

BQA NCQF QUALIFICATION TEMPLATE

SECTION A: QUALIFICATION DETAILS																							
QUALIFICATION DEVELOPER (S)				University of Botswana																			
TITLE		Doctor of Philosophy in Public Health							NCQF LEVEL			10											
STRANDS (where applicable)		1. Health Systems, Policy, and Management 2. Environmental and Occupational Health 3. Epidemiology 4. Health Promotion 5. Occupational Hygiene 6. Climate change and health 7. Health Economics 8. Human toxicology																					
FIELD		Health and Social Services							CREDIT VALUE			360											
SUB FIELD		Social Services																					
New Qualification		✓		Legacy Qualification				Renewal Qualification															
								Registration Code															
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 Doctor of Philosophy in Public Health qualification focuses on developing health research capacity, innovation and leadership in public health. The qualification is aligned with relevant national and international policies such as Vision 2036 and the Botswana Education and Training Sector Strategic Plan (ETSSP – 2015-2020), the National Development Plan 11 (2017 – 2023), the Human Resource Development Council (HRDC) Strategy (2016) and the World Health Organisation Strategy for the National Action Plan for Health Security (2022-2026) all of which emphasize and recommend creating an educated and informed nation to take advantage of opportunities as they emerge and introducing new programmes offered at lower costs locally. The qualification is therefore, intended to provide sufficient knowledge, research skills, and competency in a wider variety of public health areas that will prepare individuals for a career in public health research, academia, and leadership and at the same time demonstrating novelty of ideas and contributing meaningfully to the growing body of knowledge.

Botswana, like the rest of the world, has not been spared from the burden of Non-Communicable Diseases (NCDs) estimated to cause 46% of all deaths¹. Climate change, antimicrobial resistance (AR) and toxicology are other emerging challenges nationally, regionally and globally. Expertise in these areas including research is greatly needed, particularly in developing countries. A P.H.D. with specializations in these and many other areas will prepare human resources for leadership roles in policies related to climate change, AR (which has the potential to affect people at any stage of life), healthcare, veterinary and agriculture industries and community programs focused on sustainability, resilience, environmental protection and adaptation to lead the change.

A locally based qualification brings with it several advantages such as cost savings from the costs of training graduates in public health abroad and a greater likelihood of retaining well-trained individuals in Botswana. This qualification is not only tailor-made to meet Botswana's specific needs but is also designed to equip graduates to work regionally and globally. The qualification is additionally structured to respond to the Tertiary Education Policy (2008) and the Botswana Qualifications Authority (BQA), emphasizing building the nation's human resource capacity within a regional and global setting by ensuring that academic programmes are relevant, creating new knowledge, and supplying highly skilled graduates. This qualification aims to achieve the Botswana

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Domesticated Sustainable Development Goals (SDGs) for education, health and well-being, decent workplaces, and the one-health approach.

PURPOSE: (itemise exit level outcomes)

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

1. Critique and analyse existing literature; synthesise complex information, problems, concepts, and theories to develop new knowledge or interventions on public health.
2. Conduct advanced independent original research of international standards necessary to facilitate policy analysis, education, decision-making, and communication in public health.
3. Apply advanced skills in collaboration and team science, including openness to collaboration, self- and disciplinary awareness, and integrating information across disciplines.
4. Lead interdisciplinary research teams and participate in implementation science.
5. Communicate effectively using professional language, science, and technology to a diverse audience.

MINIMUM ENTRY REQUIREMENTS (including access and inclusion)

1. Master's degree, NCQF Level 9 or equivalent.
2. There would be a provision for entry through Recognition of Prior Learning (RPL) and Credit Accumulation and Transfer (CAT) to all candidates through institutional policies in line with national RPL and CAT policies.

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SECTION B QUALIFICATION SPECIFICATION	
GRADUATE PROFILE (LEARNING OUTCOMES)	ASSESSMENT CRITERIA
1. Critique and analyse existing literature; synthesise complex information, problems, concepts, and theories to	1.1 Conduct a comprehensive literature review and synthesise knowledge.

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develop new knowledge or interventions on public health.	<p>1.2 Present at journal clubs to critically evaluate literature and apply it to medical science research.</p> <p>1.3 Formulate scientific questions and a research plan to investigate these questions.</p> <p>1.4 Develop a research proposal that can be used to seek funding and obtain ethical approvals.</p>
2. Conduct independent original research of global standards to facilitate policy analysis, education, decision-making, and communication in public health.	<p>2.1 Plan and conduct independent research.</p> <p>2.2 Apply various research methods during research activities.</p> <p>2.3 Select appropriate research methods and specialised analytical techniques.</p> <p>2.4 Design an appropriate research methodology</p>
3. Execute collaboration and team science skills, including an understanding of collaboration, self and disciplinary awareness, and the ability to integrate information across disciplines.	<p>3.1 Apply leadership skills in addressing and resolving challenges and issues through communication and effectively engaging others.</p> <p>3.2 Collaborate with stakeholders to set direction, design, and make improvements in education, work or community settings.</p> <p>3.3 Apply theory and advanced research methodologies to contribute significant public health knowledge.</p> <p>3.4 Demonstrate autonomy, excellence and leadership skills in the conduct of research in public health.</p> <p>AC3.5 Demonstrate an inquiring mind and intellectual independence.</p>

