Weight 10%)

3.2.5. KM-03-KT05: Planning, prioritisation and time management (20%)

Topic elements to be covered include:

- KT0501 Planning principles and methods
- KT0502 Prioritisation
- KT0503 Time management principles and methods

Internal Assessment Criteria and Weight

- IAC0501 Planning, prioritisation and time management principles and methods are understood
- IAC0502 Methods to deal with adverse reactions are analysed

(Weight 20%)

3.2.6. KM-03-KT06: Interpersonal relations (20%)

Topic elements to be covered include:

- KT0601 Leading and supervision
- KT0602 Team work
- KT0603 People relations
- KT0604 Meeting procedures
- KT0605 Customer (internal or external) relations
- KT0606 Conflict management and workplace interaction

Internal Assessment Criteria and Weight

- IAC0601 The important function of interpersonal relations is described

(Weight 20%)

3.3 Provider Programme Accreditation Criteria

Physical Requirements:

- The provider must have lesson plans and structured learning material or provide learners with access to structured learning material that addresses all the topics in all the knowledge modules.

Human Resource Requirements:

- Lecturer/learner ratio of 1:30 (Maximum)

Legal Requirements:

- OHS compliance
- Compliance with products/process/service regulatory requirements

3.4 Exemptions

- None, but the module can be achieved in full through a normal RPL process.

4. 684305000-KM-04, Quality Control Principles, NQF Level 4, Credits 6

4.1 Purpose of the Knowledge Modules

The main focus of the learning in this knowledge module is to build an understanding of quality control principles, tools and the effect of QC in the workplace

The learning will enable learners to demonstrate an understanding of:

- KM-04-KT01: Quality control (20%)
- KM-04-KT02: Compliance (10%)
- KM-04-KT03: Record keeping, audits and traceability (10%)
- KM-04-KT04: Contamination and quarantine (5%)
- KM-04-KT05: Cost of quality control vs non-compliance (10%)
- KM-04-KT06: Variations from specifications (15%)
- KM-04-KT07: QC tools (15%)
- KM-04-KT08: Effect of QC in the workplace (15%)

4.2 Guidelines for Topics

4.2.1. KM-04-KT01: Quality control (20%)

Topic elements to be covered include:

- KT0101 Quality control concepts
- KT0102 Management of change (MOC): Adapting and upskilling
- KT0103 Conforming to quality
- KT0104 Quality of performance
- KT0105 Characteristics of quality
- KT0106 Quality control principles
- KT0107 Quality control terminology
- KT0108 Definitions: QA and QC
- KT0109 The function of an effective QC department
- KT0110 The role of quality control in quality improvement
- KT0111 Impact of QC on business finances
- KT0112 Quality tracking process, a central repository for tracking data related to product/service quality

Internal Assessment Criteria and Weight

- IAC0101 Quality control principles and concepts are understood

- IAC0102 Roles and functions of role players in QA are understood
- IAC0103 The importance of the contribution of QC to business success is justified

(Weight 20%)

4.2.2. KM-04-KT02: Compliance (10%)

Topic elements to be covered include:

- KT0201 Compliance: Definition, concept and implications
- KT0202 Non-compliance: Definition, concept and implications
- KT0203 Conformance and non-conformance concepts and principles

Internal Assessment Criteria and Weight

- IAC0201 Concepts, principles and implications of compliance and non-compliance are understood

(Weight 10%)

4.2.3. KM-04-KT03: Record keeping, audits and traceability (10%)

Topic elements to be covered include:

- KT0301 Record keeping
- KT0302 Audits (Process vs Conduct)
- KT0303 Traceability measures in the company
- KT0304 Product/service traceability
- KT0305 Liability concerns

Internal Assessment Criteria and Weight

- IAC0301 Concepts, principles and importance of record keeping, audits and traceability are understood

(Weight 10%)

4.2.4. KM-04-KT04: Contamination and quarantine (5%)

Topic elements to be covered include:

- KT0401 Control of non-conforming product/service (e.g. quarantine)
- KT0402 Contamination
- KT0403 Cross contamination and cross reference (manually or in transfer lines)

Internal Assessment Criteria and Weight

- IAC0401 Concept and implications of contamination and quarantine are understood

(Weight 5%)

4.2.5. KM-04-KT05: Cost of quality control vs non-compliance (10%)

Topic elements to be covered include:

- KT0501 Cost of appraisal
- KT0502 Cost of prevention
- KT0503 Cost of failure

Internal Assessment Criteria and Weight

- IAC0501 Cost and financial viability of QC is reasoned

(Weight 10%)

4.2.6. KM-04-KT06: Variations from specifications (15%)

Topic elements to be covered include:

- KT0601 SOP and review of processes
- KT0602 Changes caused by variations in input, men, resources, methods and procedures of operation and quality inspection
- KT0603 Control of variations

Internal Assessment Criteria and Weight

- IAC0601 Reasons and implications of variations from specifications are listed

(Weight 15%)

4.2.7. KM-04-KT07: QC tools (15%)

Topic elements to be covered include:

- KT0701 Cause-and-effect diagram (also known as the "fishbone" or Ishikawa diagram)
- KT0702 Check sheets
- KT0703 Control chart
- KT0704 Histogram
- KT0705 Pareto chart analysis
- KT0706 Scatter diagram
- KT0707 Stratification (alternately, flow chart or run chart)

Internal Assessment Criteria and Weight

- IAC0701 Methods of QC and use of tools are understood

(Weight 15%)

4.2.8. KM-04-KT08: Effect of QC in the workplace (15%)

Topic elements to be covered include:

- KT0801 Improving quality of products and services
- KT0802 Addressing liability concerns, planning and decision making
- KT0803 Improving effort and finance involved in product/service delivery
- KT0804 Creating benchmarks for product/service quality
- KT0805 Establishment of well-defined controls
- KT0806 Checking for statistically significant variations.

Internal Assessment Criteria and Weight

- IAC0801 The positive effect of QC in the workplace is justified

(Weight 15%)

4.3 Provider Programme Accreditation Criteria

Physical Requirements:

- The provider must have lesson plans and structured learning material or provide learners with access to structured learning material that addresses all the topics in all the knowledge modules.

Human Resource Requirements:

- Lecturer/learner ratio of 1:30 (Maximum)

Legal Requirements:

- OHS compliance

4.4 Exemptions

- None, but the module can be achieved in full through a normal RPL process.

5. 684305000-KM-05, Process, Product/Service and Resource Requirements, NQF Level 4, Credits 7

5.1 Purpose of the Knowledge Modules

The main focus of the learning in this knowledge module is to build an understanding of the implications of process, product/service and resources requirements on operation

The learning will enable learners to demonstrate an understanding of:

- KM-05-KT01: Product/service and product/service specifications (20%)
- KM-05-KT02: Process knowledge and specifications (20%)
- KM-05-KT03: Resources on the process (20%)
- KM-05-KT04: Testing resources (20%)
- KM-05-KT05: Future considerations (20%)

5.2 Guidelines for Topics

5.2.1. KM-05-KT01: Product/service and product/service specifications (20%)

Topic elements to be covered include:

- KT0101 Product/service under development principles
- KT0102 Product and/or process development principles
- KT0103 Performance of the product/service as per the commitment made by the producer to the consumer
- KT0104 Product/service specifications (Lower and upper control limits of specifications)
- KT0105 Product/service parameters of the final product/services
- KT0106 Predetermined characteristics
- KT0107 Packaging requirements
- KT0108 Documented information
- KT0109 Customer requirements
- KT0110 Product/service master sample
- KT0111 Storage conditions and expiry dates

Internal Assessment Criteria and Weight

- IAC0101 Products and services and their specifications are understood
- IAC0102 The importance of specifications in achieving quality is understood
- IAC0103 Product/service parameters are known and understood

(Weight 20%)

5.2.2. KM-05-KT02: Process knowledge and specifications (20%)

Topic elements to be covered include:

- KT0201 Process input characteristics
- KT0202 Input quality inspection and testing procedures
- KT0203 Main parameters of the process
- KT0204 Applicable documented information
- KT0205 Shift handover procedure and documentation
- KT0206 Preservation of product/service
- KT0207 Nature and sequence of operations

Internal Assessment Criteria and Weight

- IAC0201 Product/service construction is understood
- IAC0202 Standard operating procedures are understood
- IAC0203 The importance of process is understood
- IAC0204 Input, process and resources parameters are known and understood

(Weight 20%)

5.2.3. KM-05-KT03: Resources on the process (20%)

Topic elements to be covered include:

- KT0301 Concept of calibration and (out-of-spec, expiry dates, etc.)
- KT0302 Condition of resources
- KT0303 Resources settings as per product/service specifications
- KT0304 Various controls
- KT0305 Continuous or batch operation
- KT0306 Process changes and associated risk
- KT0307 Housekeeping
- KT0309 Process signals
- KT0310 Risk management

Internal Assessment Criteria and Weight

- IAC0301 The effects of lack calibration, condition and settings of resources on product/service quality are understood

(Weight 20%)

5.2.4. KM-05-KT04: Testing resources (20%)

Topic elements to be covered include:

- KT0401 Quality inspection and measuring resources
- KT0402 Sampling and testing resources
- KT0403 Calibration (out-of-spec, expiry dates, etc.)
- KT0404 Concept of calibration of resources
- KT0405 Sampling resources
- KT0406 Testing devices
- KT0407 Storage and housekeeping (maintenance)
- KT0408 Environmental conditions
- KT0409 Resources signals
- KT0410 Validations and verification

Internal Assessment Criteria and Weight

- IAC0401 The effects of lack of calibration, condition and settings of testing resources on testing results are understood

(Weight 20%)

5.2.5. KM-05-KT05: Future considerations (20%)

Topic elements to be covered include:

- KT0501 Impact of 4th industrial revolution on the workplace and QC

Internal Assessment Criteria and Weight

- IAC0501 Possible impact of the 4th industrial revolution on the workplace and QC is discussed

(Weight 20%)

5.3 Provider Programme Accreditation Criteria

Physical Requirements:

- The provider must have lesson plans and structured learning material or provide learners with access to structured learning material that addresses all the topics in all the knowledge modules.

Human Resource Requirements:

- Lecturer/learner ratio of 1:30 (Maximum)

Legal Requirements:

- OHS compliance

5.4 Exemptions

- None, but the module can be achieved in full through a normal RPL process.

6. 684305000-KM-06, Testing Practices and Resources, NQF Level 4, Credits 7

6.1 Purpose of the Knowledge Modules

The main focus of the learning in this knowledge module is to build an understanding of quality inspection, testing and sampling practices and resources used in quality control

The learning will enable learners to demonstrate an understanding of:

- KM-06-KT01: Types of samples (5%)
- KM-06-KT02: Testing for quality control (15%)
- KM-06-KT03: Science applicable to quality testing (20%)
- KM-06-KT04: Test types and testing procedures (15%)
- KM-06-KT05: Testing process (15%)
- KM-06-KT06: Testing resources (15%)
- KM-06-KT07: Handling defects (15%)

6.2 Guidelines for Topics

6.2.1. KM-06-KT01: Types of samples (5%)

Topic elements to be covered include:

- KT0101 First sample, resampling and follow-up sampling
- KT0102 Retention samples
- KT0103 Limit samples
- KT0104 Validation samples

Internal Assessment Criteria and Weight

- IAC0101 The purpose of various types of samples is analysed

(Weight 5%)

6.2.2. KM-06-KT02: Testing for quality control (15%)

Topic elements to be covered include:

- KT0201 Testing principles
- KT0202 Testing methodology as applicable to the industry
- KT0203 Testing significance
- KT0204 Attention to detail

Internal Assessment Criteria and Weight

- IAC0201 Testing principles and methodologies are discussed

(Weight 15%)

6.2.3. KM-06-KT03: Science applicable to quality testing (20%)

Topic elements to be covered include:

- KT0301 Applicable scientific principles and techniques
- KT0302 Units of measurement
- KT0303 Appropriate science
- KT0304 Principles of process outcome monitoring

Internal Assessment Criteria and Weight

- IAC0801 An understanding of the applicable scientific principles and techniques is demonstrated

(Weight 20%)

6.2.4. KM-06-KT04: Test types and testing procedures (15%)

Topic elements to be covered include:

- KT0401 Applicable tests required for the range of product/service
- KT0402 Different test types
- KT0403 Applicable laboratory tests
- KT0404 Destructive and non-destructive testing where applicable

Internal Assessment Criteria and Weight

- IAC0401 Test types and testing procedures are differentiated and discussed

(Weight 15%)

6.2.5. KM-06-KT05: Testing process (15%)

Topic elements to be covered include:

- KT0501 Random test
- KT0502 Test set-up, operations and maintenance
- KT0503 Procedures for evaluating test results
- KT0504 Procedures for disposing of test samples
- KT0505 Various types of test results

Internal Assessment Criteria and Weight

- IAC0501 Testing procedures are evaluated

(Weight 15%)

6.2.6. KM-06-KT06: Testing resources (15%)

Topic elements to be covered include:

- KT0601 Resources use and settings (read gauges)
- KT0602 Testing resources operations
- KT0603 Testing resources breakdown
- KT0604 Testing resources calibration and maintenance
- KT0605 Document information required for testing

Internal Assessment Criteria and Weight

- IAC0601 The selection and use of testing resources are described

(Weight 15%)

6.2.7. KM-06-KT07: Handling defects (15%)

Topic elements to be covered include:

- KT0701 Rejected input or product/service
- KT0702 Further testing
- KT0703 Stopping operation
- KT0704 Quarantine or localising non-conformance

Internal Assessment Criteria and Weight

- IAC0701 Methods to handle defects appropriately are defined

(Weight 15%)

6.3 Provider Programme Accreditation Criteria

Physical Requirements:

- The provider must have lesson plans and structured learning material or provide learners with access to structured learning material that addresses all the topics in all the knowledge modules.

Human Resource Requirements:

- Lecturer/learner ratio of 1:30 (Maximum)

Legal Requirements:

- OHS compliance

6.4 Exemptions

- None, but the module can be achieved in full through a normal RPL process.

