

BQA NCQF QUALIFICATION TEMPLATE

SECTION A: QUALIFICATION DETAILS													
QUALIFICATION DEVELOPER (S)				Madirelo Training and Testing Centre									
TITLE		Certificate V in Forestry						NCQF LEVEL			5		
STRANDS (where applicable)		1. 2. 3. 4.											
FIELD		Agriculture and Nature Conservation		SUB-FIELD		Nature conservation			CREDIT VALUE		120		
New Qualification						Legacy Qualification							
SUB-FRAMEWORK		General Education				TVET		Higher Education					
QUALIFICATION TYPE		Certificate	I	II	III	I V	V	✓	Diploma	Bachelor			
		Bachelor Honours			Post Graduate Certificate				Post Graduate Diploma				
		Masters						Doctorate/ PhD					
RATIONALE AND PURPOSE OF THE QUALIFICATION													
<p>RATIONALE:</p> <p>The Botswana Education and Training Sector Strategic Plan (ETSSP 2015-2020) marks a significant milestone in our collective efforts as a nation to bring about a more diversified, knowledge-based economy. Through a planned and careful development of human capital, the ETSSP seeks to refocus our education and training towards fulfilment of social and economic aspirations identified in our Revised National Policy on Education (RNPE), the National Development Plan, Vision 2036 and as well as the Millennium Development Goals. In particular, the ETSSP is intended to strengthen the match between qualifications and labour market requirements, thereby ensuring that education and training outputs are more closely aligned to socio economic development needs of the country. In line with this strategic goal, the HRDC report on top occupations of 2016 has identified Forestry as some of the priority skills for the Agriculture and Nature Conservation sector.</p>													

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Forest and rangeland resources provide multiple benefits and have direct and measurable impacts on people's lives and the national economy as envisioned by Vision 2036 of Botswana (Government of Botswana, 2016). They play important roles in the livelihoods of rural people by providing employment, energy, nutritious foods and a wide range of goods (FAO, 2014; Teketay et al., 2016). If managed well, these forests and rangelands offer tremendous potential to contribute to sustainable development and a greener economy. The multi-functional role of biodiversity is also recognized in Vision 2036 of Botswana as an economic resource, providing life-supporting services and enhancing community resilience.

According to the Human Resource Development Plan (HRDC, 2023), fisheries and the forest sector are largely underdeveloped with most producers located in the northern part of the country on a seasonal and subsistence basis. Therefore, the need to do more to develop aquaculture and agroforestry has been emphasized.

Qualification Purpose

The purpose of this qualification is to produce graduates with broad technical knowledge, skills and competence to:

- Implement sustainable practices into forestry entrepreneurship, considering environmental stewardship and social responsibility, and develop strategies to communicate and market these efforts to stakeholders.
- Incorporate design principles for aesthetically pleasing and functional outdoor spaces.
- Implement measures for protecting forests from pests, diseases, and wildfires, and understand emergency response protocols.
- Apply knowledge of forest management practices to ensure the long-term health and productivity of forests.

MINIMUM ENTRY REQUIREMENTS (including access and inclusion)

- Any qualification equivalent to NCQF Level 4, certificate IV.
- There will be provision for Recognition of Prior Learning (RPL) and Credit Accumulation and Transfer (CAT) for entry according to the national RPL and CAT policies.

SECTION B QUALIFICATION SPECIFICATION	
GRADUATE PROFILE (LEARNING OUTCOMES)	ASSESSMENT CRITERIA
1. Develop a comprehensive entrepreneurial forestry	1.1 Identify an enterprise of interest to venture into and run it profitably 1.2 Conduct a market survey to assess the viability of

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management plan, including a detailed business plan with market analysis, financial projections, and risk assessment, while integrating sustainable practices to ensure environmental stewardship and social responsibility.	<p>1.3 Prepare a business plan for the chosen enterprise,</p> <p>1.4 Conduct an internal and external factors viability assessment (SWOT) as well as a Risk assessment of the business under study.</p> <p>1.5 Prepare the financial projections (incomes and cash flow statements) for the business, determine the estimate total project costs and evaluate possible sources of finance</p> <p>1.6 Prepare an implementation schedule for the business in the form of a Gantt chart</p>
2. Execute proficient plant production activities by applying appropriate propagation techniques, demonstrating effective nursery management, and considering environmental factors to ensure optimal growth and health of plants.	<p>2.1 Prepare propagation materials to produce plants.</p> <p>2.2 Prepare seedbed in accordance with the Propagation method.</p> <p>2.3 Perform the appropriate propagation method (asexual or sexual) to produce plants</p> <p>2.4 Prick out seedlings to make them ready for planting.</p> <p>2.5 Carry out nursery management practices to ensure healthy plant growth.</p>
3. Implement landscaping techniques by applying design principles, selecting suitable plants, and conducting site analysis to create aesthetically pleasing and functional outdoor spaces.	<p>3.1 Demonstrate understanding of the conditions of the site to suitably effect landscaping.</p> <p>3.2 Design a landscaping plan to easy implementation of landscaping techniques.</p> <p>3.3 Install a landscape material by selecting suitable materials to create aesthetic pleasing and functional outdoor spaces.</p> <p>3.4 Carry out landscape maintenance practices to maintain a landscape site.</p>
4. Develop and apply Integrated Pest Management techniques for a specific forest area, incorporating strategies such as biological controls, cultural practices, and judicious use of chemical	<p>1.1 Identify plant pests taking into consideration safety, health and environment.</p> <p>1.2 Select appropriate pest management techniques to control pests effectively and suitably.</p> <p>1.3 Perform Integrated Pest Management techniques to control Identified plant diseases pests taking into consideration safety, health and environment.</p>
5. Implement effective apiary operations by managing beehives, understanding bee behavior, optimizing honey production ensuring the health and productivity of the bee colony	<p>5.1 Utilize beekeeping tools and equipment safely.</p> <p>5.2 Manage beehives to ensure productive honey production.</p> <p>5.3 Control bee diseases and pests to ensure a healthy colony.</p> <p>5.4 Carry out harvesting of honey and honey by-products for human use ,sale and consumption.</p>