<p>4. Identify appropriate experimental protocols/analytical methods, design and execute protocols, troubleshoot, data management and interpretation of data.</p>	<p>4.1 Design, and implement research to generate new knowledge,</p> <p>4.2 Make informed judgments on complex issues in specialist public health fields.</p> <p>4.3 Produce original research, or other advanced scholarship, of a quality to satisfy peer review, and to merit publication</p>
<p>5. Implement the most advanced data analysis and modelling approaches to address important questions in public health research.</p>	<p>5.1 Apply theory and advanced research methodologies to contribute significant knowledge in public health.</p> <p>5.2. Plan and conduct independent research.</p> <p>5.3 Demonstrate an understanding of research methods.</p> <p>5.4 Select appropriate research methods and specialized analytical techniques.</p> <p>5.5 Design an appropriate research methodology</p>
<p>6. Lead interdisciplinary research teams and participate in implementation science</p>	<p>6.1 Collaboratively work with key stakeholders from the organization(s) to identify team members, create role clarity, develop decision-making and communication processes, goals, and work plans.</p> <p>6.2 Employ data-driven methods (e.g., needs assessment, gap assessment, stakeholder analysis, environmental scan, scoping or systematic reviews) to explore public health problem from multiple angles.</p> <p>6.3 Use prioritization techniques to guide teams to prioritize needs, gaps, challenges and practices</p>

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	<p>drawing from the data and critical reflections on the problem.</p> <p>6.4 Critically appraise available evidence and programs or practices to identify the problem, select a program or practice based on evidence that appropriately addresses the gap, assess barriers and identify strategies.</p> <p>6.5 Demonstrate autonomy, excellence and leadership skills in the conduct of research in public health</p> <p>6.6 Demonstrate an enquiring mind and intellectual independence.</p> <p>6.7 Independently retrieve and process advanced information relating to the selected field of study.</p> <p>6.8 Work autonomously in specialized, complex, ill-defined and unpredictable contexts</p>
<p>7. Conduct research and adhere to Responsible Conduct of Research (RCR) principles, ethical decision-making, moral courage, and integrity.</p>	<p>7.1 Adhere to high ethical standards and academic integrity when conducting research.</p> <p>7.2 Make informed decisions or judgements on ethical codes and practices and manage complex ethical and professional issues</p>
<p>8. Communicate effectively using professional language, science, and technology to a diverse audience.</p>	<p>8.1 Use oral and written skills to effectively communicate with peers and other stakeholders.</p> <p>8.2 Interpret and transfer new knowledge through original research of publishable quality which satisfies peer review.</p> <p>8.3 Communicate complex ideas, issues, and conclusions clearly and effectively.</p>

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	<p>8.4 Present and defend research findings at national, regional or international scientific meetings.</p> <p>8.5 Compose an original research doctoral thesis that places the candidate research within the broader context of research</p>
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SECTION C	QUALIFICATION STRUCTURE				
COMPONENT	TITLE	Credits Per Relevant NCQF Level			Total Credits
		Level []	Level []	Level [10]	
FUNDAMENTAL COMPONENT Subjects/ Courses/ Modules/Units					
CORE COMPONENT Subjects/Courses/ Modules/Units	Doctoral Thesis			360	360
STRANDS/ SPECIALIZATION	Subjects/ Courses/ Modules/Units	Credits Per Relevant NCQF Level			Total Credits
		Level []	Level []	Level [10]	

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1. Health Systems, Policy, and Management	Thesis			360	360
2. Environmental and Occupational Health	Thesis			360	360
3. Epidemiology	Thesis			360	360
4. Health Promotion	Thesis			360	360
5. Occupational Hygiene	Thesis			360	360
6. Climate change and health	Thesis			360	360
7. Health Economics	Thesis			360	360
8. Human Toxicology	Thesis			360	360
Electives					

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SUMMARY OF CREDIT DISTRIBUTION FOR EACH COMPONENT PER NCQF LEVEL

TOTAL CREDITS PER NCQF LEVEL

NCQF Level	Credit Value
10	360
TOTAL CREDITS	

Rules of Combination:

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

This qualification comprises of the following, which must be fulfilled for the candidate to graduate with the qualification “Doctor of Philosophy in Public Health”. Learners are to select one area of specialisation.

Core module: Doctoral Thesis (360 credits)

Total = 360

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ASSESSMENT ARRANGEMENTS

Assessment focusing on the exit-level outcomes is done by means of a doctoral thesis in fulfilment of the award of the Doctor of Philosophy in Public Health. Assessment will be carried out by BQA-registered and accredited assessors.

Formative Assessment

No credits are assigned to the formative assessment.

Summative Assessment

Summative assessment will contribute 100% to the overall grading for the qualification.

MODERATION ARRANGEMENTS

1. There shall be both internal and external moderation in accordance with institutional policies aligned to national policies.
2. Moderators shall be accredited and registered or registrable with the Botswana Qualifications Authority (BQA) or other equivalent bodies.