7. 684305000-KM-07, Data and Information Analysis, NQF Level 4, 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 data and information analysis procedures, tools and presentation of information

The learning will enable learners to demonstrate an understanding of:

- KM-01-KT01: Information Security (10%)
- KM-07-KT02: Data and information (10%)
- KM-07-KT03: Documentation and record keeping (15%)
- KM-07-KT04: Calculations used in QC (15%)
- KM-07-KT05: Analysing data (20%)
- KM-07-KT06: Summarising and presenting information/data and results (15%)
- KM-07-KT07: Reporting and recommendations (15%)

7.2 Guidelines for Topics

7.2.1. KM-07-KT01: Information Security (10%)

Topic elements to be covered include:

- KT0101 Records and reports
- KT0102 Document control and security
- KT0103 Confidentiality of information
- KT0104 Filing systems and configuration management

Internal Assessment Criteria and Weight

- IAC0101 An understanding is demonstrated of the elements and practical application of document control procedures
- IAC0102 The reasons for confidentiality of information and the consequences of non-adherence are explained

(Weight 10%)

7.2.2. KM-07-KT02: Data and information (10%)

Topic elements to be covered include:

- KT0201 Concepts: data, information
- KT0202 Data collection and collation principles
- KT0203 Collating input, product/service and process data (Product/service data include service and defects, field failures, customer complaints, product/service improvements and corrective and processing preventive action requests)

Internal Assessment Criteria and Weight

- IAC0201 Data and information are differentiated
- IAC0202 Data collection and collation principles are understood
- IAC0203 Types of workplace data are identified

(Weight 10%)

7.2.3. KM-07-KT03: Documentation and record keeping (15%)

Topic elements to be covered include:

- KT0301 Recording, reporting of results and storage of data, documentation, samples and specimens
- KT0302 Record keeping principles
- KT0303 Report writing
- KT0304 Reporting procedures
- KT0305 Archiving (traceable, verifiable)
- KT0306 Documentation, reports, and checklists
- KT0307 Documents to be completed during operation and input quality inspections
- KT0308 Document control, record keeping methods and systems
- KT0309 Keeping accurate records
- KT0310 Documents related to sampling and testing
- KT0311 Documents related to the various processes

Internal Assessment Criteria and Weight

- IAC0301 Concepts and principles of record keeping, report writing, archiving, data integrity, traceability and verifiability of data and information are described
- IAC0302 The importance of accurate record keeping, report writing, archiving, data integrity, traceability and verifiability of data and information is justified
- IAC0303 The importance of document control is argued

(Weight 15%)

7.2.4. KM-07-KT04: Calculations used in QC (15%)

Topic elements to be covered include:

- KT0401 Applicable mathematical and statistical principles
- KT0402 Mathematical and statistical calculations
- KT0403 Percentage and part per hundred calculations

- KT0404 Units of measure
- KT0405 Formulations (part per hundred)
- KT0406 Related mathematical and scientific rules, principles and laws
- KT0407 Basic knowledge of statistical techniques

Internal Assessment Criteria and Weight

- IAC0401 An understanding of calculations used in QC is demonstrated
- IAC0402 An understanding of statistical techniques used in QC is demonstrated

(Weight 15%)

7.2.5. KM-07-KT05: Analysing data (20%)

Topic elements to be covered include:

- KT0501 Principles of data analysis
- KT0502 Identifying process trends
- KT0503 Interpreting graphs
- KT0504 Trend analysis
- KT0505 Statistical process control SPC)
- KT0506 Analysis of samples
- KT0507 Use of control chart
- KT0508 Corrective measures
- KT0509 Ability to read data sheets, supplier specification sheets and MSDS
- KT0510 Analysis to determine deviations from specifications
- KT0511 Statistical process control techniques and methodology
- KT0512 Range of statistical process control techniques and methodologies

Internal Assessment Criteria and Weight

- IAC0501 An understanding of principles of data analysis used in QC is demonstrated
- IAC0502 An understanding of various data analysis techniques used in QC is demonstrated
- IAC0503 The use of tables, graphs, charts, etc. in QC are defined and purpose is evaluated

(Weight 20%)

7.2.6. KM-07-KT06: Summarising and presenting information/data and results (15%)

Topic elements to be covered include:

- KT0601 Techniques for summarising and presenting data
- KT0602 Charts, tables, graphs, spreadsheets, diagrams, flowcharts
- KT0603 Multivariate and univariate charts
- KT0604 X-bar charts, S charts and NP charts
- KT0605 Plotting process control charts

Internal Assessment Criteria and Weight

- IAC0601 Various methods to present information and results in QC are defined and purpose is evaluated

(Weight 15%)

7.2.7. KM-07-KT07: Reporting and recommendations (15%)

Topic elements to be covered include:

- KT0701 Content and structure of reports formats
- KT0702 Report formats
- KT0703 Compiling reports
- KT0704 Formulating and motivating recommendations
- KT0705 Discussions with parties affected by test results
- KT0706 Dealing with adverse reactions from affected parties

Internal Assessment Criteria and Weight

- IAC0701 The formulation and motivation of recommendations are evaluated

(Weight 15%)

7.3 Provider Programme Accreditation Criteria

Physical Requirements:

- The provider must have lesson plans and structured learning material or provide learners with access to structured learning material that addresses all the topics in all the knowledge modules.

Human Resource Requirements:

- Lecturer/learner ratio of 1:30 (Maximum)

Legal Requirements:

- OHS compliance

7.4 Exemptions

- None, but the module can be achieved in full through a normal RPL process.

8. 684305000-KM-08, Problem Solving for Quality Control, NQF Level 4, Credits 4

8.1 Purpose of the Knowledge Modules

The main focus of the learning in this knowledge module is to build an understanding of fault finding, root cause analysis and problem-solving techniques as it pertains to quality control.

The learning will enable learners to demonstrate an understanding of:

- KM-08-KT01 Problem identification and decision making (25%)
- KM-08-KT02: Problem solving techniques (25%)
- KM-08-KT03: Non-conformance tracing and risk analysis (15%)
- KM-08-KT04: Variables impacting on QC (35%)

8.2 Guidelines for Topics

8.2.1. KM-08-KT01: Problem identification and decision making (25%)

Topic elements to be covered include:

- KT0101 Principles of problem identification and decision making
 - Analytical and critical thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems
 - Judgment and Decision Making — Considering the relative costs and benefits of potential actions to choose the most appropriate one
 - Problem Sensitivity — The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem

Internal Assessment Criteria and Weight

- IAC0101 Principles of problem identification and decision making are understood

(Weight 25%)

8.2.2. KM-08-KT02: Problem solving techniques (25%)

Topic elements to be covered include:

- KT0201 Types of quality problems to be solved including problems related to input, product/service-in-progress, final product/service and resources functioning
- KT0202 Problem solving methodology and techniques
- KT0203 Trouble shooting methods and techniques
- KT0204 Root cause analysis
- KT0205 FMEA (failure mode and effect analysis)

Internal Assessment Criteria and Weight

- IAC0201 The purpose and application of various problem-solving methods and techniques are compared and differentiated

(Weight 25%)

8.2.3. KM-08-KT03: Non-conformance tracing and risk analysis (15%)

Topic elements to be covered include:

- KT0301 Tracing non-conformances
- KT0302 Risk analysis when non-conformance occur (when did it start, what is implication, how can it be solved)
- KT0303 Concessions

Internal Assessment Criteria and Weight

- IAC0301 Principles of non-conformance tracing and risk analysis are stated

(Weight 15%)

8.2.4. KM-08-KT04: Variables impacting on QC (35%)

Topic elements to be covered include:

- KT0401 Implications of overlooking product/service quality
- KT0402 Causes and effects of product/service non-conformances
- KT0403 Impact of resources malfunction on testing process
- KT0404 Implications of not performing routine operations and causing stoppages
- KT0405 Effects of incorrect labelling of test samples
- KT0406 Possible problem areas
- KT0407 Inaccuracy of data and analysis
- KT0408 Effects of chemicals, dust and poor workplace practices on health and safety
- KT0409 Effect of processing on final product/service
- KT0410 Implications of recommending inappropriate corrective action
- KT0411 Poor quality test procedures and data analysis
- KT0412 Incorrect work practices
- KT0413 Poor safety practices
- KT0414 Inaccurate results
- KT0415 Implications of failing to detect quality problems and/or conditions that present a threat to quality maintenance

Internal Assessment Criteria and Weight

- IAC0401 Causes, effects and implications of variables impacting on QC (relevant to specific industry) are analysed

(Weight 35%)

8.3 Provider Programme Accreditation Criteria

Physical Requirements:

- The provider must have lesson plans and structured learning material or provide learners with access to structured learning material that addresses all the topics in all the knowledge modules.

Human Resource Requirements:

- Lecturer/learner ratio of 1:30 (Maximum)

Legal Requirements:

- None

8.4 Exemptions

- None, but the module can be achieved in full through a normal RPL process.

9. 684305000-KM-09, Quality Inspection Practices, NQF Level 3, Credits 10

9.1 Purpose of the Knowledge Modules

The main focus of the learning in this knowledge module is to build an understanding of quality inspection, testing and sampling practices and resources used in quality control

The learning will enable learners to demonstrate an understanding of:

- KM-09-KT01: Quality measurement (20%)
- KM-09-KT02: Inspection of product/service quality (10%)
- KM-09-KT03: Quality inspection methods (10%)
- KM-09-KT04: Investigating and Report writing (5%)
- KM-09-KT05: Sample taking (10%)
- KM-09-KT06: Types of samples (5%)
- KM-09-KT07: Problem solving tools (40%)

9.2 Guidelines for Topics

9.2.1. KM-09-KT01: Quality measurement (20%)

Topic elements to be covered include:

- KT0101 Sampling (Sampling techniques to control quality, Sample frequency to control quality, Sample handling and integrity, Sample retention, Sample labelling/identification, Sampling resources)
- KT0102 Special and common causes
- KT0103 Attribute and variable measurement (verification of resources)
- KT0104 Basic Statistical Process Control (Control charts)
- KT0105 Specifications and tolerance bands

Internal Assessment Criteria and Weight

- IAC0101 An understanding is demonstrated of the elements and practical application of quality measurement

(Weight 20%)

9.2.2. KM-09-KT02: Inspection of product/service quality (10%)

Topic elements to be covered include:

- KT0201 Principles of quality inspection
- KT0202 Quality inspection purpose and objectives
- KT0203 Quality inspection process
- KT0204 Quality inspection tools and techniques
- KT0205 Types of quality inspections: pre-operation, during operation, final random, container loading

- KT0206 Typical product/service non-conformances, deviations and product/service faults/failures

Internal Assessment Criteria and Weight

- IAC0201 Principles and concept of quality inspection are understood
- IAC0202 Types of quality inspections and application thereof are evaluated

(Weight 10%)

9.2.3. KM-09-KT03: Quality inspection methods (10%)

Topic elements to be covered include:

- KT0301 Methods of quality inspection: Product/service inspection, Process inspection, Inspection analysis
- KT0302 Sensory cues (what I see, hear, smell, feel) used to identify problems during quality inspections
- KT0303 Sensory cues utilised in localising non-conformances and indicating correct functioning and/or malfunction of resources
- KT0304 Routine monitoring of product/service and processes
- KT0305 Comparing data against process limits
- KT0306 Making minor operational adjustments

Internal Assessment Criteria and Weight

- IAC0301 Various quality inspection methods and uses are described

(Weight 10%)

9.2.4. KM-09-KT04: Investigating and Report writing (5%)

Topic elements to be covered include:

- KT0401 Data and information collection, recording and reporting
- KT0402 Conducting investigations
- KT0403 Methods for investigating causes
- KT0404 Report writing

Internal Assessment Criteria and Weight

- IAC0401 Methods for collection, recording and reporting data and information are analysed
- IAC0401 Methods for investigating causes are analysed

(Weight 5%)

9.2.5. KM-09-KT05: Sample taking (10%)

Topic elements to be covered include:

- KT0501 Sampling methods and procedures
- KT0502 Sampling and testing instruments and resources
- KT0503 Acceptance sampling
- KT0504 Random sampling
- KT0505 Representative samples
- KT0506 Sampling frequency
- KT0507 Sampling tools
- KT0508 Sample size
- KT0509 Associated risks
- KT0510 Sampling techniques
- KT0511 Handling and transportation of samples (labelling, optimum conditions)
- KT0512 Disposing of the remainder of samples

Internal Assessment Criteria and Weight

- IAC0501 Sample taking principles are understood

(Weight 10%)

9.2.6. KM-09-KT06: Types of Samples (5%)

Topic elements to be covered include:

- KT0601 First sample, resampling and follow up sampling
- KT0602 Retention samples
- KT0603 Limit samples
- KT0604 Validation samples

Internal Assessment Criteria and Weight

- IAC0601 The purpose of various types of samples is analysed

(Weight 5%)

9.2.7. KM-09-KT07: Problem solving tools (40%)

Topic elements to be covered include:

- KT0701 Problem solving principles

- KT0702 Fishbone diagram
- KT0703 5W's

Internal Assessment Criteria and Weight

- IAC0701 Problem solving principles are understood
- IAC0702 Problem solving tools are understood
- IAC0702 The application of problem solving tools are understood

(Weight 40%)

9.3 Provider Programme Accreditation Criteria

Physical Requirements:

- The provider must have lesson plans and structured learning material or provide learners with access to structured learning material that addresses all the topics in all the knowledge modules.

Human Resource Requirements:

- Lecturer/learner ratio of 1:30 (Maximum)

Legal Requirements:

- OHS Compliance

9.4 Exemptions

- None, but the module can be achieved in full through a normal RPL process.

