

## BQA NCQF QUALIFICATION TEMPLATE

SECTION A: QUALIFICATION DETAILS														
<b>QUALIFICATION DEVELOPER (S)</b>			University of Botswana											
<b>TITLE</b>		Master of Public Health						<b>NCQF LEVEL</b>		9				
<b>STRANDS (where applicable)</b>		1. Health Systems 2. Health Promotion 3. Environmental Health 4. Occupational Hygiene 5. Field Epidemiology												
<b>FIELD</b>		Health and Social Services		<b>SUB-FIELD</b>		Social Services		<b>CREDIT VALUE</b>		240				
New Qualification				√		Legacy Qualification								
<b>SUB-FRAMEWORK</b>		General Education				TVET				Higher Education				√
<b>QUALIFICATION TYPE</b>		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														
<p><b>RATIONALE:</b></p> <p>Botswana has a limited Public health research capacity. Anecdotal evidence shows that most health research in Botswana is conducted by expatriates employed by international organisations, especially USA-linked academic institutions. Further, a large proportion of recent and current health research in Botswana is donor-driven and externally funded, reflecting the priorities of organisations outside Botswana. Research is largely planned and conducted by foreign researchers. Therefore, Botswana needs to build research capacity by training a pool of Botswana health professionals who would design and conduct population health research and apply research findings to improve its health and</p>														

beyond. Advantages of locally based educational qualifications include cost savings from the exorbitant costs of training graduates in public health abroad and a greater likelihood of retaining well-trained individuals in Botswana. Although the program is tailor-made to meet Botswana's specific needs, it is also designed to equip graduates to work regionally and globally.

The Human Resource Development Council's (HRDC) priority skills report lists Public Health Practitioners, epidemiologists, Occupational hygienists, Environmental Health officers and Data scientists as occupations in demand (HRDC, 2023/2024). The proposed Master of Public Health qualification, with different streams, will contribute to the (HRDC) report of 2019 aim in human resource development and Sustainable Development Goal 3 of ensuring healthy lives and promoting well-being for all through human development as emphasised by Vision 36 pillars and NDP 11 priorities.

The qualification is aligned to relevant national policies such as Vision 2036 and the Botswana Education and Training Sector Strategic Plan (ETSSP – 2015-2020) that emphasise the need to strengthen the match between qualifications and labour market requirements, thereby ensuring that education outputs are more closely aligned to future employment need. This qualification's strands are also relevant to the Revised National Policy on Education (RNPE), 1994, which recommends introducing new qualifications offered at lower costs locally. The RNPE policy also states that there must be an infusion and integration approach to accommodate emerging issues such as environmental issues, HIV/AIDS and Information Communication Technology (ICT). All the strands in the qualification have a component of ICT, such as health Informatics or digital health and emerging health issues.

Furthermore, the Master of Public Health qualification will respond to the needs of Botswana's National Health objectives, which are laid out in the National Development Plans (NDP 9, 10, and 11). These include Reducing morbidity and mortality due to communicable and non-communicable diseases, reducing infant and maternal mortality, preventing new HIV infections, and mitigating HIV/AIDS and emerging epidemics/pandemics like Coronavirus diseases (COVID-19). According to the Integrated Health Service Plan (2010), the Public Health practitioner shortage impeded the awareness of NCDs and their risk factors among the population in delivering the Essential Health Service Package (EHSP). The EHSP strategic objective six (6) aims to enhance community involvement and participation for individuals and communities to take responsibility for their health and health risks (Republic of Botswana, 2010).

In addition, the qualification will help achieve the Botswana Domesticated Sustainable Development Goals (SDGs) for education, health, well-being, and decent workplaces. With the implementation of the Essential Health Services Package and Health Sector Strategy, the Ministry of Health (MOH) gives local district teams more civil society and private authority and responsibility. This shift requires an integrated understanding of public health among district leaders and the need for improved leadership and management skills. Botswana's health leaders will need a broad understanding of public health to provide effective leadership in selecting, delivering, and monitoring these interventions' impact.

