

BQA NCQF QUALIFICATION TEMPLATE

SECTION A:		QUALIFICATION DETAILS											
QUALIFICATION DEVELOPER (S)		Madirelo Training and Testing Centre											
TITLE	Certificate III in Plumbing and Pipe Fitting								NCQF LEVEL		3		
STRANDS (where applicable)	N/A												
FIELD	Physical Planning and Construction								CREDIT VALUE		120		
SUB FIELD	Building Construction												
New Qualification				Legacy Qualification				Renewal Qualification		✓			
								Registration Code		Q0394			
SUB-FRAMEWORK		General Education						TVET		✓		Higher Education	
QUALIFICATION TYPE	Certificate	I		II		III	✓	IV		V		Diploma	Bachelor
	Bachelor Honours				Post Graduate Certificate						Post Graduate Diploma		
					Masters						Doctorate/ PhD		
RATIONALE AND PURPOSE OF THE QUALIFICATION RATIONALE: The Certificate III in Plumbing and Pipe Fitting is reviewed in response to skills shortages identified in the HRDC Labour Market Intelligence Report (2025), which highlights increasing demand for qualified artisans in water supply, sanitation, drainage, and infrastructure development. The report confirms critical gaps in plumbing and pipe installation services driven by rapid urbanisation and expanding construction and industrial sectors, justifying the need for a structured, competency-based qualification to produce job-ready graduates. The qualification is aligned with ISCO-08 Code 7126 (Plumbers and Pipe Fitters), which defines occupational roles involving installation, maintenance, and repair of water, gas, drainage, and heating													

systems. This alignment ensures international occupational recognition and supports labour mobility across regional and global markets by standardising skills and competencies.

Regionally, the qualification is benchmarked against TVET plumbing qualifications within Southern Africa. These qualifications share similar competency-based frameworks focusing on pipe installation, system maintenance, technical drawing interpretation, occupational health and safety, and construction site practices. This ensures regional comparability, harmonisation of skills standards, and recognition of prior learning across SADC countries.

Internationally, the qualification aligns with New Zealand Certificate in Plumbing. These qualifications emphasize workplace-based training, technical competence, safety compliance, and adherence to building codes and industry standards, reinforcing global comparability and employability.

In conclusion, the Certificate III in Plumbing and Pipe Fitting is designed to address labour market needs identified in the HRDC 2025 report, align with ISCO-08 occupational classifications, and ensure both regional and international recognition. It produces competent, adaptable, and employable artisans capable of performing plumbing and pipe fitting tasks across residential, commercial, industrial, and municipal infrastructure environments.

PURPOSE:

The purpose of the qualification is to produce graduates with basic operational and theoretical skills and competence to

1. Prepare construction materials and tools in accordance with job requirements, technical specifications, and health and safety procedures.
2. Perform construction-related mathematical calculations to ensure accuracy and compliance with standards.
3. Perform plumbing installation in line with technical drawings, specifications, and industry standards for safe and accurate system installation.
4. Interpret technical drawings accurately to ensure correct understanding of workplace tasks and specifications.
5. Apply communication principles and computer concepts to support effective task execution and problem-solving in the workplace.

MINIMUM ENTRY REQUIREMENTS (including access and inclusion)

- Certificate II, NCQF Level 2 or equivalent.
- There shall be access in inclusion through Credit Accumulation Transfer and Recognition Prior Learning in line with ETP policies.

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SECTION B QUALIFICATION SPECIFICATION	
GRADUATE PROFILE (LEARNING OUTCOMES)	ASSESSMENT CRITERIA
1. Prepare construction materials and tools to perform routine task in accordance with job requirements, technical specifications, and workplace safety procedures	1.1 Perform plumbing tasks using tools for specific construction activities to ensure compliance with job requirements. 1.2 2.2 Demonstrate correct handling and operation techniques for hand and power tools to ensure safe and effective task execution. 1.3 2.3 Produce workmanship using tools to achieve quality results that meet technical specifications and industry standards. 1.4 2.4 Apply maintenance routines to tools and equipment to ensure safe and efficient operation.
2. Perform plumbing installation according to technical drawings, specifications, and industry standards to ensure safe and accurate system installation.	2.1 Maintain safe Handling of plumbing tools and machines installations during installation tasks in accordance with workplace safety procedures. 2.2 Prepare work area for installation in accordance with job requirements and safety procedure. 2.3 Install plumbing components according to technical drawings, specifications, and standards to ensure safe and efficient system operation. 2.4 Apply finishing techniques in plumbing installation tasks in accordance with technical specifications and industry standards. 2.5 Perform basic plumbing commissioning in accordance with technical specifications and safety standards to ensure installed systems function effectively.
3. Interpret drawings in accordance to design specifications to ensure compliance with job requirements and industry standards.	3.1 Identify specifications relevant to the task in order to accurately interpret technical drawings and design requirements to ensure compliance with manufacturer and industry design standards. 3.2 Read and interpret technical drawings, diagrams, and job specifications accurately. 3.3 Translate design information into practical work requirements to meet client requirements. 3.4 Document and communicate interpreted design information to ensure correct implementation and compliance with specifications and standards.