SECTION 3B: PRACTICAL SKILL MODULE SPECIFICATIONS

List of Practical Skill Module Specifications

- 684305000-PM-01, Conduct Quality Inspections During and at the End of the Process to Verify Product/Service Quality, NQF Level 3, Credits 10
- 684305000-PM-02, Test Input and Process at Various Stages of Operation as well as the Final Product or Service, NQF Level 4, Credits 8
- 684305000-PM-03, Analyse Data and Present Information, NQF Level 4, Credits 8
- 684305000-PM-04, Troubleshoot and Problem-solve Quality Non-conformance, NQF Level 4, Credits 8
- 684305000-PM-05, Adherence to Occupational Health and Safety, Environmental and Risk Requirements, NQF Level 3, Credits 1

1. 684305000-PM-01, Conduct Quality Inspections During and at the End of the Process to Verify Product/Service Quality, NQF Level 3, Credits 10

1.1 Purpose of the Practical Skill Modules

The focus of the learning in this module is on providing the learner with an opportunity to inspect input or output product/service to control conformity with specifications and industry standards

The learner will be required to:

- PM-01-PS01: Handle and care for measuring resources or gauges to maintain a high level of reliability and accuracy
- PM-01-PS02: Use applicable measuring resources to perform measuring activities such as, but not limited to, temperature, length, moisture or volume
- PM-01-PS03: Read, study and interpret various types of requirements correctly
- PM-01-PS04: Establish the requirements of the master reference of the product or service and check test samples against those requirements
- PM-01-PS05: Take representative samples
- PM-01-PS06: Use appropriate quality inspection methods to determine conformance or non-conformance of product/service, process and/or service
- PM-01-PS07: Conduct quality inspections during the process using measuring tools, checklists and master references applying correct frequency and sequence
- PM-01-PS08: Identify potential quality problems and conditions such as environmental, working conditions that present a threat to maintaining standards
- PM-01-PS09: Collect data and keep records ensuring it is accurate and current and meet traceability standards
- PM-01-PS10: Accept or reject quality inspected or tested items

1.2 Guidelines for Practical Skills

1.2.1. PM-01-PS01: Handle and care for measuring resources or gauges to maintain a high level of reliability and accuracy

Scope of Practical Skill

Given applicable cleaning input, certificate (external calibration), constant temperature in room, measuring and testing resources (including but not limited to micrometers, callipers and dial gauges), the learner must be able to:

- PA0101 Check calibration certificate for validity (not expired)
- PA0102 Select and use correct cleaning or lubricating agents which will not leave a film and affect the calibration of the instrument (if applicable)
- PA0103 Lubricate (where appropriate) resources to prevent corrosion
- PA0104 Maintain equipment
- PA0105 Store equipment according to Standard Operating Procedures

- PA0106 Use measuring resources correctly, avoiding sudden shocks or extreme temperature

Applied Knowledge

- AK0101 Requirements for the handling, caring and storage of various types of testing resources

Internal Assessment Criteria

- IAC0101 Measuring resources and gauges are handled, used, cared for and stored according to standard operating practices

1.2.2. PM-01-PS02: Use applicable measuring resources to perform measuring activities such as, but not limited to, temperature, length, moisture or volume

Scope of Practical Skill

Given specifications, product or service, PPE, measuring resources and testing SOP, the learner must be able to:

- PA0201 Read and understand requirements of the applicable SOP
- PA0202 Select and use the appropriate measuring equipment for the correct measuring activity applicable to the SOP's of the relevant workplace

Applied Knowledge

- AK0201 Units of measurement
- AK0202 Types of measuring resources

Internal Assessment Criteria

- IAC0201 Correct resources is selected and correctly used
- IAC0202 Procedure is applied correctly
- IAC0203 Measurements are accurate
- IAC0204 Appropriate steps are taken to address non-conformance

1.2.3. PM-01-PS03: Read, study and interpret various types of requirements correctly

Scope of Practical Skill

Given blueprints, data, manuals, relevant reports, SOP, legal and other requirements, the learner must be able to:

- PA0301 Read blueprints, data, manuals, or other materials to determine specifications, quality inspection and testing procedures, adjustment methods, certification processes, formulas, or measuring instruments required
- PA0302 Interpret legal requirements, safety information, and recommended compliance procedures
- PA0303 Read, interpret and ensure compliance with standard operating procedures

- PA0304 Interpret relevant reports using master/reference samples as a standard for verifying product/service (if applicable)

Applied Knowledge

- AK0301 Implication of requirements on the processing process and product/service quality

Internal Assessment Criteria

- IAC0301 Appropriate conclusions are derived from reading and studying various types of requirements and appropriate action is taken

1.2.4. PM-01-PS04: Establish the requirements of the master reference of the product or service and check test sample against those requirements

Scope of Practical Skill

Given a product/service master reference or product requirements and conforming and non-conforming product/service, the learner must be able to:

- PA0401 Read and understand product/service requirements
- PA0402 Determine date of issue or processing (if applicable)
- PA0403 Determine shelf life of product/service/sample (if appropriate)
- PA0404 Check the batch number/lot number/ sample number ensuring it is correct
- PA0405 Check that job specification card and SOP are current
- PA0406 Check that the designated person signed the document
- PA0407 Record and make necessary adjustments (in case of dealing with expired date, and replace) if appropriate
- PA0408 Document QC information
- PA0409 Conduct comparisons between master specifications and identify non-conformance of incoming input (acceptable quality level= AQL)

Applied Knowledge

- AK0401 Product/service knowledge

Internal Assessment Criteria

- IAC0401 Appropriate conclusions are derived from the product/service master sample or product requirements
- IAC0402 Non-conforming product/service are identified

1.2.5. PM-01-PS05: Take representative samples

Scope of Practical Skill

Given practical task instruction, sampling kit, appropriate input or products (gas, liquids and solids), sampling SOP and PPE, the learner must be able to:

- PA0501 Ensure appropriate PPE is used
- PA0502 Select the correct resources
- PA0503 Ensure resources are clean and non-contaminated
- PA0504 Follow correct sampling procedure which will ensure sample taken is representative
- PA0505 Ensure that a representative sample of the whole population is selected, taken and analysed
- PA0506 Label sample, if applicable, correctly ensuring all relevant information is noted
- PA0507 Ensure retained sample is taken if applicable
- PA0508 Ensure retention and disposal of samples and apply variables control (where applicable) procedures (where applicable)

Applied Knowledge

- AK0101 Sample taking procedure

Internal Assessment Criteria

- IAC0101 A sample taken is representative of the population and packaged and labelled correctly

1.2.6. PM-01-PS06: Use appropriate quality inspection methods to determine conformance or non-conformance of product/service, process or materials

Scope of Practical Skill

Given PPE, equipment or product/service requirements, SOP, the learner must be able to:

- PA0601 Compare the appropriate characteristic such as colour, shape, texture, or grade of products or services with colour charts, templates, or samples to verify conformance to standards
- PA0602 Read dials gauges or meters to verify that resources are functioning at specified levels
- PA0603 Check purchase materials to ensure that they match purchase orders, submitting discrepancy reports as necessary (if applicable)
- PA0604 Monitor operation operations or resources to ensure conformance to specifications
- PA0605 Verify resources that automatically measure, sort, or quality inspect product/service
- PA0606 Weigh materials, product, containers, or samples to verify packaging weights or ingredient quantities

Applied Knowledge

- AK0501 Product/service knowledge
- AK0502 Process knowledge
- AK0503 Incoming or purchased knowledge

Internal Assessment Criteria

- IAC0501 Conforming and non-conforming product/service are differentiated by applying product/service requirements and product/service knowledge

1.2.7. PM-01-PS07: Conduct quality inspections during the process using measuring tools, checklists and master references applying correct frequency and sequence

Scope of Practical Skill

Given measuring tools, checklists, master reference and frequency and sequence, the learner must be able to:

- PA0701 Select applicable measuring tool(s),
- PA0702 Establish the requirements of the master reference and confirm required specification and use in making visual comparison
- PA0703 Use appropriate PPE
- PA0704 Check the calibration status of the measuring tools
- PA0705 Sample and inspect product/service at correct frequency and sequence for inspections as per SOP
- PA0706 Determine non-conformances against master reference
- PA0707 Record information as per SOP
- PA0708 Label (if applicable) and separate non-conforming service or product
- PA0709 Raise non-conformance alert if outside specification

Applied Knowledge

- AK0601 Product/service knowledge
- AK0602 Process knowledge
- AK0603 Input knowledge

Internal Assessment Criteria

- IAC0601 Inspections during the process are correctly conducted and conforming and non-conforming product/service are differentiated

1.2.8. PM-01-PS08: Compare first produced and last produced (if applicable)

Scope of Practical Skill

Given product/service specifications, appropriate measuring tools, PPE and access to operation line, the learner must be able to:

- PA0801 Adhere to safety standards according to company specifications
- PA0802 Ensure documents for specific product/service that is to be produced are available

- PA0803 Proceed to the line/resources from which the product/service will be produced and collect first products which are produced and released by operation (test run/first-off)
- PA0804 Conduct checks within scope on the first-off and if required deliver first-off to e.g. laboratory for checks which are not within scope
- PA0805 Record results ensuring it is accurate and that correct recording procedure is applied
- PA1006 If product/service are within specification, inform Operation giving them the go-ahead to proceed with operation
- PA0807 If product/service are non-conforming, inform Operation and raise aspects of non-conformance
- PA0808 Collect last produced product/service from line or resources and check with first-off (if applicable)
- PA0809 Record and compare results against the first-off and specifications of the product/service (if applicable)
- PA0810 If within specifications, release product/service for next stage in the process (if applicable)

Applied Knowledge

- AK0701 Product/service knowledge
- AK0702 Process knowledge
- AK0703 Input knowledge

Internal Assessment Criteria

- IAC0701 First produced and last produced quality inspections are correctly conducted and conforming and non-conforming product/service are differentiated (if applicable)

1.2.9. PM-01-PS09: Identify potential quality problems and conditions such environmental, equipment or workplace conditions that present a threat to maintaining standards

Scope of Practical Skill

Given access to product, process and equipment requirements, the learner must be able to:

- PA0901 Identify potential quality problems that present a threat to customer dissatisfaction (Quality problems may include problems related to materials, process, final product or service and equipment functioning)
- PA0902 Identify any conditions that present a threat to acceptable quality standards
- PA0903 Conduct a risk assessment of the potential problem

Applied Knowledge

- AK0801 Quality problems include problems related to materials, product-in-progress, final product or service, and equipment functioning

Internal Assessment Criteria

- IAC0801 A thorough assessment of the process, resources functioning, product or service is conducted

1.2.10. PM-01-PS10: Collect data and keep records ensuring it is accurate and current and meet traceability standards

Scope of Practical Skill

Given SOP/WI, access to a range of operation data, the learner must be able to:

- PA1001 Read, interpret and adhere to SOP/WI relating to organisation record keeping
- PA1002 Use prescribed ink/colour and documentation formats (e.g. appropriate checklists)
- PA1003 Ensure document is fully completed and that information is accurate
- PA1004 Apply version control procedures
- PA1005 File or save information according to filing/storing system and procedures ensuring retrieval of documents
- PA1006 Adhere to traceability standards

Applied Knowledge

- AK0901 SOP/WI
- AK0902 Traceability standards

Internal Assessment Criteria

- IAC0901 Data collected are accurate and appropriate to the QC activity
- IAC0902 Records are kept according to the SOP/WI

1.2.11. PM-01-PS11: Accept or reject quality inspected or tested items

Scope of Practical Skill

Given conforming and a range of non-conforming products, product requirements or master reference, the learner must be able to:

- PA1101 Mark product/service with details such as grade, scrapped, acceptance or rejection status
- PA1102 Apply procedures to divert process, reject product, quarantine product/service, segregate non-conformance inputs or products or service, rework, scrap and downgrade the product (if applicable)
- PA1103 Discard or reject product/service, inputs or resources not meeting specifications which cannot be reworked or downgraded (if applicable)
- PA1104 Appropriate action must be taken such as consultation, disciplinary on a non - conforming service activity (if applicable)

Applied Knowledge

- AK1001 Product/service knowledge

- AK1002 SOP for non-conforming product

Internal Assessment Criteria

- IAC1001 Quality inspected or tested items or service activity are differentiated and non-conforming product or service is appropriately handled

1.3 Provider Programme Accreditation Criteria

Physical Requirements:

- All the documents, examples and information specified in the scope statement
- All the case studies and scenarios implied in the scope statement
- All resources, consumables, processes implied in the scope statement

Human Resource Requirements:

- Facilitator/learner ratio of 1:30 (Maximum) (suggested practice refers to 5 learners per grouping)
- Facilitator qualification: NQF 5 qualified in quality control or quality assurance with 3 years of experience as a quality controller or quality assurer

OR

- Facilitator qualification: NQF 4 qualified in quality control or quality assurance with 5 years of experience as a quality controller or quality assurer

Legal Requirements:

- OHS compliant
- Compliance with products/process/service regulatory requirements

1.4 Exemptions

- None, but the module can be achieved through RPL

2. 684305000-PM-02, Test Input and Process at Various Stages of Operation as well as the Final Product or Service, NQF Level 4, Credits 8

2.1 Purpose of the Practical Skill Modules

The focus of the learning in this module is on providing the learner with an opportunity to conduct **testing** of input, products and services in various stages of operation as well as final processed products to ensure conformance to customer specification, GMP, SANS codes, national and international standards

The learner will be required to:

- PM-02-PS01: Take representative samples
- PM-02-PS02: Check, identify and adhere to calibration compliance (outside of specification) of measuring resources and set up quality inspection resources prior to testing
- PM-02-PS03: Plan and set up testing activity to investigate non-compliance
- PM-02-PS04: Perform tests appropriate to product, service and process using applicable testing resources
- PM-02-PS05: Apply new test method or new technology by applying acceptable testing and quality inspection procedures: management of change (MOC)
- PM-02-PS06: Analyse test results and identify process, products, services and input non-conformances
- PM-02-PS07: Ensure that corrective action is taken by the responsible parties

2.2 Guidelines for Practical Skills

2.2.1. PM-02-PS01: Take representative samples

Scope of Practical Skill

Given practical task instruction, sampling kit, appropriate input or products (gas, liquids and solids), sampling SOP and PPE, the learner must be able to:

- PA0101 Ensure appropriate PPE is used
- PA0102 Select the correct resources
- PA0103 Ensure resources are clean and non-contaminated
- PA0104 Follow correct sampling procedure which will ensure sample taken is representative
- PA0105 Ensure that a representative sample of the whole population is selected, taken and analysed
- PA0106 Label sample, if applicable, correctly ensuring all relevant information is noted
- PA0107 Ensure retained sample is taken if applicable
- PA0108 Ensure retention and disposal of samples and apply variables control (where applicable) procedures (where applicable)