### **PURPOSE:**

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

1. Assess the population's health and well-being in various communities to identify the gaps between the current and desired public health outcomes.
2. Critique contemporary topics and challenges in public health, as well as the strategies formulated to prevent, mitigate and control these both nationally and globally for ideal public health outcomes.
3. Design public health programs and assess evidence of their effectiveness in interventions to improve population health and well-being in various public health settings.
4. Conduct specialised research in different strands of Public Health, employing epidemiological and social science research methods to gain new insights and innovative solutions to health problems in various communities.
5. Characterize various infectious outbreaks and environmental hazards and develop effective health protection strategies to prevent, mitigate and control risks in public health environments.
6. Interpret and apply occupational and environmental health regulations in various public health settings for healthy communities.
7. Provide leadership skills in collaborative work to improve population health and well-being in different public health settings.

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### MINIMUM ENTRY REQUIREMENTS (including access and inclusion)

The minimum entry requirements for admission to the Master of Public Health qualification shall be:

- Bachelor's degree (NCQF) Level 7 or equivalent.
- Access through Recognition of Prior Learning (RPL) and Credit Accumulation and Transfer (CAT) is accessible to all candidates through institutional policies aligned with the national RPL and CAT policies.

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SECTION B QUALIFICATION SPECIFICATION	
GRADUATE PROFILE (LEARNING OUTCOMES)	ASSESSMENT CRITERIA
1. Apply advanced knowledge and understanding of public health concepts and healthcare systems.	1.1 Measure the health statuses and outcomes of various populations using various factors. 1.2 Identify inequities in health and their causes across the populations and between different groups within the society. 1.3 Examine the determinants of health and illness in any community setting. 1.4 Select appropriate strategies for health promotion and protection for health in various communities.
2. Plan and manage public health programmes and interventions to effectively promote health.	2.1 Conduct public health community needs assessments and prioritise public health strategies for improvement in various communities. 2.2 Apply awareness of cultural values and practices to the design, implementation, or critique of public health policies or programs. 2.3 Design a targeted public health policy, public health program or intervention to solve public health problems in various community settings.

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	<p>2.4 Apply basic principles and tools of budget and resource management.</p> <p>2.5 Select methods to evaluate public health programs.</p>
LO3. Advocate for and implement policies and programmes to improve health in diverse populations.	<p>3.1 Participate in discussing the policy-making process, including the roles of ethics and evidence.</p> <p>3.2 Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes.</p> <p>3.3 Advocate for political, social or economic policies and programs to improve health in diverse populations.</p> <p>3.4 Evaluate policies for their impact on public health and health equity.</p>
4. Apply advanced communication skills that are audience-appropriate public health content, both in writing and through oral presentation.	<p>4.1 Select communication strategies for different audiences and sectors in public health settings.</p> <p>4.2 Create reports for public health advocacy and management.</p> <p>4.3 Create public health scientific reports.</p> <p>4.4 Develop public health poster presentations.</p> <p>4.5 Develop and deliver oral public health communications.</p>
5. Develop, apply and evaluate policies and programs in public health.	<p>5.1 Identify stakeholders and build coalitions and partnerships to influence public health outcomes.</p> <p>5.2 Advocate for political, social or economic policies and programs to improve health in diverse populations.</p> <p>5.3 Evaluate policies for their impact on public health and health equity</p>

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6. Apply leadership and management principles to address public Health policies, interventions and strategies.	<p>6.1 Apply leadership and/or management principles to address a relevant issue.</p> <p>6.2 Apply negotiation and mediation skills to address organisational or community challenges.</p> <p>6.3 Integrate perspectives from other sectors and/or professions to promote and advance population health.</p>
7. Apply systems thinking tools to visually represent a public health issue in a format other than the standard narrative.	<p>7.1 Compare and resolve distinct patterns of systems dynamics that may result in unintended consequences of systems interventions.</p> <p>7.2 Analyze public health key systems concepts in any public health setting.</p> <p>7.3 Identify systems interventions in an innovative way within identified areas.</p>
8. Use epidemiologic practices to conduct studies that improve public health program delivery	<p>8.1 Design and conduct analytic studies in various populations.</p> <p>8.2 Calculate measures of disease association in public health practice.</p> <p>8.3 Analyse epidemiologic data using appropriate statistical methods and data management tools.</p> <p>8.4 Utilize publicly available datasets to design and interpret data visualizations.</p>
LO9. Use laboratory resources to support public health activities	<p>9.1 Coordinate laboratory and epidemiology activities, including test selection, communication, and field results reporting.</p> <p>9.2 Analyse and interpret laboratory data accounting for factors that influence the results of diagnostic tests.</p> <p>9.3 Identify and Implement appropriate specimen collection, storage and transportation measures.</p>