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6. Communicate effectively with stakeholders, communities, and team members, and understand the social and economic aspects of forestry management.

- 6.1 Demonstrate negotiation and communication skills before and during work-based learning
- 6.2 Perform assigned fundamental and core skills throughout the work-based learning program
- 6.3 Adhere to health and safety requirements at all times
- 6.4 Demonstrate problem-solving skills as when problems are encountered during the work process
- 6.5 Contribute effectively to teamwork initiatives within the work environment

SECTION C		QUALIFICATION STRUCTURE			
COMPONENT	TITLE	Credits Per Relevant NCQF Level			Total Credits
		Level []	Level []	Level []	
FUNDAMENTAL COMPONENT Subjects/ Courses/ Modules/Units	Entrepreneurship			11	11
CORE COMPONENT Subjects/Courses/ Modules/Units	Nursery Operations			18	18
	Landscaping			13	12
	Plant Protection			18	18
	Beekeeping			16	13
	Work Based Learning/Attachments			48	48
	Subjects/ Courses/ Modules/Units	Credits Per Relevant NCQF Level			Total Credits

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STRANDS/ SPECIALIZATION		Level []	Level []	Level []	
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 5	120
TOTAL CREDITS	120

Rules of Combination:

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

Candidates are required to achieve a minimum of 120 credits for the qualification inclusive of 11 credits for fundamentals, 109 credits for Core, and 48 credits for Work based learning / attachment

The candidate is also required to complete the required period of work based experience and associated portfolio of evidence

(Note: Please use Arial 11 font for completing the template)

ASSESSMENT ARRANGEMENTS

The weightings for the assessment will be as follows:

a) Formative assessment

The weighting of formative assessment is 60% of the final assessment mark.

b) Summative Assessment

The weighting of summative assessment is 40% of the final assessment mark.

Internal and external assessors perform assessments of the qualification. Both internal and external assessors are done in-line with the national assessment policy. Anyone assessing a learner against this qualification must be registered as an assessor from any relevant regulatory body.

MODERATION ARRANGEMENTS

Internal and external moderators perform assessments of the qualification. Both internal and external moderators are done in-line with the national assessment policy. Anyone moderating a learner against this qualification must be registered as an moderator from any relevant regulatory body

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 national RPL policy.

CREDIT ACCUMULATION AND TRANSFER

Credits Accumulated and Transfer will be administered in line with the national and institutional policy and will be administered towards the award of qualification.

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

LEARNING PATHWAYS

Horizontal Articulation

- Certificate V in Crop Farming
- Certificate V in beekeeping

Vertical Articulation

- Diploma in Forestry
- Diploma in Landscaping
- Diploma in Bee Keeping

Employment Pathways

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- Gardeners, Horticultural and Nursery growers
- Field crop and Vegetable growers
- tree and shrub growers
- Apiarists and Sericulturists
- Market Gardeners and Crop Growers

QUALIFICATION AWARD AND CERTIFICATION

Candidates meeting prescribed requirements OF 120 credits will be awarded Certificate V in Forestry in accordance with standards prescribed for the award of the qualification and applicable policies.

Certification

Candidates meeting prescribed requirements will be issued with certificate.

SUMMARY OF REGIONAL AND INTERNATIONAL COMPARABILITY

The following were used for bench marking:

1. **Title** : Certificate in Forestry Crew Management-level 5,125 credits

Name of ETP: New Zealand Institute of Skills and Technology

Country: New Zealand

1. **Title**: National Certificate in Forestry Silviculture, SAQA NQF level 5,123 credits

Name of ETP University of Pretoria-Forestry and Biotechnology Institution

Country: South Africa

All qualifications are of level 5 and have same component of forestry as there are areas of focus on imparting knowledge on forestry, manage a forestry or forest harvesting, Develop, implement and monitor operational plans. They also have similar modules covered being health and safety, tools and equipment. All assessment strategies are written and practical assessment.

Both qualifications have well outlined, and similar exit outcomes and main domains and they also have credits values well stipulated.

Differences observed between the two qualifications are that New Zealand Institute of Skills and Technology qualification does not have assessment strategies while the University of Pretoria-Forestry and Biotechnology Institution, has well defined assessment strategies.

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REVIEW PERIOD

This qualification shall be reviewed every 5 years.

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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	

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