Applied Knowledge

- AK0101 Sample taking procedure

Internal Assessment Criteria

- IAC0101 A sample taken is representative of the population and packaged and labelled correctly

2.2.2. PM-02-PS02: Check, identify and adhere to calibration compliance (outside of specification) of measuring resources and set up quality inspection resources prior to testing

Scope of Practical Skill

Given calibration record, measuring and/or testing resources and SOP/resources manual, the learner must be able to:

- PA0201 Check calibration certificate is valid before doing testing procedures
- PA0202 Check expiry date on calibration verifying material (not out of date)
- PA0203 Conduct routine monitoring of resource function and output
- PA0204 Check and identify calibration compliance (outside of specification) of measuring resources and set up quality inspection resources prior to testing

Applied Knowledge

- AK0201 Calibration requirements

Internal Assessment Criteria

- IAC0201 Calibration status is checked and testing resources is good to use

2.2.3. PM-02-PS03: Plan and set up testing activity to investigate non-compliance

Scope of Practical Skill

Given scenario where non-compliance is detected, testing resources, consumables, PPE, designated area, product/service or input to be tested, the learner must be able to:

- PA0301 Determine testing requirements
- PA0302 Plan testing activity
- PA0303 Prepare environment and set up testing resources
- PA0304 Identify required changes/settings to testing resources. Testing resources may include: pH meter, thermometer, viscometer - excluding laboratory testing resources

Applied Knowledge

- AK0301 Testing procedure

Internal Assessment Criteria

- IAC0301 Testing activity and resources are prepared and ready for use

2.2.4. PM-02-PS04: Perform tests appropriate to product, service and process using applicable testing resources

Scope of Practical Skill

Given scenario where non-compliance is created, testing resources, consumables, PPE, designated area, products or input to be tested, the learner must be able to:

- PA0401 Determine type of test and the size and type of product/service and select appropriate test specifications
- PA0402 Select and place product/service on quality testing resources. Resources include product/service uniformity optimisers, x-ray resources, force variation testing resources. (List all applicable)
- PA0403 Set operating parameters and start and run the quality testing resources.
 - Operational parameters include speeds, weight monitoring, lengths, widths, pressures and temperatures.
 - Set includes running first-off tests to verify resources settings, e.g. different depths and angles in x-ray resources.
- PA0404 Monitor testing process and unload product/service.
- PA0406 Collect, collate and record results ensuring they are accurate and current

Applied Knowledge

- AK0401 Testing procedures

Internal Assessment Criteria

- IAC0401 Various tests are performed
- IAC0402 Information is collected, collated and recorded for analysis.

2.2.5. PM-02-PS05: Apply new test method or new technology by applying applicable testing and quality inspection procedures: management of change (MOC)

Scope of Practical Skill

Given new product/service specifications and process and resource requirements, the learner must be able to:

- PA0501 Ensure training in new method/service/product for operators is scheduled and check evidence of such training.
- PA0502 Obtain revised SOP and ensure it is correct method/service/product by referencing document control system
- PA0503 Ensure all protocols are in place and all human resources are informed
- PA0504 Ensure the product/service are compliant by applying new test method

Applied Knowledge

- IAC0501 The effect of new process/product/service on productivity of the company
- IAC0502 Procedures and protocols for introducing new testing method or new technology
- IAC0503 MOC principles in QC

Internal Assessment Criteria

- IAC0501 MOC principles are applied
- IAC0501 Testing and quality inspection procedures are adapted in line with new product/service/technology
- IAC0501 Apply new test method or new technology by applying: management of change (MOC)

2.2.6. PM-02-PS06: Analyse test results and identify process, product/service and input non-conformances

Scope of Practical Skill

Given testing results, the learner must be able to:

- PA0601 Analyse test results and identify process, product/service and input non-conformance
- PA0602 Decide on action plan as per SOP to address results. (e.g. contact someone, urgency, escalate, further testing or retesting, Etc.)
- PA0603 Compile report, make recommendations and discuss with appropriate personnel
- PA0604 Present findings
- PA0605 Discuss causes and implications
- PA0606 Seek agreement and commitment to action
- PA0607 Develop graphical and tabular data summaries

Applied Knowledge

- AK0601 Planning procedures
- AK0602 Analysis techniques
- AK0603 Report writing techniques

Internal Assessment Criteria

- IAC0601 Analysis of test results are appropriate to the non-conformance
- IAC0602 The non-conformance is addressed by an action plan

2.2.7. PM-02-PS07: Ensure that corrective action is taken by the responsible parties

Scope of Practical Skill

Given action plan and SOP, the learner must be able to:

- PA0701 Liaise with workgroup members and co-ordinate changes to testing resources.
- PA0702 Ensure legal requirements are met, provide safety information, or recommend compliance procedures.
- PA0703 Notify supervisors or other personnel of process problems.

- Changes include accommodating different product/service sizes and processes and resetting the resources.
- Workgroup members include testing personnel and staff affected by action plan.

Applied Knowledge

- IAC0701 Methods to introduce changes into process

Internal Assessment Criteria

- IAC0701 Actions are integrated in SOP and applied

2.3 Provider Programme Accreditation Criteria

Physical Requirements:

- All the documents, examples and information specified in the scope statement
- All the case studies and scenarios implied in the scope statement
- All resources, consumables, processes implied in the scope statement

Human Resource Requirements:

- Facilitator/learner ratio of 1:30 (Maximum) (suggested practice refers to 5 learners per grouping)
- Facilitator qualification: NQF 5 qualified in quality control or quality assurance with 3 years of experience as a quality controller or quality assurer

OR

- Facilitator qualification: NQF 4 qualified in quality control or quality assurance with 5 years of experience as a quality controller or quality assurer

Legal Requirements:

- OHS compliant
- Compliance with products/process/service regulatory requirements

2.4 Exemptions

- None, but the module can be achieved through RPL

3. 684305000-PM-03, Analyse Data and Present Information, NQF Level 4, Credits 8

3.1 Purpose of the Practical Skill Modules

The focus of the learning in this module is on providing the learner an opportunity to analyse data and present information in suitable formats.

The learner will be required to:

- PM-03-PS01: Read data sheets, drawings, specification sheets, reports, operation information, laboratory results
- PM-03-PS02: Observe operators performing duties to gather information on product, process or service quality and to determine adherence to SOP
- PM-03-PS03: Conduct an interview to collect information for quality analysis
- PM-03-PS04: Plan and prepare for performing data analysis
- PM-03-PS05: Conduct trend analysis
- PM-03-PS06: Perform statistical process control
- PM-03-PS07: Present information using appropriate means (e.g. plots, tables, graphs, spreadsheets, word)

3.2 Guidelines for Practical Skills

3.2.1. PM-03-PS01: Read data sheets, drawings, specification sheets, reports, operation information, laboratory results

Scope of Practical Skill

Given data sheets, drawings, specification sheets, reports, operation information and laboratory results, the learner must be able to:

- PA0101 Study the data to establish how data were collected and how valid the data are
- PA0102 Establish the reference of the data (e.g. reference/case/incident, batch number, operation date, product/service, etc.)
- PA0103 Display technical competence (conduct tests, read drawings, units)
- PA0104 Apply product/service knowledge and product/service lower and upper limits
- PA0105 Appraise different types of data i.e. test results, observation sheet, MDS – hazardous substances, trends, information on batch cards, etc.

Applied Knowledge

- AK0101 Formats of and information contained in data sheets, drawings, specification sheets, reports, operation information, laboratory results

Internal Assessment Criteria

- IAC0101 Interpretation of information is valid and accurate

3.2.2. PM-03-PS02: Observe operators performing duties to gather information on product, process or service quality and to determine adherence to SOP

Scope of Practical Skill

Given a simulation of an operator performing a task, SOP, the learner must be able to:

- PA0201 Develop a plan for observing operators
- PA0202 Obtain relevant SOP or WI for the process
- PA0203 Validate it is a current version (signed)
- PA0204 Identify critical tasks
- PA0205 Contact the operator to confirm the session
- PA0206 Observe operator performing the task as per SOP
- PA0207 Provide the relevant feedback to the recipient and impart recommendation
- PA0208 Following the outcome of the observation, provide non-conformance or deviation report
- PA0209 Agree on rectification date where deviations from above will be corrected
- PA0210 Observe operators performing an activity and note deviation from SOP
- PA0211 Observe operators acting outside the scope and note deviation from SOP
- PA0212 Operators setting up the resources/process according to relevant specifications (with critical parameters) – QC must verify it is correct
- PA0213 Recommendations to close gaps and avoid non-conformances can include training, discussions, to adhere to SOP, PJO to be conducted

Applied Knowledge

- AK0201 Data collection techniques
- AK0202 Observation techniques

Internal Assessment Criteria

- IAC0201 Observation is accurate and information gathered is appropriate to the process

3.2.3. PM-03-PS03: Conduct an interview to collect information for quality analysis

Scope of Practical Skill

Given scenario with operation service information and product/service non-conformity and role play, the learner must be able to:

- PA0301 Analyse the situation from the scenario
- PA0302 Plan the entire process of data selection, collection, analysis and use from the start deciding on:
- PA0303 What information do you intend to gather?

- PA0304 Where will you get this information, and how will it be collected?
- PA0305 Why is the information needed, and what questions is the information going to answer?
- PA0306 Who will use the information once collected?
- PA0307 How will the information be analysed?
- PA0308 How will the analyses be used?
- PA0309 Consider ethical issues
- PA0310 Compile a list of questions
- PA0311 Schedule meeting with operator
- PA0312 Conduct interview
- PA0313 Check whether data is complete and accurate and ensure that any data collected is valid, reliable and credible
- PA0314 Report on the interview

Applied Knowledge

- AK0301 Data collection techniques
- AK0302 Interviewing techniques

Internal Assessment Criteria

- IAC0301 Collected information is applicable to the problem and sufficient to analyse and solve the problem

3.2.4. PM-03-PS04: Plan and prepare for performing data analysis

Scope of Practical Skill

Given scenario with operation information and product/service non-conformity, the learner must be able to:

- PA0401 Collect process data, applicable input, product/service and process standards, schedules, job requirements and sequence of activities
- PA0402 Collate and organise process data (may include laboratory reports) using an appropriate tool (may use spreadsheet) ensuring accuracy
- PA0403 Select and apply an appropriate statistical method
- PA0404 Analyse the data and compare process data against process limits
- PA0405 Present the data in an appropriate format

Applied Knowledge

- AK0401 Data analysis techniques
- AK0402 Presentation formats

Internal Assessment Criteria

- IAC0401 Data analysis is applicable to the problem and sufficient to make recommendations

3.2.5. PM-03-PS05: Conduct trend analysis

Scope of Practical Skill

Given scenario with operation information and product/service non-conformity, the learner must be able to:

- PA0501 Analyse data collected using appropriate method (SPC's, 6Sigma, CPK's, quality index)
- PA0502 Identify repeats of similar problems
- PA0503 Use appropriate presenting formats to present
- PA0504 Formulate trend analysis based on consistency or deviation
- PA0505 Give feedback with recommendations

Applied Knowledge

- AK0501 Trend analysis techniques
- AK0502 Presentation formats

Internal Assessment Criteria

- IAC0501 Trend analysis is applicable to the problem and sufficient to make recommendations

3.2.6. PM-03-PS06: Perform statistical process control

Scope of Practical Skill

Given scenario with operation information and product/service non-conformity, the learner must be able to:

- PA0601 Compare actual results to accepted standards, control and action limits
- PA0602 Selecting statistical process control techniques
- PA0603 Selecting statistical process control method
- PA0604 Selecting correct input, product/service and process standards
- PA0605 Determining process trends
- PA0606 Recording process correction recommendations
- PA0607 Measure process parameters and collate process data. Process data include recorded values and observations
- PA0608 Plot statistical process control charts Statistical process control charts include manual and electronic types
- PA0609 Compare process data against process limits and identify trends. Process limits include control and action limits

- PA0610 Consider possible process corrections and make recommendations
- PA0611 Identify problems and take corrective action
- PA0612 Apply quality checks on completed work. Quality checks include rechecking data captured and plotted charts
- PA0613 Complete and process applicable documentation. Documentation includes statistical process charts and corrective action reports
- PA0614 Evaluate implementation of recommendations made
- PA0615 Discuss and explain incidents and problems relating to statistical process control

Applied Knowledge

- AK0601 Statistical process control method
- AK0602 Presentation formats

Internal Assessment Criteria

- IAC0601 Trend analysis is applicable to the problem and sufficient to make recommendations

3.2.7. PM-03-PS07: Present information using appropriate means (e.g. plots, tables, graphs, spreadsheets, word)

Scope of Practical Skill

Given findings from data analysis, the learner must be able to:

- PA0701 Analyse findings and form opinion
- PA0702 Consider facts and formulate recommendation
- PA0703 Present processed data using different formats (plots, tables, graphs, spreadsheets, word, etc.)