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<p>LO10. Manage a public health surveillance system</p>	<p>10.1 Establish a surveillance system using various Information, Communication and Technology tools.</p> <p>10.2 Plans, designs, and defines functional requirements for public health information systems.</p> <p>10.3 Operate a surveillance system.</p> <p>10.4 Evaluate the applications and impact of information systems supporting health goals.</p> <p>10.5 Develop an intervention strategy for an outbreak</p>
<p>11. Respond to disease outbreaks in communities.</p>	<p>11.1 Investigate a disease outbreak in the community.</p> <p>11.2 Communicate investigation activities to 3 audiences: scientific, community, and political.</p> <p>11.3 Develop an intervention strategy for an outbreak.</p> <p>11.4 Communicate investigation activities to 3 audiences: scientific, community and political.</p>
<p>12. Conduct specialised research for new insights and innovative solutions to health problems in various public health specializations/ strands.</p>	<p>12.1 Conduct a comprehensive literature review to identify gaps warranting further research investigations.</p> <p>12.2 Apply advanced knowledge and skills in developing a research proposal.</p> <p>12.3 Apply theoretical frameworks and appropriate methodologies.</p> <p>12.5 Observe ethical codes and legal guidelines in the conduct of responsible Science.</p> <p>12.6 Collect high-quality data and manage data using open source softwares.</p> <p>12.7 Analyse the research findings using various statistical softwares.</p>



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	<p>12.8 Synthesise and interpret the research findings using various data visualisation tools.</p> <p>12.9 Generate scientific reports using various data visualization tools</p> <p>12.10 Present a poster or oral research findings at local and international forums.</p> <p>12.11 Design epidemiologic studies of environmental or occupational factors and health outcomes to test specific or more hypotheses.</p>
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SECTION C		QUALIFICATION STRUCTURE			
COMPONENT	TITLE	Credits Per Relevant NCQF Level			Total Credits
		Level [ ]	Level [ ]	Level [9 ]	
<b>FUNDAMENTAL COMPONENT</b> Subjects/ Courses/ Modules/Units					
<b>CORE COMPONENT</b> Subjects/Courses/ Modules/Units	Principles of Public Health			18	18
	Health Public Policy Development and Analysis			10	10



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	Epidemiological Methods			17	17
	Biostatistics (Medical Statistics)			15	15
	Methods of Social Sciences Research			15	15
	Research Proposal			25	25
	Dissertation			80	80
STRANDS/SPECIALISATION	Subjects/ Courses/ Modules/Units	Credits Per Relevant NCQF Level			Total Credits
		Level [ ]	Level [ ]	Level [ 9 ]	
1. Health Systems, Policy and Management	Fundamentals of Occupational and Environmental Health			15	15
	Health Economics			15	15
	Health Systems Management			15	15
Optional (Choose one course)	Applied Policy Analysis			15	15
	Leadership and Public Policy			15	15
	Programme Planning, Monitoring and Evaluation of Public Health Interventions			15	15
Learners take three (45 credits) from the list of core courses and one (15 credits) from the list of optional courses.					
	Fundamentals of Occupational and			15	15

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<b>2. Health Promotion</b>	Environmental Health				
	Health Promotion and Well-being			15	15
	Information, Education and Communication in Population and Development.			15	15
<b>Optional (Choose one course)</b>	Public Health Informatics			15	15
	Programme Planning, Monitoring and Evaluation of Public Health Interventions			15	15
	Leadership and Public Policy			15	15
	Gerontology			15	15
<i>Learners take three (45 credits) from the list of core courses and one (15 credits) from the list of optional courses.</i>					
<b>3. Environmental Health</b>	Fundamentals of Occupational and Environmental Health.			15	15
	Environmental Toxicology			15	15
	Health Risk Assessment			15	15
<b>Optional (Choose one course)</b>	Food Science and Technology			15	15
	Environmental Legislation & Compliance			15	15