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4. Perform mathematical calculations for accuracy with construction standards.	4.1 Perform basic arithmetic to calculate material quantities in compliance with construction requirements. 4.2 Convert between metric and imperial units with construction specifications and standards 4.3 Apply mathematical formulas to calculate areas and volumes of materials in compliance with construction specifications. 4.4 Apply geometric and trigonometric principles to determine angles and lengths to ensure compliance with construction specifications. 4.5 Apply proportions and scaling when interpreting drawings to ensure accurate translation of design specifications into correct measurements and construction work.
5. Apply occupational health and safety practices in furniture manufacturing environments.	5.1 Identify workplace hazards and apply risk control measures to maintain a safe working environment. 5.2 Use personal protective equipment (PPE) correctly to prevent injuries and ensure compliance with safety regulations. 5.3 Follow safe operating procedures for tools and machinery to reduce workplace accidents and equipment damage. 5.1 Maintain a clean and safe workshop environment to support productivity and environmental compliance.
6. Communicate effectively using appropriate verbal and non-verbal methods.	6.1 Demonstrate the concept of Communicate for good communication 6.2 Interpret workplace documents, instructions, manuals, and technical information accurately. 6.3 Prepare clear and concise workplace documents and correspondence. 6.4 Present information effectively and respond appropriately to enquiries, instructions, and feedback. 6.5 Apply professionalism when interacting with colleagues, clients, and supervisors.
7. Apply computer concepts to manage workplace task using ICT tools and Digital applications.	7.1 Use basic computer concepts to perform technical and professional tasks. 7.2 Perform ethical and safe practices in the use of ICT ensuring digital activities are secure.

7.3 Produce documents using ICT applications in compliance with organizational standards.

7.4 8.4 Communicate using digital technologies to share information, collaborate, and connect effectively.



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SECTION C		QUALIFICATION STRUCTURE			
COMPONENT	TITLE	Credits Per Relevant NCQF Level			Total Credits
		Level [3]	Level []	Level []	
FUNDAMENTAL COMPONENT Subjects/ Courses/ Modules/Units	Communication Skills	10			10
	Computer Skills	10			10
CORE COMPONENT Subjects/Courses/ Modules/Units	Plumbing Tools, Materials and Workshop Practice	15			15
	Plumbing Installation and System Assembly	30			30
	Technical Drawing Interpretation and Design Compliance	20			20
	Construction Mathematics for Plumbing Applications	20			20
	Occupational Health, Safety and Environmental Practices in Plumbing	15			15
STRANDS/ SPECIALIZATION	Subjects/ Courses/ Modules/Units	Credits Per Relevant NCQF Level			Total Credits
		Level []	Level []	Level []	120 credits
1.					
2.					
Electives					

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SUMMARY OF CREDIT DISTRIBUTION FOR EACH COMPONENT PER NCQF LEVEL

TOTAL CREDITS PER NCQF LEVEL

NCQF Level	Credit Value
NCQF Level 3	120
TOTAL CREDITS	120

Rules of Combination:

(Please Indicate combinations for the different constituent components of the qualification)

To graduate candidate should achieve a maximum of 120 credits inclusive of 20 credits for fundamental and 100 credits core. Qualification does not have elective components.

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ASSESSMENT ARRANGEMENTS

Assessment shall be conducted by persons registered with Botswana Qualifications Authority (BQA) as assessors preferably with a qualification higher than Certificate III in Automotive body repair and refinishing or related in line with ETP assessment policies.