Applied Knowledge

- AK0701 Statistical process control method
- AK0702 Presentation formats

Internal Assessment Criteria

- IAC0701 Recommendations are appropriate to the situation
- IAC0702 Presentation formats (plots, tables, graphs, spreadsheets, word, etc.) are appropriate and information is presented in a meaningful manner

3.3 Provider Programme Accreditation Criteria

Physical Requirements:

- All the documents, examples and information specified in the scope statement

- All the case studies and scenarios implied in the scope statement
- All resources, consumables, processes implied in the scope statement

Human Resource Requirements:

- Facilitator/learner ratio of 1:30 (Maximum) (suggested practice refers to 5 learners per grouping)
- Facilitator qualification: NQF 5 qualified in quality control or quality assurance with 3 years of experience as a quality controller or quality assurer

OR

- Facilitator qualification: NQF 4 qualified in quality control or quality assurance with 5 years of experience as a quality controller or quality assurer

Legal Requirements:

- OHS compliant
- Compliance with products/process/service regulatory requirements

3.4 Exemptions

- None, but the module can be achieved through RPL

4. 684305000-PM-04, Troubleshoot and Problem-solve Quality Non-conformance, NQF Level 4, Credits 8

4.1 Purpose of the Practical Skill Modules

The focus of the learning in this module is on providing the learner with an opportunity to identify and investigate causes of non-conformance (process deviation and non-conforming product/service) and identify risks to product/service and recommend corrective action to address non-conformance

The learner will be required to:

- PM-04-PS01: Identify and investigate causes of non-conformance and take remedial action
- PM-04-PS02: Identify root cause of non-conformance and perform trouble shooting procedure
- PM-04-PS03: Work with a team to investigate problems / deviations and find solutions
- PM-04-PS04: As part of team review effectiveness of the corrective action
- PM-04-PS05: Conduct information sharing to prevent recurrence (element of awareness creation) and keep record of it
- PM-04-PS06: Make inputs (using historical and relevant information) during planning meetings

4.2 Guidelines for Practical Skills

4.2.1. PM-04-PS01: Identify and investigate causes of non-conformance and take remedial action

Scope of Practical Skill

Given a case study about product/service non-conformance, operation reports, sales/ customer reports, the learner must be able to:

- PA0101 Plan and prepare for activity. Planning and preparation include collecting and studying operation reports, sales/ customer reports
- PA0102 Trace identified non-conformance to cause (Cause of non-conformance may include resources, input or process related aspects)
- PA0103 Weigh up options and decide on remedial action required
- PA0104 Draft a report
- PA0105 Evaluate implementation of remedial action taken to determine whether problem has been resolved
- PA0106 Respond to `what if` and `why` questions related to causes of non-conformance
- PA0107 Fault diagnosis techniques used
- PA0108 Scientific and mathematical principles and techniques used
- PA0109 Solution options available

Applied Knowledge

- AK0101 Explain and discuss how product/service properties relate to inputs and processing.

Internal Assessment Criteria

- IAC0101 Cause of non-conformance is accurately identified
- IAC0102 The cause of non-conformance is addressed by recommendations

4.2.2. PM-04-PS02: Identify root cause of non-conformance and perform trouble shooting procedure

Scope of Practical Skill

Given a case study about product/service non-conformance, operation reports, sales/ customer reports, the learner must be able to:

- PA0201 Identify what the problem is
- PA0202 Identify the symptoms
- PA0203 Establish possible causes
- PA0204 Eliminate possible causes using appropriate problem-solving methodology i.e. fishbone, 5Why's, Pareto charts
- PA0205 Identify impact on product/service if not rectified
- PA0206 Isolate affected product/service if required
- PA0207 Develop corrective actions
- PA0208 Formulate recommendations based on root cause analysis and risk assessment findings (Recommendations: re corrective action to address non-conformance) may lead to change of instructions, amendments to SOP
- PA0209 Implement corrective action
- PA0210 Verify that the corrective action was sufficient/successful

Applied Knowledge

- AK0201 Trouble shooting techniques
- AK0202 Root cause analysis techniques

Internal Assessment Criteria

- IAC0201 Trouble-shooting procedure is correctly selected and applied
- IAC0202 Root cause analysis is correctly applied

4.2.3. PM-04-PS03: Work with a team to investigate problems / deviations and find solutions

Scope of Practical Skill

Given a case study about product/service non-conformance, operation reports, sales/ customer reports, the learner must be able to:

- PA0301 Identify problem/s that lead to non-conformances

- PA0302 Ensure all relevant stakeholders have been identified, informed and will be part of the process
- PA0303 Deal with the logistics of a meeting (venue, date and time) to address non-conformance
- PA0304 Invite stakeholders identified above
- PA0305 Prepare presentation about the problem/s to the groups with comments on deviations/non-conformances
- PA0306 Present to group and use preferred problem-solving technique
- PA0307 Ensure and encourage 100% participation
- PA0308 Encourage agreement on root cause and solution and formulate action plans to address and prevent future occurrences
- PA0309 Recommend solution to the management
- PA0310 If solution is approved, implement

Applied Knowledge

- AK0301 Presentation techniques
- AK0302 Group work procedures

Internal Assessment Criteria

- IAC0301 Stakeholders are correctly identified
- IAC0302 Logistics of the meeting are planned and concluded
- IAC0303 A presentation is appropriately constructed and presented

4.2.4. PM-04-PS04: As part of team review effectiveness of the corrective action

Scope of Practical Skill

Given a case study about product/service non-conformance, operation reports, sales/ customer reports and implemented remedial action and product/service role play, the learner must be able to:

- PA0401 Track implemented action plans to check whether recommendation worked and gave expected results
- PA0402 Verify the effectiveness of the solution implemented
- PA0403 Invite stakeholders to a meeting
- PA0404 Give feedback and encourage all stakeholders to share their experience with the implementation of corrective action

Applied Knowledge

- AK0401 Teamwork principles

Internal Assessment Criteria

- IAC0401 Information selected and presented is appropriate to the situation

4.2.5. PM-04-PS05: Conduct information sharing to prevent recurrence (element of awareness creation) and keep record of it

Scope of Practical Skill

Given a case study about product/service non-conformance, operation reports, sales/ customer reports and implemented remedial action, the learner must be able to:

- PA0501 Identify problem/s that lead to non-conformances
- PA0502 Extract relevant information that you wish to share
- PA0503 Identify appropriate means of sharing information i.e. contact session, training session, notice boards, email
- PA0504 Make sure records are in place for the above
- PA0505 Assess after an agreed period of time whether the method worked - relook a different approach if required

Applied Knowledge

- AK0501 Means of information sharing

Internal Assessment Criteria

- IAC0501 Appropriate means of information sharing are selected

4.2.6. PM-04-PS06: Make inputs (using historical and relevant information) during planning meetings

Scope of Practical Skill

Given a case study about product/service non-conformance, operation reports, sales/ customer reports and implemented remedial action and role play, the learner must be able to:

- PA0601 Collect (prior to the meeting) data in terms of same product/service being run in the past or the present
- PA0602 Identify possible areas of concern or dispute and prepare answers
- PA0603 Apply the “5W’s and H” or fishbone technique to identify potential questions for the meeting
- PA0604 Attend the meeting
- PA0605 Share the above information within the meeting (hand-outs and presentation)
- PA0606 Highlight (if any) quality related problems being experienced past or present in relation to the product/service being run
- PA0607 Ensure any corrective actions from the past run’s problems are discussed to ensure prevention of reoccurrence

Applied Knowledge

- AK0601 Meeting procedures
- AK0602 “5W’s and H” or fishbone technique

Internal Assessment Criteria

- IAC0601 Input into planning meetings is appropriate and addresses quality control issues

4.3 Provider Programme Accreditation Criteria

Physical Requirements:

- All the documents, examples and information specified in the scope statement
- All the case studies and scenarios implied in the scope statement
- All resources, consumables, processes implied in the scope statement

Human Resource Requirements:

- Facilitator/learner ratio of 1:30 (Maximum) (suggested practice refers to 5 learners per grouping)
- Facilitator qualification: NQF 5 qualified in quality control or quality assurance with 3 years of experience as a quality controller or quality assurer

OR

- Facilitator qualification: NQF 4 qualified in quality control or quality assurance with 5 years of experience as a quality controller or quality assurer

Legal Requirements:

- OHS compliant
- Compliance with products/process/service regulatory requirements

4.4 Exemptions

- None, but the module can be achieved through RPL

5. 684305000-PM-05, Adhere to Occupational Health and Safety, Environmental and Risk Requirements, NQF Level 3, Credits 1

5.1 Purpose of the Practical Skill Modules

The focus of the learning in this module is on providing the learner with an opportunity to understand the concept of compliance by adhering to legislation and occupational health, safety, environment and risk (SHER) requirements

The learner will be required to:

- PM-05-PS01: Read and interpret SHER information in the workplace
- PM-05-PS02: Communicate SHER information to team members
- PM-05-PS03: Identify and report the risks identified
- PM-05-PS04: Create and sustain a safe, clean and environment friendly work place

5.2 Guidelines for Practical Skills

5.2.1. PM-05-PS01: Read and interpret SHER information in the workplace

Scope of Practical Skill

Given SHER instructions, MSDS and resource manuals, the learner must be able to:

- PA0101 Read and interpret safety instructions and precautions put up across the workplace or mentioned in resources manuals and panels to understand the potential risks associated with the resources
- PA0102 Read and interpret occupational health instructions and precautions to understand the potential risks associated with the resources
- PA0103 Read and interpret environmental instructions and precautions to understand the potential risks associated with the resources

Applied Knowledge

- AK0101 Reading and interpretation skills

Internal Assessment Criteria

- IAC0101 Relevant information is extracted from the SHER instructions and resource manuals

5.2.2. PM-05-PS02: Communicate SHER information to team members

Scope of Practical Skill

Given SHER instructions, MSDS and resources manuals, the learner must be able to:

- PA0201 Effectively communicate information to team members and inform employees in the infrastructure and concerned functions about potential Safety, Health and Environment related risks observed
- PA0202 Question operator/ supervisor in order to understand the safety related issues

- PA0203 Attentively listen and comprehend the information given by the speaker during safety drills and training programs

Applied Knowledge

- AK0201 Communication skills

Internal Assessment Criteria

- IAC0201 Relevant information is extracted from the SHER instructions and resources manuals and communicated to the team members

5.2.3. PM-05-PS03: Identify and report the risks identified

Scope of Practical Skill

Given SHER instructions, MSDS, resources manuals and scenario, the learner must be able to:

- PA0301 Identify activities which can cause potential injury through sharp objects, burns, falls, electricity, gas leakages, radiation, poisonous emissions, chemicals, loud noise
- PA0302 Inform the concerned authorities about the potential risks identified in the processes, workplace area/ layout, input used etc.
- PA0303 Inform the authorities concerned about damages which can potentially harm man/ resources during operations
- PA0304 Create awareness amongst others by sharing information on the identified risks
- PA0305 Ensure GMP procedures are applied throughout operation processes (if applicable)
- PA0306 Quality inspect or test inputs, parts, or product/service to determine compliance with environmental standards

Applied Knowledge

- AK0301 Communication skills
- AK0302 Observation skills

Internal Assessment Criteria

- IAC0301 Risks to SHEQ compliance are identified

5.2.4. PM-05-PS04: Create and sustain a safe, clean and environment friendly work place

Scope of Practical Skill

Given scenario, SHEQ instructions, MSDS, and resources manuals, the learner must be able to:

- PA0401 Adhere to the instructions given in the resource manual describing the operating processes of the resources
- PA0402 Adhere to the safety, health and environment related practices developed by the organization

- PA0403 Operate the resources using the recommended personal protective resources (PPE)
- PA0404 Maintain a clean and safe working environment near the workplace and ensure there is no spillage of chemicals, operation waste, oil, solvents, etc.
- PA0405 Maintain high standards of personal hygiene at the work place
- PA0406 Ensure that the sample and waste disposal (product/service, quantity, date) (separation of different chemicals that can react), takes place in the designated area as per organization SOP
- PA0407 Inform the medical officer/ HR appropriately in case of own or an employee's illness of contagious nature so that preventive action can be planned for others

Applied Knowledge

- AK0401 Communication skills
- AK0402 Observation skills

Internal Assessment Criteria

- IAC0401 Risks to SHEQ compliance are identified

5.3 Provider Programme Accreditation Criteria

Physical Requirements:

- All the documents, examples and information specified in the scope statement
- All the case studies and scenarios implied in the scope statement
- All resources, consumables, processes implied in the scope statement

Human Resource Requirements:

- Facilitator/learner ratio of 1:30 (Maximum) (suggested practice refers to 5 learners per grouping)
- Facilitator qualification: NQF 5 qualified in quality control or quality assurance with 3 years of experience as a quality controller or quality assurer

OR

- Facilitator qualification: NQF 4 qualified in quality control or quality assurance with 5 years of experience as a quality controller or quality assurer

Legal Requirements:

- OHS compliant
- Compliance with products/process/service regulatory requirements

5.4 Exemptions

- None, but the module can be achieved through RPL

SECTION 3C: WORK EXPERIENCE MODULE SPECIFICATIONS

List of Work Experience Module Specifications

- 684305000-WM-01, Induction, Company Processes and Inspection Procedures, NQF Level 3, Credits 16
- 684305000-WM-02, Input and Output Quality Control, NQF Level 4, Credits 20
- 684305000-WM-03, Process Input and Product/Service Testing, NQF Level 4, Credits 22
- 684305000-WM-04, Data Analysis, Fault Finding and Recommendations for Non-conformances, NQF Level 4, Credits 22

1. 684305000-WM-01, Induction, Company Processes and Inspection Procedures, NQF Level 3, Credits 16

1.1 Purpose of the Work Experience Modules

The focus of the work experience is on providing the learner an opportunity to:

Attend induction and familiarise self with company processes and product/service

The learner will be required to:

- WM-01-WE01: Attend and participate in induction process according to company policies
- WM-01-WE02: Gather information and quality specifications on the operation of the various resources on the operation floor/site and familiarise self with the function thereof
- WM-01-WE03: Gather data on the construction of the product/service and the customer requirements impacting on the product/service to familiarise self with the product/service requirements
- WM-01-WE04: Gather information on input requirements of various product/service produced by the company (gas, liquids, solids, etc.)
- WM-01-WE05: Observe operators performing duties according to company SOP
- WM-01-WE06: Gather information on the flow and sequence of operations (upstream and downstream) in the company from receipt of input to delivery of product/service
- WM-01-WE07: Be exposed to various departments, inputs and all types of product/service

1.2 Guidelines for Work Experiences

1.2.1. WM-01-WE01: Attend and participate in induction process according to company policies

Scope of Work Experience

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

- WA0101 Receive induction on company specific HR policies, legislation, LRA and legislation pertaining to company product/service
- WA0102 Participate in departmental induction
- WA0103 Familiarise self with the industry jargon and terminology
- WA0104 Be introduced to an assigned mentor (ideally a quality controller)
- WA0105 Attend session with mentor to discuss agreed KPA's – what the learner will be doing throughout period. KPA's will be aligned with qualification requirements
- WA0106 Mentor and mentee will go through the logbook and make recommendations as per SOP
- WA0107 Be briefed in detail on health and safety procedures
- WA0108 Schedule coaching and mentoring sessions between mentor and mentee

Supporting Evidence

- SE0101 Attendance register

- SE0102 Schedule of coaching and mentoring sessions

1.2.2. WM-01-WE02: Gather information and quality specifications on the operation of the various resources on the operation floor/site and familiarise self with the function thereof

Scope of Work Experience

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

- WA0201 Identify the various resources used during operation on the operation floor/site
- WA0202 Identify the functions of all resources
- WA0203 Conduct a resources appraisal of all resources used on site/floor to understand the resources capacities
- WA0204 Read manufacturer specifications and manual to determine quality specifications and resources settings

Supporting Evidence

- SE0201 Attendance register
- SE0202 List of resources
- SE0203 Resources appraisal report

1.2.3. WM-01-WE03: Gather data on the construction of the product/service and the customer requirements impacting on the product/service to familiarise self with the product requirements

Scope of Work Experience

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

- WA0301 Analyse the construction/operation process of a product/service to identify the various operations, resources and input required using samples or prototypes, sketches, master sample and technical packs
- WA0302 Study and interpret customer requirements related to the product/service
- WA0303 Compile a sequence of operations for the product/service (flow chart)

Supporting Evidence

- SE0301 Report on the range of operations, resources and input types

1.2.4. WM-01-WE04: Gather information on input requirements of various product/service produced by the company (gas, liquids, solids, etc.)