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	Environmental Assessments and Audits			15	15
	<i>Learners take three (45 credits) from the list of core courses and one (15 credits) from the list of optional courses.</i>				
<b>4. Occupational Hygiene</b>	Occupational Hygiene 1 (Chemical management & Biological stressors)			15	15
	Occupational Hygiene II (Physical, Psychosocial, Ergonomics & human stressors)			15	15
	Environmental Toxicology			15	15
<b>Optional (Choose one course)</b>	Industrial Audiology and Hearing Conservation			15	15
	Health Risk Assessment			15	15
	Environmental Assessments and Audits			15	15
	<i>Learners take three (45 credits) from the list of core courses and one (15 credits) from the list of optional courses.</i>				
<b>5. Field Epidemiology</b>	Health Systems Management			10	10
	Public Health Informatics			15	15
	Public Health Surveillance			10	10
	Professional Development in Public Health			10	10

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	Advanced Epidemiology			<b>15</b>	<b>15</b>
	<i>Learners take all four (60 credits) from the list of courses.</i>				



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### SUMMARY OF CREDIT DISTRIBUTION FOR EACH COMPONENT PER NCQF LEVEL

#### TOTAL CREDITS PER NCQF LEVEL

NCQF Level	Credit Value
9	240
<b>TOTAL CREDITS</b>	<b>240</b>

#### **Rules of Combination:**

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

**A.** Fundamental Courses – N/A

**B.** Core Courses – 180 Credits (Compulsory Courses)

**C.** Strands Courses – 45 Credits per strand

**D.** Optional Courses – 15 credits per strand (Learners choose one from the chosen strand)

**TOTAL CREDITS:** 240 Credits

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### **ASSESSMENT ARRANGEMENTS**

There will be assessments, both formative and summative assessments modes.

#### Formative Assessment

Formative assessment will contribute (50%) to the overall grading for the qualification.

#### Summative Assessment

Formative assessment will contribute (50%) to the overall grading for the qualification.

Requirements for Assessors and Moderators: Assessors and moderators shall have a PhD in Public Health or a related field (NCQF Level 10 or equivalent). Assessment will be carried out by BQA registered and accredited assessors or accredited by a relevant body.

### **MODERATION ARRANGEMENTS**

#### **Internal moderation**

There shall be internal moderation. This shall follow applicable institutional and national policies and regulations. Internal assessors and moderators shall have a PhD (NCQF Level 10 or equivalent) and be accredited with Botswana Qualifications Authority or an equivalent institution.

#### **External moderation**

There shall be external moderation. This shall follow applicable institutional and national policies and regulations. External assessors and moderators shall have a PhD (NCQF Level 10 or equivalent) and be accredited with relevant national qualification authority.

There shall be moderators. This shall follow applicable institutional and national policies and regulations. Assessors and moderators shall have a PhD in Public Health or a related field (NCQF Level 10 or equivalent).

### **RECOGNITION OF PRIOR LEARNING**

A provision shall be made for an award through Recognition of Prior Learning (RPL) in line with institutional and national policies.

### **CREDIT ACCUMULATION AND TRANSFER**

There is a provision for an award through credit accumulation and transfer in line with institutional and national policies.

### **PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)**

#### **a. Vertical**

Graduates will be eligible to pursue any of the following postgraduate qualifications:

1. Doctor of Philosophy in Epidemiology
2. Doctor of Philosophy in Public Health
3. Doctor of Philosophy in Health Systems, Policy and Management
4. Doctor of Philosophy in Health Promotion and Education
5. Doctor of Philosophy in Occupational Health and Hygiene
6. Doctor of Philosophy in Environmental Health

#### **b. Horizontal**

This qualification articulates horizontally with any relevant master's degree in the area of Public Health, for example:

1. Master of Occupational Health and Hygiene
2. Master of Health Promotion
3. Master of Environmental Health
4. Master of Health Systems

#### **Employment Opportunities**

Possible jobs or employment that the holder of this qualification may take up include the following:

1. Epidemiologist
2. Public Health Practitioner
3. Programme Manager
4. Researcher
5. Policy Advisor
6. Environmental Health Practitioner
7. Environmental and Safety Managers
8. Housing Officer
9. Food Quality Assurance Managers
10. Researchers in Academic Institutions
11. Environmental and Occupational Health Consultant

### **QUALIFICATION AWARD AND CERTIFICATION**



### Awarding

The award of a Master of Public Health degree shall be done after attaining the stipulated minimum credits for the qualification (240 credits) in accordance with the provision of the institution.