The weightings for the assessment will be as follows:

a) Formative assessment

The weighting of formative assessment is 60%.

b) Summative Assessment

The weighting of summative assessment is 40%.

MODERATION ARRANGEMENTS

Moderation shall be conducted by persons registered with Botswana Qualifications Authority (BQA) as moderators preferably with a qualification higher than Certificate III in Automotive body repair and refinishing or related in line with ETP moderation policies.

RECOGNITION OF PRIOR LEARNING

There shall be provision for award of the qualification through Recognition of Prior Learning (RPL) in accordance with institutional policies in line with the Educational Training Provider (ETP) policy.

CREDIT ACCUMULATION AND TRANSFER

Credits Accumulated and Transfer (CAT) will be administered in line with the Educational Training Provider (ETP) policy and will be administered towards the award of qualification

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

Learning Pathways

Horizontal Articulation

- Certificate III in Bricklaying

Vertical Articulation

- Certificate IV in Plumbing
- Certificate IV in Renewable in Energy

Employment Pathways

Holders of this qualification can work as; but not limited to:

- Semi-skilled plumber
- Plumbing assistant
- Assistant in Renewable Energy

QUALIFICATION AWARD AND CERTIFICATION

Minimum standards of achievement for the award of the qualification

A candidate is required to achieve the stipulated minimum of 120 credits inclusive of 20 credits for fundamental and 100 credits for core components, to be awarded the qualification.

Certification

Candidates meeting prescribed requirements will be awarded Certificate III in Plumbing and Pipe fitting certificate in accordance with standards prescribed for the award of the certificate and applicable policies.

SUMMARY OF REGIONAL AND INTERNATIONAL COMPARABILITY

The reviewed qualification was benchmarked:

Regionally: Plumbing Certificate of Tshwane North TVET College (South Africa).

Internationally: Technical Certificate in Plumbing of Stockholm Riverside College (UK).

Title of Qualification

The reviewed Certificate III in Plumbing and Pipefitting has a title comparable to the benchmarks, in that all qualifications have the key word plumbing. The reviewed qualification adds pipefitting to plumbing in its title giving the graduate additional skills in pipe installation.

NQF Level

The reviewed qualification and the benchmarks are at par in terms of the NQF levels with Plumbing Certificate NQF Level 3, South Africa and Technical Certificate in Plumbing of Stockholm Riverside, UK, positioned at RQF Level 2. The similarities herein are aligned by the level of difficulty rather than by identical numbering.

Credit Value or Duration

All three qualifications fall within the same credit value range of 120 to 140 credits. This reflects equivalent training volumes and trade-level competencies.

Main Exit Outcome(s)

Graduates of the reviewed and benchmark qualifications should be able to plan for system installation, apply fault find techniques, read and interpret drawings as well as commissioning systems in accordance with standards. Additionally, the reviewed qualification, Certificate III in Plumbing and Pipefitting, builds competence in basic jointing processes in plumbing operations to produce versatile graduates.

Domains/Modules/Courses/Subjects Covered

The reviewed qualification combines plumbing processes from the benchmarks. It furthermore, incorporates Communication, ICT fundamentals and Basic Construction Mathematics into the qualification while embedding workplace safety and environmental practices as core modules. Therefore, the reviewed qualification has an integrated approach, producing versatile graduates with skills in both installation as well as maintenance.

Assessment Strategies and Weightings

The reviewed qualification and benchmarks all use competency-based assessment combining practical, theoretical, and workplace evaluations. The reviewed qualification and UK qualification

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applies 60% formative and 40% summative assessment, while the South African qualification uses 25% formative and 75% summative assessment. Therefore the reviewed qualification shows significant differences in terms of assessment weightings with the South African qualification.

Qualification Rules and Minimum Standards

The qualification rules and minimum standards of the reviewed qualification are aligned with those of the Technical Certificate in Plumbing (RQF Level 2, United Kingdom) and Plumbing Certificate (NQF Level 3, South Africa). In all three qualifications, learners are required to complete all compulsory components, including fundamental and core to achieve the qualification.

REVIEW PERIOD

This qualification shall be reviewed every five (5) years.

For Official Use Only:

CODE (ID)	REGISTRATION STATUS	BQA DECISION NO.	REGISTRATION START DATE	REGISTRATION END DATE
LAST DATE FOR ENROLMENT			LAST DATE FOR ACHIEVEMENT	