Scope of Work Experience

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

- WA0401 Identify various input used during operation

- WA0402 Identify uses and characteristics of input
- WA0403 Study and interpret input specifications and certification methods and documents
- WA0404 Identify the various resources used and assess resources settings to meet the required standard
- WA0405 Allocate resources for all operations according to input characteristics and for meeting required standards

Supporting Evidence

- SE0401 List of input and its respective requirements

1.2.5. WM-01-WE05: Observe operators performing duties according to company SOP

Scope of Work Experience

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

- WA0501 Study and interpret the KPA of the company
- WA0502 Study and interpret SOPs
- WA0503 Identify individual resources operators and their respective tasks in terms of SOP and operation flow
- WA0504 Observe performance of operators on specific operations and resources
- WA0505 Gather information on product/service or process quality
- WA0506 Identify real or potential skills gaps in relation to product/service and operation quality

Supporting Evidence

- SE0501 Completed observation checklist

1.2.6. WM-01-WE06: Gather information on the flow and sequence of operations (upstream and downstream) in the company from receipt of input to delivery of product/service

Scope of Work Experience

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

- WA0601 Visit, observe and record the operations in each department of the company
- WA0602 Draw a flow diagram of all processes (could use pictures) within the company indicating the interdependency of the process aspects
- WA0603 Identify the interrelation of all departments and the impact they have on each other's performance

Supporting Evidence

- SE0601 Flow diagram and sequence of operations

1.2.7. WM-01-WE07: Be exposed to various departments, inputs and all types of product/service

Scope of Work Experience

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

- WA0701 Attend and observe operations in all departments (spend time in warehouse and observe quantities of inputs paying attention to matters such as shelf life, FIFO, etc.)
- WA0702 Be exposed to all types of product/service – e.g. liquids, powders, tablets, (characteristics, components, requirements, specifications)
- WA0703 Be exposed to inputs and its characteristics

Supporting Evidence

- SE0701 Attendance register
- SE0702 Written report/checklist on observations

1.3 Contextualised Workplace Knowledge

1. Product/service characteristics and requirements
2. Workplace specific logbook
3. Customer and legal requirements for inputs, product/service and components
4. Legislation (specific to the workplace and product/service)
5. Resources and operation processes
6. Input characteristics
7. Standard operating procedures (SOP)
8. Operation plan and meetings
9. Reporting structures and protocols
10. Quality assurance policies
11. Key performance areas (KPA) for the QC

1.4 Criteria for Workplace Approval

Physical Requirements:

- Tools, resources, systems, e.g.: Access to operation line or service process, product/service and process specifications
- Key processes, e.g.: induction processes, QC processes, inspection processes

Human Resource Requirements:

- Maximum mentor/learner ratio of 1:5

- Mentor: Quality controller with 3 years of experience in QC

Legal Requirements:

- Compliance with all occupational health and safety standards
- Compliance with products/process/service regulatory requirements

1.5 Additional Assignments to be Assessed Externally

None

2. 684305000-WM-02, Input and Output Quality Control, NQF Level 4, Credits 20

2.1 Purpose of the Work Experience Modules

The focus of the work experience is on providing the learner with an opportunity to:

Conduct input and output quality control to detect non-conforming product/service, process or input and make recommendations to address any deviations from product/service specifications

The learner will be required to:

- WM-02-WE01: Shadow experienced QC by observing activities performed to determine conformance or non-conformance of product/service, process, input and resources
- WM-02-WE02: Attend and participate in shift handover activity and consider reports from previous shift
- WM-02-WE03: Prepare for daily QC activities
- WM-02-WE04: Conduct QC inspections of inputs, outputs and first-off and last-off items to establish conformance with specifications of product/service, process and inputs
- WM-02-WE05: Ensure documentation for QC products, process and service changes (change from product/service a to b) is available (if applicable)
- WM-02-WE06: Recognise and report on quality problems in work area. Quality problems include problems related to input, product/service-in-progress, final product/service and resources functioning
- WM-02-WE07: Demonstrate control of non-conforming product/service (identify, quarantine) in cases of area problems
- WM-02-WE08: Conduct safety and environmental quality inspections

2.2 Guidelines for Work Experiences

2.2.1. WM-02-WE01: Shadow experienced QC by observing activities being performed to determine conformance or non-conformance of, product/service process, input and resources

Scope of Work Experience

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

- WA0101 Attend regular planning meetings
- WA0102 Observe QC conducting measuring activities using product/service specifications and determine conformity/non-conformity
- WA0103 Observe QC inspecting input using product/service specifications and determine conformity/non-conformity
- WA0104 Observe QC inspecting output product/service using product/service specifications and determine conformity/non-conformity
- WA0105 Observe QC comparing first-off and last-off product/service using product/service specifications and determine conformity/non-conformity
- WA0106 Observe QC collect and record data to ensure accuracy and currency to meet traceability standards

- WA0107 Observe QC accept or reject inspected or tested items

Supporting Evidence

- SE0101 Attendance register
- SE0102 Quality Inspection checklists

2.2.2. WM-02-WE02: Attend and participate in shift handover activity and consider reports from previous shift

Scope of Work Experience

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

- WA0201 Conduct shift hand-over procedures (meeting between outgoing and incoming quality controllers at start and end of the shift) ensuring transfer of all responsibilities. (Log that must be signed by both parties.)
- WA0202 Attend daily shift meetings where the shift foreman or manager informs the team of matters e.g. operation plan for the shift/day/week, permit to work outstanding, progress, etc.
- WA0203 Conduct daily work according to company operation/QC plan and attend to all technicalities/events that occurred,
- WA0204 Ensure compliance with housekeeping standards

Supporting Evidence

- SE0201 Attendance register
- SE0202 Signed shift handover documentation including logbook and checklist

2.2.3. WM-02-WE03: Prepare for daily QC activities

Scope of Work Experience

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

- WA0301 Ensure correct work instruction is applied
- WA0302 Read and interpret reports including operation specifications, tolerances, reports, checklists
- WA0303 Ensure information is available and accessible in cases of product/service changes
- WA0304 Ensure latest version of work instruction is available
- WA0305 Ensure availability of measuring tools
- WA0306 Implement operation plan – to plan QC for the day, what tests, what resources, etc.
- WA0307 Attend operation meetings – ensure all relevant documents are displayed

Supporting Evidence

- SE0301 Quality Control checklist

- SE0302 Attendance register of meetings

2.2.4. WM-02-WE04: Conduct quality inspections of inputs, input and output product/service, first-off and last-off items to establish conformance with specifications of product/service, process and input

Scope of Work Experience

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

- WA0401 Conduct measuring activities using product/service specifications and determine conformity/non-conformity
- WA0402 Perform quality control on inputs using product/service specifications and determine conformity/non-conformity
- WA0403 Conduct input and output quality control using measuring tools, checklists and master references applying correct frequency and sequence
- WA0404 Compare first-off and last-off product/service using product/service specifications and determine conformity/non-conformity
- WA0405 Quality check packaged final product/service against criteria
- WA0406 Quality check compliance with environmental requirements when product/service are in storage
- WA0407 Conduct visual quality checks against quality criteria
- WA0408 Collect data and keep records to ensure accuracy and currency and meeting of traceability standards
- WA0409 Identify quality problems and any conditions that present a threat to maintaining standards
- WA0410 Release the product/service (certificate of compliance or using the relevant MRP system)

Supporting Evidence

- SE0401 Activity checklists

2.2.5. WM-02-WE05: Ensure documentation for QC products, process and service changes (change from product/service a to b) is available (if applicable)

Scope of Work Experience

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

- WA0501 Conduct input and/or output quality checks for conformity with specifications and standards (product/service changes)
- WA0502 Access product/service requirements and job specifications
- WA0503 Ensure product/service requirements and job specifications are followed
- WA0504 Access available information in cases of product/service changes according to standard operating procedures

- WA0505 Check if sequence as per flow diagram/chart has been applied
- WA0506 Interpret technical data sheet of new product/service (product/service for processors and old product/service) that come from the processing engineer
- WA0507 Perform an input check ensuring it is up-to-standard when product/service change
- WA0508 Conduct task observations to ascertain if all steps have been followed and complete checklist as evidence
- WA0509 Check all operation information is available and it is correct
- WA0510 Determine relevant and latest version of work instruction is used during operations
- WA0511 Attend daily operations meetings attended by quality controller
- WA0512 Read or be aware of in-house communication and internal systems with regard to updates in product/service, work-instructions, standard operating procedures
- WA0513 Attend weekly or monthly (planning) sessions
- WA0514 Check new product/service codes and ensure all documentation is fully aligned with the new product/service codes
- WA0515 Perform quality control of flushing of the line, (scouring or washing of resources) ensuring line clearance to prevent contamination

Supporting Evidence

- SE0501 Quality control reports
- SE0502 MOC report
- SE0503 Completed checklist

2.2.6. WM-02-WE06: Recognise and report on quality problems in work area. Quality problems include problems related to input, product/service-in-progress, final product/service and resources functioning

Scope of Work Experience

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

- WA0601 Observe and quality check process, product/service and input during various stages of operation
- WA0602 Identify quality problems
- WA0603 Identify conditions that present a threat to quality maintenance
- WA0604 Comment on deviations/non- conformances and formulate action plans to address and prevent future occurrences
- WA0605 Inform appropriate parties
- WA0606 Conduct a process audit to make sure all the resources are working (from the start of the process – inputs to final product/service)

Supporting Evidence

- SE0601 Quality control checklist

2.2.7. WM-02-WE07: Demonstrate control of non-conforming product/service (identify, quarantine) in cases of area problems

Scope of Work Experience

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

- WA0701 Identify procedure for controlling non-conforming product/service
- WA0702 Segregate non-conforming product/service
- WA0703 Ensure no possibility of mixing non-conforming with conforming product/service using quarantine area

Supporting Evidence

- SE0701 SOP

2.2.8. WM-02-WE08: Conduct safety and environmental quality inspections

Scope of Work Experience

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

- WA0801 Wear appropriate PPE at all times
- WA0802 Observing environment (safety) and surroundings of infrastructure, including emergency processes

Supporting Evidence

- SE0801 Appropriate PPE

2.3 Contextualised Workplace Knowledge

1. Product/service characteristics and requirements
2. Workplace specific logbook
3. Customer and legal requirements for inputs, product/service and components
4. Legislation (specific to the workplace and product/service)
5. Resources and operation processes
6. Input characteristics
7. Standard operating procedures (SOP)
8. Operation plan and meetings

9. Reporting structures and protocols
10. Quality assurance policies
11. Key performance areas (KPA) for the QC

2.4 Workplace Criteria

Physical Requirements:

- Tools, resources, systems, e.g.: Access to operation line or service process, product/service and process specifications
- Key processes, e.g.: induction processes, QC processes, inspection processes

Human Resource Requirements:

- Maximum mentor/learner ratio of 1:5
- Mentor: Quality controller with 3 years of experience in QC

Legal Requirements:

- Compliance with all occupational health and safety standards
- Compliance with products/process/service regulatory requirements

2.5 Additional Assignments to be Assessed Externally

None

3. 684305000-WM-03, Process Input and Product/Service Testing, NQF Level 4, Credits 22

3.1 Purpose of the Work Experience Modules

The focus of the work experience is on providing the learner an opportunity to:

Test incoming product/service and process inputs in various stages of operation as well as finished product/service to assess conformity to specifications and make recommendations to address any deviations from product/service specifications

The learner will be required to:

- WM-03-WE01: Shadow experienced QC and observe conducting of sample taking activities
- WM-03-WE02: Conduct sample taking procedures by adhering to internal/external sampling procedures
- WM-03-WE03: Shadow experienced QC and observe **testing** of incoming product/service and process inputs at various stages of operation and the final product/service to ensure conformity with customer specifications and industry standards
- WM-03-WE04: Test incoming product/service and process inputs at various stages of operation as well as the final product/service to ensure conformity with customer specifications and industry standards

3.2 Guidelines for Work Experiences

3.2.1. WM-03-WE01: Shadow experienced QC and observe conducting of sample taking activities

Scope of Work Experience

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

- WA0101 Observe QC interpreting and applying sampling plans (where applicable)
- WA0102 Observe QC conducting sampling procedures following frequency requirements (number of intervals and number of samples)
- WA0103 Observe QC taking representative samples
- WA0104 Observe QC conducting acceptance sampling procedures
- WA0105 Observe QC conducting in-process sampling procedures

Supporting Evidence

- SE0101 Both parties to sign a SOP or checklist

3.2.2. WM-03-WE02: Conduct sample taking procedures by adhering to internal/external sampling procedures

Scope of Work Experience

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

- WA0201 Interpret and apply sampling plans

- WA0202 Conduct sampling procedures following frequency requirements (number of intervals and number of samples)
- WA0203 Take representative samples
- WA0204 Conduct acceptance sampling procedures
- WA0205 Conduct in-process sampling procedures

Supporting Evidence

- SE0201 Properly labelled and packaged samples

3.2.3. WM-03-WE03: Shadow experienced QC and observe testing of incoming product/service and process inputs at various stages of operation and the final product/service to ensure conformity with customer specifications and industry standards