RECOGNITION OF PRIOR LEARNING

Recognition of Prior Learning shall be granted where the candidate can provide academic transcripts and other forms of academic records of modules.

CREDIT ACCUMULATION AND TRANSFER

The qualification is designed to allow awards through CAT in accordance with institutional and national CAT policy.

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

1. Horizontal Articulation

PhD holders may progress in other specialised areas in science and public health fields at NCQF level 10, such as:

- a. Doctor of Philosophy in Biological Sciences

- b. Doctor of Philosophy in Microbiology
- c. Doctor of Philosophy in Biochemistry

2. Employment Pathways

There are employment opportunities for PhD in Public Health graduates in the country and beyond.

- a. Public Health Specialists
- b. Policy and Research analysts
- c. Health educators
- d. Environmental health specialists
- e. Public Health Research
- f. Epidemiologists
- g. Public health consultants
- h. Public health policy advisors
- i. Laboratory scientists
- j. Occupational hygienists
- k. Climate and health experts
- l. Health Economists
- m. Human toxicologists

QUALIFICATION AWARD AND CERTIFICATION

Qualification Awarding

The award of a Doctor of Philosophy degree shall be done after attaining the stipulated minimum credits for the qualification (360 credits) in accordance with the provision of the institution.

Certification Award

A candidate meeting the prescribed requirements will be awarded **Doctor of Philosophy in Public Health** and will be issued a certificate and an official transcript.

SUMMARY OF REGIONAL AND INTERNATIONAL COMPARABILITY

The Doctor of Philosophy in Public Health qualification was benchmarked with similar Doctor of Philosophy in Public Health qualifications offered regionally in South Africa and internationally in Uganda, the United States of America (USA) and Canada.

Similarities:

1. Title: The qualification has a similar title to those offered by the University of Western Cape South Africa; University of Pretoria, South Africa and the University of Makerere, Uganda.
2. NQF Level: This qualification is at NQF level 10 which is similar to the two qualifications offered in South Africa.
3. Credits: The qualification has a credit value of 360 like the qualifications offered by the universities in South Africa it is compared with.
4. Duration: The duration of the proposed programme is a minimum of 3-4 years full time, which is comparable to other qualifications it is compared with.
5. Outcomes: The main exit outcomes of this qualification focus on the competence to conduct public health research; identify, quantify, and prioritize the health problems and needs of communities; design, implement, and evaluate comprehensive and participatory public health programme and demonstration of leadership in transforming the public health, which is similar to all the qualifications benched marked with.
6. Modules: In terms of the domains/modules and subjects, the qualification is full research without coursework like that of the University of Western Cape, University of Waterloo and the University of Makerere. Coursework in this qualification may be required for some candidates as in the case of the University of Waterloo, Canada and the University of Makerere.
7. Assessment: The qualification is assessed through research and thesis/dissertation like qualifications offered at the University of Western Cape, University of Waterloo and the University of Tennessee Knoxville. The thesis may be written up in a full, or in a format of manuscripts as in the case of the University of Western Cape qualification.
8. Award: The qualification rules and minimum standards for the award of this qualification requires completion of a thesis as is the case with the qualifications from the University of Western Cape, University of Waterloo, the University of Makerere and the University of Tennessee Knoxville. A candidate must publish at least two articles based on the doctoral research specialization before completing and this is similar to the qualification offered at the

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University of Makerere. All qualifications compared require a Master's or equivalent qualification for admission

Differences

1. Title: The title of qualification is slightly different from those from the University of Waterloo and the University of Tennessee Knoxville, with the title "Doctor of Philosophy in Public Health Sciences" instead of Doctor of Philosophy in Public Health as in this qualification and that of the Universities of Makerere, Western Cape, and the University of Pretoria.
2. Credits: This qualification differs in terms of the credits with those offered by the University of Waterloo, Canada, University of Tennessee Knoxville and the University of Makerere, which do not use same notional hours per credit as the NCQF.
3. Modules: This qualification, which is research only, differs from that of the University of Pretoria, where all candidates must register for and attend Applied research methodology course in addition to research. The University of Pretoria attracts candidates with a Bachelor of Medicine and Bachelor of Surgery (MBChB or equivalent). Additionally, A student for the PhD degree must be registered for the doctoral degree study at the University for at least one academic year before the degree can be conferred, this is different from qualifications from other Universities which require 3-4 years. Similarly, the qualification from the University of Tennessee Knoxville requires candidates to pass a PhD qualifying exam within one semester of completing all required PhD core courses.
4. Award: The qualification offered by the University of Makerere is awarded by coursework and research. This is different from this qualification where the qualification is awarded by research only.
5. As for the qualification offered the University of Makerere, a candidate may be accepted with a first degree for a master's degree and after a year or two of satisfactory progress apply for upgrading of their candidature to PhD level. This is different for this qualification where access is only through a masters degree.

The proposed Doctor of Philosophy in Public Health is generally comparable to other qualifications in terms of the name, level of qualification, credits, duration of study, domains/modules, assessment strategies, qualification rules and pathways.

REVIEW PERIOD

The 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	



BOTSWANA
Qualifications Authority