Master of Public Health in Health Systems -240 Credits

Master of Public Health in Health Promotion -240 Credits

Master of Public Health in Environmental Health -240 Credits

Master of Public Health in Occupational Hygiene -240 Credits

Master of Public Health in Field Epidemiology -240 Credits

### Certification

Candidates meeting the prescribed requirements will be awarded a Master of Public Health certificate of qualification and academic transcript in accordance with the institution's standards and applicable policies for awarding.

### SUMMARY OF REGIONAL AND INTERNATIONAL COMPARABILITY

Benchmarking has been done against qualifications offered by reputable entities within the region and beyond to appreciate what is typical of this level and type of qualification with graduate profiling, scope and depth of content to ascertain regional and international comparability and articulation of the proposed qualification.

This qualification has been benchmarked against the following qualifications regionally and internationally:

- Master's in Public Health from the University of Pretoria, South Africa (SA)
- Master of Public Health from Imperial College London (UK)
- Master of Public Health from Makerere University (Uganda)
- Master of Public Health from Michigan University (USA)

The following was observed:

#### Title:

#### Similarities:

The major similarity across the qualifications is the title of the qualification. All qualifications reviewed are titled Master of Public Health (MPH).

### Mode of delivery and duration:

#### **Similarity:**

The duration for most reviewed qualifications is two years full-time and three years part-time, and all require examinations and some form of research. The other similarity is the mode of delivery across all the bench-marked Universities. They offer blended learning and various tracks or specializations similar to this qualification. The Master of Public Health at the University of Pretoria is offered online completed within a minimum of 24 months (full-time) and a maximum of 36 months (part-time). The MPH qualification will be semesterised, as is offered by Imperial College London, the University of Michigan, and the University of Makerere.

#### **Differences:**

Imperial College London offers a full-time/one-year MPH taught on-campus with two streams (Health Services and System and the Global Health streams). Imperial College London also offers a part-time/two-year qualification taught fully online called Global Master of Public Health. The University of Pretoria qualification is run on a modular basis and not semesterised as proposed by this MPH qualification.

### Main Modules

#### **Similarity:**

The main modules across the strand are similar, such as Biostatistics, Epidemiology, and Research Methods.

#### **Differences:**

Some modules have similar content but differ in the nomenclature; for example, Biostatistics is the main module offered across all the benchmark qualifications, and it is referred to as the Statistical Thinking and Data Analysis module by Imperial University.

### Strands

#### **Similarity:**

The MPH qualification offered at the University of Pretoria has five tracks/ strands (Occupational Hygiene, Health Promotion, Disease control, Environmental and Occupational Health and Health Policy Management), of which three (3) tracks/ strands are almost similar to the proposed MPH.

#### **Differences:**

The proposed MPH's stream names differ, but the taught content is the same as those offered by the University of Michigan MPH (Industrial Hygiene Programme, Environmental Health Sciences, Epidemiology, Health Behaviour and Health Education). The proposed MPH qualification is comparable in terms of the core modules and the qualification rules.

### **Assessments:**

#### **Similarity**

All the MPH requirements are for the candidate to pass all modules through writing examinations at each study level and through a dissertation or a research project. In addition, for Environmental Health and Occupational Health and Hygiene strands, learners are required to have passed laboratory exercises.

#### **NQF level and Credits**

There is a similarity with regard to the NQF level with only the University of Pretoria MPH, which places the MPH qualification at level 9 with a minimum credit value of 180. This qualification has 240 credits in line with the NCQF requirements.

#### **Differences:**

The Ugandan Higher Qualification Framework places master qualification at level 8, and the Framework for Higher Education Qualifications (UK) places master qualification at level 7. This difference also applies to how credits are calculated. This qualification is at Level 9 in line with National Credit and Qualifications Framework.

#### **Entry requirements**

##### **Similarities:**

Entry into the qualification is similar across all benchmarked qualifications, which requires a bachelor's degree (NQF level 7) in Health Sciences, Biological Sciences, Social Sciences or equivalent.

In conclusion, this qualification compares well with the regional and international benchmarks.

### **REVIEW PERIOD**

The qualification shall be reviewed every 5 years.

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**For Official Use Only:**

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



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