Scope of Work Experience

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

- WA0301 Observe QC checking and identifying calibration compliance (out of specification) of testing resources and setting up of testing resources prior to testing
- WA0302 Observe QC planning and setting up testing activity to investigate quality issues and recommend changes
- WA0303 Observe QC performing tests appropriate to product/service and process using testing resources to ensure conformance
- WA0304 Observe QC performing alternative test methods
- WA0305 Observe QC performing stability testing on retained samples as proactive step to avoid complaints
- WA0306 Observe QC introducing new test method or new technology by applying acceptable testing and quality inspection procedures: management of change (MOC)
- WA0307 Observe QC collating and summarising data and compiling reports
- WA0308 Observe QC analysing test results and identifying process, product/service and input non-conformances
- WA0309 Observe QC ensuring corrective action is taken by the responsible parties
- WA0310 Observe QC validating input, prescribed method or new technology by using appropriate testing and quality inspection procedures – management of change (MOC) (make sure all protocols are in place and ensure the product/service are compliant)

Supporting Evidence

- SE0301 Test results
- SE0302 Attendance register
- SE0303 Observation checklist

3.2.4. WM-03-WE04: Test incoming product/service and process inputs at various stages of operation as well as the final product/service to ensure conformity with customer specifications and industry standards

Scope of Work Experience

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

- WA0401 Ensure availability of testing resources
- WA0402 Verify the calibration of resources (weekly)
- WA0403 Check and identify calibration compliance (out of specification) of measuring resources and set up quality inspection resources prior to testing
- WA0404 Plan and set up testing activity to investigate quality issues and recommend changes
- WA0405 Maintain testing resources (housekeeping and storage)
- WA0406 Perform tests appropriate to product/service and process using testing resources to ensure conformance
- WA0407 Perform alternative test methods
- WA0408 Perform stability testing on retained samples as proactive step to avoid complaints
- WA0409 Test product/service in various stages of operation to ensure conformance
- WA0410 Test final processed product/service to ensure conformance
- WA0411 Apply new test method or new technology by applying acceptable testing and quality inspection procedures: management of change (MOC)
- WA0412 Collate and summarise data and compile reports
- WA0413 Analyse test results and identify process, incoming product/service and process inputs non-conformances
- WA0414 Ensure that corrective action is taken by the responsible parties
- WA0415 Validate incoming product/service process inputs, prescribed method or new technology by using appropriate testing and quality inspection procedures – management of change (MOC) (make sure all protocols are in place and ensure the product/service are compliant)
- WA0416 Generate non-conformance reports
- WA0417 Notify supervisors or other personnel of operation problems
- WA0418 Recommend necessary corrective actions, based on quality inspection results.

Supporting Evidence

- SE0401 Test results and analysis
- SE0402 Report

3.3 Contextualised Workplace Knowledge

1. Product/service characteristics and requirements
2. Workplace specific logbook
3. Customer and legal requirements for process inputs, product/service and components
4. Legislation (specific to the workplace and product/service)
5. Resources and operation processes
6. Process inputs characteristics
7. Standard operating procedures (SOP)
8. Operation plan and meetings
9. Reporting structures and protocols
10. Quality assurance policies
11. Key performance areas (KPA) for the QC

3.4 Criteria for Workplace Approval

Physical Requirements:

- Tools, resources, systems, e.g.: Access to operation line or service process, product/service and process specifications
- Key processes, e.g.: induction processes, QC processes, inspection processes

Human Resource Requirements:

- Maximum mentor/learner ratio of 1:5
- Mentor: Quality controller with 3 years of experience in QC

Legal Requirements:

- Compliance with all occupational health and safety standards
- Compliance with products/process/service regulatory requirements

3.5 Additional Assignments to be Assessed Externally

None

4. 684305000-WM-04, Data Analysis, Fault Finding and Recommendations for Non-conformances, NQF Level 4, Credits 22

4.1 Purpose of the Work Experience Modules

The focus of the work experience is on providing the learner an opportunity to:

Investigate non-conformance performing root cause analyses, identify the most likely cause of deviation and recommend corrective action to address non-conformances

The learner will be required to:

- WM-04-WE01: Shadow and observe the experienced QC conducting data gathering and analysis activities and presentation of information
- WM-04-WE02: Conduct data gathering and analyses and presentation of information
- WM-04-WE03: Shadow and observe the experienced QC identifying the most likely cause of non-conformance and recommending corrective action
- WM-04-WE04: Identify the most likely cause of non-conformance and recommend corrective action

4.2 Guidelines for Work Experiences

4.2.1. WM-04-WE01: Shadow and observe the experienced QC conducting data gathering and analysis activities and presentation of information

Scope of Work Experience

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

- WA0101 Observe QC interpreting data sheets, drawings, specification sheets, reports, operation information, laboratory results
- WA0102 Observe QC examining different types of data e.g. test results, observation sheet, MSDS hazardous substances, trends, information on batch cards, etc.
- WA0103 Observe QC observing operators performing duties to gather information on product/service or process quality and to determine adherence to SOP
- WA0104 Observe QC conducting an interview to collect information for quality analysis
- WA0105 Observe QC planning and preparing for performing data analysis
- WA0106 Observe QC conducting trend analysis
- WA0107 Observe QC conducting statistical process control
- WA0108 Observe QC presenting information using appropriate means (e.g. plots, tables, graphs, spreadsheets, Word)

Supporting Evidence

- SE0101 Both parties to sign SOP or checklist

4.2.2. WM-04-WE02: Conduct data gathering and analyses and presentation of information

Scope of Work Experience

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

- WA0201 Interpret data sheets, drawings, specification sheets, reports, operation information, laboratory results
- WA0202 Examine different types of data i.e. test results, observation sheet, MDS – hazardous substances, trends, information on batch cards, etc.
- WA0203 Observe operators performing duties to gather information on product/service or process quality and to determine adherence to SOP
- WA0204 Conduct an interview to collect information for quality analysis
- WA0205 Plan and prepare for performing data analysis
- WA0206 Conduct trend analysis
- WA0207 Perform statistical process control
- WA0208 Present information using communication skills and appropriate means (e.g. plots, tables, graphs, spreadsheets, word)

Supporting Evidence

- SE0201 Report with relevant attachments

4.2.3. WM-04-WE03: Shadow and observe the experienced QC identifying the most likely cause of non-conformance and recommending corrective action

Scope of Work Experience

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

- WA0301 Observe QC identifying and investigating causes of non-conformance
- WA0302 Observe QC identifying root cause and perform trouble-shooting procedures
- WA0303 Observe QC working with a team to investigate problems/deviations and find solutions
- WA0304 Observe QC working as part of a team to review effectiveness of the corrective action and ensuring implementation
- WA0305 Observe QC conducting information sharing to prevent recurrence – element of awareness creation – and keeping record of it

Supporting Evidence

- SE0301 Both parties to sign SOP or checklist

4.2.4. WM-04-WE04: Identify the most likely cause of non-conformance and recommend corrective action

Scope of Work Experience

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

- WA0401 Identify and investigate causes of non-conformance
- WA0402 Identify root cause and perform trouble shooting procedure
- WA0403 Work with a team to investigate problems/deviations and find solutions
- WA0404 As part of team review effectiveness of the corrective action and ensure implementation
- WA0405 Conduct an information sharing and awareness creation session/meeting to prevent recurrence and keep record of it
- WA0406 Complete a check sheet to confirm everything is in order

Supporting Evidence

- SE0401 Report with relevant attachments and supporting documents

4.3 Contextualised Workplace Knowledge

1. Product/service characteristics and requirements
2. Workplace specific logbook
3. Customer and legal requirements for incoming product/service, process inputs and components
4. Legislation (specific to the workplace and product/service)
5. Resources and operation processes
 - Input characteristics
6. Standard operating procedures (SOP)
7. Operation plan and meetings
8. Reporting structures and protocols
9. Quality assurance policies
10. Key performance areas (KPA) for the QC

4.4 Criteria for Workplace Approval

Physical Requirements:

- Tools, resources, systems, e.g.: Access to operation line or service process, product/service and process specifications
- Key processes, e.g.: induction processes, QC processes, inspection processes

Human Resource Requirements:

- Maximum mentor/learner ratio of 1:5
- Mentor: Quality controller with 3 years of experience in QC

Legal Requirements:

- Compliance with all occupational health and safety standards

- Compliance with products/process/service regulatory requirements

4.5 Additional Assignments to be Assessed Externally

None

SECTION 4: STATEMENT OF WORK EXPERIENCE

Curriculum Number:	684305000
Curriculum Title:	Quality Controller

Learner Details	
Name:	
ID Number:	

Employer Details	
Company Name:	
Address:	
Supervisor Name:	
Work Telephone:	
E-Mail:	

WM-01-WE01	Attend and participate in induction process according to company policies		
	Scope of Work Experience	Date	Signature
WA0101	Receive induction on company specific HR policies, legislation, LRA and legislation pertaining to company product/service		
WA0102	Participate in departmental induction		
WA0103	Familiarise self with the industry jargon and terminology		
WA0104	Be introduced to an assigned mentor (ideally a quality controller)		
WA0105	Attend session with mentor to discuss agreed KPA's – what the learner will be doing throughout period. KPA's will be aligned with qualification requirements		
WA0106	Mentor and mentee will go through the logbook and make recommendations as per SOP		
WA0107	Be briefed in detail on health and safety procedures		
WA0108	Schedule coaching and mentoring sessions between mentor and mentee		
	Supporting Evidence	Date	Signature
SE0101	Attendance register		
SE0102	Schedule of coaching and mentoring sessions		
WM-01-WE02	Gather information and quality specifications on the operation of the various resources on the operation floor/site and familiarise self with the function thereof		
	Scope of Work Experience	Date	Signature
WA0201	Identify the various resources used during operation on the operation floor/site		

WA0202	Identify the functions of all resources		
WA0203	Conduct a resources appraisal of all resources used on site/floor to understand the resources capacities		
WA0204	Read manufacturer specifications and manual to determine quality specifications and resources settings		
	Supporting Evidence	Date	Signature
SE0201	Attendance register		
SE0202	List of resources		
SE0203	Resources appraisal report		
WM-01-WE03	Gather data on the construction of the product/service and the customer requirements impacting on the product/service to familiarise self with the product/service requirements		
	Scope of Work Experience	Date	Signature
WA0301	Analyse the construction/operation process of a product/service to identify the various operations, resources and input required using samples or prototypes, sketches, master sample and technical packs		
WA0302	Study and interpret customer requirements related to the product/service		
WA0303	Compile a sequence of operations for the product/service (flow chart)		
	Supporting Evidence	Date	Signature
SE0301	Report on the range of operations, resources and input types		
WM-01-WE04	Gather information on input requirements of various product/service produced by the company (gas, liquids, solids, etc.)		
	Scope of Work Experience	Date	Signature

WA0401	Identify various inputs used during operation		
WA0402	Identify uses and characteristics of input		
WA0403	Study and interpret input specifications and certification methods and documents		
WA0404	Identify the various resources used and assess resources settings to meet the required standard		
WA0405	Allocate resources for all operations according to input characteristics and for meeting required standards		
	Supporting Evidence	Date	Signature
SE0401	List of input and its respective requirements		
WM-01-WE05	Observe operators performing duties according to company SOP		
	Scope of Work Experience	Date	Signature
WA0501	Study and interpret the KPA of the company		
WA0502	Study and interpret SOPs		
WA0503	Identify individual resources operators and their respective tasks in terms of SOP and operation flow		
WA0504	Observe performance of operators on specific operations and resources		
WA0505	Gather information on product/service or process quality		
WA0506	Identify real or potential skills gaps in relation to product/service and operation quality		
	Supporting Evidence	Date	Signature
SE0501	Completed observation checklist		
WM-01-WE06	Gather information on the flow and sequence of operations (upstream and downstream) in the		

	company from receipt of input to delivery of product/service		
	Scope of Work Experience	Date	Signature
WA0601	Visit, observe and record the operations in each department of the company		
WA0602	Draw a flow diagram of all processes (could use pictures) within the company indicating the interdependency of the process aspects		
WA0603	Identify the interrelation of all departments and the impact they have on each other's performance		
	Supporting Evidence	Date	Signature
SE0601	Flow diagram and sequence of operations		
WM-01-WE07	Be exposed to various departments, inputs and all types of product/service		
	Scope of Work Experience	Date	Signature
WA0701	Attend and observe operations in all departments (spend time in warehouse and observe quantities of inputs paying attention to matters such as shelf life, FIFO, etc.)		
WA0702	Be exposed to all types of product/service – e.g. liquids, powders, tablets, (characteristics, components, requirements, specifications)		
WA0703	Be exposed to inputs and its characteristics		
	Supporting Evidence	Date	Signature
SE0701	Attendance register		
SE0702	Written report/checklist on observations		

Contextualised Workplace Knowledge	Date	Signature
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1. Product/service characteristics and requirements		
2. Workplace specific logbook		
3. Customer and legal requirements for inputs, product/service and components		
4. Legislation (specific to the workplace and product/service)		
5. Resources and operation processes		
6. Input characteristics		
7. Standard operating procedures (SOP)		
8. Operation plan and meetings		
9. Reporting structures and protocols		
10. Quality assurance policies		
11. Key performance areas (KPA) for the QC		

	Additional Assignments to be Assessed Externally	Date	Signature
	None		

684305000-WM-02, Input and Output Quality Control, NQF Level 4, Credits 20

WM-02-WE01	Shadow experienced QC by observing activities performed to determine conformance or non-conformance of product/service, process, input and resources		
	Scope of Work Experience	Date	Signature
WA0101	Attend regular planning meetings		

WA0102	Observe QC conducting measuring activities using product/service specifications and determine conformity/non-conformity		
WA0103	Observe QC inspecting input using product/service specifications and determine conformity/non-conformity		
WA0104	Observe QC inspecting output product/service using product/service specifications and determine conformity/non-conformity		
WA0105	Observe QC comparing first-off and last-off product/service using product/service specifications and determine conformity/non-conformity		
WA0106	Observe QC collect and record data to ensure accuracy and currency to meet traceability standards		
WA0107	Observe QC accept or reject quality inspected or tested items		
	Supporting Evidence	Date	Signature
SE0101	Attendance register		
SE0102	Quality Inspection checklists		
WM-02-WE02	Attend and participate in shift handover activity and consider reports from previous shift		
	Scope of Work Experience	Date	Signature
WA0201	Conduct shift hand-over procedures (meeting between outgoing and incoming quality controllers at start and end of the shift) ensuring transfer of all responsibilities. (Log that must be signed by both parties.)		
WA0202	Attend daily shift meetings where the shift foreman or manager informs the team of matters e.g. operation plan for the shift/day/week, permit to work outstanding, progress, etc.		
WA0203	Conduct daily work according to company operation/QC plan and attend to all technicalities/events that occurred,		

WA0204	Ensure compliance with housekeeping standards		
	Supporting Evidence	Date	Signature
SE0201	Attendance register		
SE0202	Signed shift hand-over documentation including logbook and checklist		
WM-02-WE03	Prepare for daily QC activities		
	Scope of Work Experience	Date	Signature
WA0301	Ensure correct work instruction is applied		
WA0302	Read and interpret reports including operation specifications, tolerances, reports, checklists		
WA0303	Ensure information is available and accessible in cases of product/service changes		
WA0304	Ensure latest version of work instruction is available		
WA0305	Ensure availability of measuring tools		
WA0306	Implement operation plan – to plan QC for the day, what tests, what resources, etc.		
WA0307	Attend operation meetings – ensure all relevant documents are displayed		
	Supporting Evidence	Date	Signature
SE0301	Quality control checklist		
SE0302	Attendance register of meetings		
WM-02-WE04	Conduct quality inspections of inputs, input and output product/service, first-off and last-off items to establish conformance with specifications of product/service, process and inputs		
	Scope of Work Experience	Date	Signature
WA0401	Conduct measuring activities using product/service specifications and determine conformity/non		

WA0402	Perform quality control on inputs using product/service specifications and determine conformity/non-conformity		
WA0403	Conduct input and output quality control using measuring tools, checklists and master references applying correct frequency and sequence		
WA0404	Compare first-off and last-off product/service using product/service specifications and determine conformity/non-conformity		
WA0405	Quality check packaged final product/service against specification		
WA0406	Quality check compliance with environmental requirements when product/service are in storage		
WA0407	Conduct visual quality checks against specification		
WA0408	Collect data and keep records to ensure accuracy and currency and meeting of traceability standards		
WA0409	Identify quality problems and any conditions that present a threat to maintaining standards		
WA0410	Release the product/service (certificate of compliance or using the relevant MRP system)		
	Supporting Evidence	Date	Signature
SE0401	Activity checklists		
WM-02-WE05	Ensure documentation for QC products, process and service changes (change from product/service a to b) is available (if applicable)		
	Scope of Work Experience	Date	Signature
WA0501	Conduct inline and/or end-line quality checks for conformity with specifications and standards (product/service changes)		
WA0502	Access product/service requirements and job specifications		

WA0503	Ensure product/service requirements and job specifications are followed		
WA0504	Access available information in cases of product/service changes according to standard operating procedures		
WA0505	Check if sequence as per flow diagram/chart has been applied		
WA0506	Interpret technical data sheet of new product/service (product/service for processors and old product/service) that come from the processing engineer		
WA0507	Perform an input check ensuring it is up-to-standard when product/service change		
WA0508	Conduct task observations to ascertain if all steps have been followed and complete checklist as evidence		
WA0509	Check all operation information is available and it is correct		
WA0510	Determine relevant and latest version of work instruction is used during operations		
WA0511	Attend daily operations meetings attended by quality controller		
WA0512	Read or be aware of in-house communication and internal systems with regard to updates in product/service, work-instructions, standard operating procedures		
WA0513	Attend weekly or monthly (planning) sessions		
WA0514	Check new product/service codes and ensure all documentation is fully aligned with the new product/service codes		
WA0515	Perform quality control of flushing of the line, (scouring or washing of resources) ensuring line clearance to prevent contamination		
	Supporting Evidence	Date	Signature

SE0501	Quality control reports		
SE0502	MOC report		
SE0503	Completed checklist		
WM-02-WE06	Recognise and report on quality problems in work area. Quality problems include problems related to input, product/service-in-progress, final product/service and resources functioning		
	Scope of Work Experience	Date	Signature
WA0601	Observe and quality check process, product/service and input during various stages of operation		
WA0602	Identify quality problems		
WA0603	Identify conditions that present a threat to quality maintenance		
WA0604	Comment on deviations/non- conformances and formulate action plans to address and prevent future occurrences		
WA0605	Inform appropriate parties		
WA0606	Conduct a process audit to make sure all the resources are working (from the start of the process – inputs to final product/service)		
	Supporting Evidence	Date	Signature
SE0601	Quality Control checklist		
WM-02-WE07	Demonstrate control of non-conforming product/service (identify, quarantine) in cases of area problems		
	Scope of Work Experience	Date	Signature
WA0701	Identify procedure for controlling non-conforming product/service		
WA0702	Segregate non-conforming product/service		

WA0703	Ensure no possibility of mixing non-conforming with conforming product/service using quarantine area		
	Supporting Evidence	Date	Signature
SE0701	SOP		
WM-02-WE08	Conduct safety and environmental quality inspections		
	Scope of Work Experience	Date	Signature
WA0801	Wear appropriate PPE at all times		
WA0802	Observing environment (safety) and surroundings of infrastructure, including emergency processes		
	Supporting Evidence	Date	Signature
SE0801	Appropriate PPE		

Contextualised Workplace Knowledge	Date	Signature
1. Product/service characteristics and requirements		
2. Workplace specific logbook		
3. Customer and legal requirements for inputs, product/service and components		
4. Legislation (specific to the workplace and product/service)		
5. Resources and operation processes		
6. Input characteristics		
7. Standard operating procedures (SOP)		
8. Operation plan and meetings		
9. Reporting structures and protocols		
10. Quality assurance policies		

11. Key performance areas (KPA) for the QC		
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	Additional Assignments to be Assessed Externally	Date	Signature
	None		

684305000-WM-03, Process Input and Product/Service Testing, NQF Level 4, Credits 22

WM-03-WE01	Shadow experienced QC and observe conducting of sample taking activities		
	Scope of Work Experience	Date	Signature
WA0101	Observe QC interpreting and applying sampling plans		
WA0102	Observe QC conducting sampling procedures following frequency requirements (number of intervals and number of samples)		
WA0103	Observe QC taking representative samples		
WA0104	Observe QC conducting acceptance sampling procedures		
WA0105	Observe QC conducting in-process sampling procedures		
	Supporting Evidence	Date	Signature
SE0101	Both parties to sign a SOP or checklist		
WM-03-WE02	Conduct sample taking procedures by adhering to internal/external sampling procedures		
	Scope of Work Experience	Date	Signature
WA0201	Interpret and apply sampling plans		

WA0202	Conduct sampling procedures following frequency requirements (number of intervals and number of samples)		
WA0203	Take representative samples		
WA0204	Conduct acceptance sampling procedures		
WA0205	Conduct in-process sampling procedures		
	Supporting Evidence	Date	Signature
SE0201	Properly labelled and packaged samples		
WM-03-WE03	Shadow experienced QC and observe testing of incoming product/service and process inputs at various stages of operation and the final product/service to ensure conformity with customer specifications and industry standards		
	Scope of Work Experience	Date	Signature
WA0301	Observe QC checking and identifying calibration compliance (out of specification) of testing resources and setting up of testing resources prior to testing		
WA0302	Observe QC planning and setting up testing activity to investigate quality issues and recommend changes		
WA0303	Observe QC performing tests appropriate to product/service and process using testing resources to ensure conformance		
WA0304	Observe QC performing alternative test methods		
WA0305	Observe QC performing stability testing on retained samples as proactive step to avoid complaints		
WA0306	Observe QC introducing new test method or new technology by applying acceptable testing and quality inspection procedures: management of change (MOC)		
WA0307	Observe QC collating and summarising data and compiling reports		

WA0308	Observe QC analysing test results and identifying process, product/service and input non-conformances		
WA0309	Observe QC ensuring corrective action is taken by the responsible parties		
WA0310	Observe QC validating input, prescribed method or new technology by using appropriate testing and quality inspection procedures – management of change (MOC) (make sure all protocols are in place and ensure the product/service are compliant)		
	Supporting Evidence	Date	Signature
SE0301	Test results		
SE0302	Attendance register		
SE0303	Observation checklist		
WM-03-WE04	Test incoming product/service and process inputs at various stages of operation as well as the final product/service to ensure conformity with customer specifications and industry standards		
	Scope of Work Experience	Date	Signature
WA0401	Ensure availability of testing tools		
WA0402	Verify the calibration of resources (weekly)		
WA0403	Check and identify calibration compliance (out of specification) of measuring resources and set up quality inspection resources prior to testing		
WA0404	Plan and set up testing activity to investigate quality issues and recommend changes		
WA0405	Maintain testing resources (housekeeping and storage)		
WA0406	Perform tests appropriate to product/service and process using testing resources to ensure conformance		
WA0407	Perform alternative test methods		

WA0408	Perform stability testing on retained samples as proactive step to avoid complaints		
WA0409	Test product/service in various stages of operation to ensure conformance		
WA0410	Test final processed product/service to ensure conformance		
WA0411	Apply new test method or new technology by applying acceptable testing and quality inspection procedures: management of change (MOC)		
WA0412	Collate and summarise data and compile reports		
WA0413	Analyse test results and identify process, incoming product/service and process input non-conformances		
WA0414	Ensure that corrective action is taken by the responsible parties		
WA0415	Validate incoming product/service and process input, prescribed method or new technology by using appropriate testing and quality inspection procedures – management of change (MOC) (make sure all protocols are in place and ensure the product/service are compliant)		
W0416	Generate non-conformance reports		
WA0417	Notify supervisors or other personnel of operation problems		
WA0418	Recommend necessary corrective actions, based on quality inspection results.		
	Supporting Evidence	Date	Signature
SE0401	Test results and analysis		
SE0402	Report		

Contextualised Workplace Knowledge	Date	Signature
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1. Product/service characteristics and requirements		
2. Workplace specific logbook		
3. Customer and legal requirements for process inputs, product/service and components		
4. Legislation (specific to the workplace and product/service)		
5. Resources and operation processes		
6. Process Input characteristics		
7. Standard operating procedures (SOP)		
8. Operation plan and meetings		
9. Reporting structures and protocols		
10. Quality assurance policies		
11. Key performance areas (KPA) for the QC		

	Additional Assignments to be Assessed Externally	Date	Signature
	None		

684305000-WM-04, Data Analysis, Fault Finding and Recommendations for Non-conformances, NQF Level 4, Credits 22

WM-04-WE01	Shadow and observe the experienced QC conducting data gathering and analysis activities and presentation of information		
	Scope of Work Experience	Date	Signature
WA0101	Observe QC interpreting data sheets, drawings, specification sheets, reports, operation information, laboratory results		

WA0102	Observe QC examining different types of data i.e. test results, observation sheet, MDS – hazardous substances, trends, information on batch cards, etc.		
WA0103	Observe QC observing operators performing duties to gather information on product/service or process quality and to determine adherence to SOP		
WA0104	Observe QC conducting an interview to collect information for quality analysis		
WA0105	Observe QC planning and preparing for performing data analysis		
WA0106	Observe QC conducting trend analysis		
WA0107	Observe QC conducting statistical process control		
WA0108	Observe QC presenting information using appropriate means (e.g. plots, tables, graphs, spreadsheets, Word)		
	Supporting Evidence	Date	Signature
SE0101	Both parties to sign SOP or checklist		
WM-04-WE02	Conduct data gathering and analyses and presentation of information		
	Scope of Work Experience	Date	Signature
WA0201	Interpret data sheets, drawings, specification sheets, reports, operation information, laboratory results		
WA0202	Examine different types of data i.e. test results, observation sheet, MDS – hazardous substances, trends, information on batch cards, etc.		
WA0203	Observe operators performing duties to gather information on product/service or process quality and to determine adherence to SOP		
WA0204	Conduct an interview to collect information for quality analysis		
WA0205	Plan and prepare for performing data analysis		

WA0206	Conduct trend analysis		
WA0207	Perform statistical process control		
WA0208	Present information using communication skills and appropriate means (e.g. plots, tables, graphs, spreadsheets, word)		
	Supporting Evidence	Date	Signature
SE0201	Report with relevant attachments		
WM-04-WE03	Shadow and observe the experienced QC identifying the most likely cause of non-conformance and recommending corrective action		
	Scope of Work Experience	Date	Signature
WA0301	Observe QC identifying and investigating causes of non-conformance		
WA0302	Observe QC identifying root cause and perform trouble-shooting procedures		
WA0303	Observe QC working with a team to investigate problems/deviations and find solutions		
WA0304	Observe QC working as part of a team to review effectiveness of the corrective action and ensuring implementation		
WA0305	Observe QC conducting information sharing to prevent recurrence – element of awareness creation – and keeping record of it		
	Supporting Evidence	Date	Signature
SE0301	Both parties to sign SOP or checklist		
WM-04-WE04	Identify the most likely cause of non-conformance and recommend corrective action		
	Scope of Work Experience	Date	Signature
WA0401	Identify and investigate causes of non-conformance		

WA0402	Identify root cause and perform trouble shooting procedure		
WA0403	Work with a team to investigate problems/deviations and find solutions		
WA0404	As part of team review effectiveness of the corrective action and ensure implementation		
WA0405	Conduct an information sharing and awareness creation session/meeting to prevent recurrence and keep record of it		
WA0406	Complete a check sheet to confirm everything is in order		
	Supporting Evidence	Date	Signature
SE0401	Report with relevant attachments and supporting documents		

Contextualised Workplace Knowledge	Date	Signature
1. Product/service characteristics and requirements		
2. Workplace specific logbook		
3. Customer and legal requirements for incoming product/service, process inputs, and components		
4. Legislation (specific to the workplace and product/service)		
5. Resources and operation processes		
6. Input characteristics		
7. Standard operating procedures (SOP)		
8. Operation plan and meetings		
9. Reporting structures and protocols		
10. Quality assurance policies		

11. Key performance areas (KPA) for the QC		
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	Additional Assignments to be Assessed Externally	Date	Signature
	None		