SECTION A:	**QUALIFICATION DETAILS**

QUALIFICATION DEVELOPER (S)	• Gaborone University College of law & Professional studies • Boitekanelo College • Botho University • Mega Size College • Ramatea Vocational School • BA ISAGO University

TITLE	**MASTER OF SCIENCE IN OCCUPATIONAL HEALTH AND SAFETY**	**NCQF LEVEL**	9

FIELD	**HEALTH AND SOCIAL SERVICES**	**SUB-FIELD**	**OCCUPATIONAL HEALTH AND SAFETY**	**CREDIT VALUE**	260

New Qualification		✓	Review of Existing Qualification	

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:

Currently there is acute shortage of trained leadership personnel in the health sector. There is need for Botswana to have an expanded pool of health experts equipped with managerial skills in administering, managing environmental and workplace safety programs, from development, implementation, monitoring and

evaluation. This need has been outlined in the Botswana's Education and Training Sector Strategic Plan of 2015-2020, (ETSSP, 2015).

This would expedite government efforts in alleviating work-related accidents that has had enormous costs on government expenditures resulting in minimal funds towards development of the country. There are a number of policy shifts and changes taking place in Botswana, which all managers should be conversant with. Major bills such as the Human Resources Development Bill and the Botswana National Credit and Qualifications Framework, were passed by Parliament of Botswana in August 2013 but this has lacked a national Health and Safety policy in Botswana that has led to organisation to act on their own accord or to borrow international policies. This calls for a need of specialists in the field that can incorporate policy's at national level.

This sentiment is reverberated in the Human Resource Development Strategy (HRDS) which emphasizes the need to increase postgraduate qualifications across the health sector to enhance the human resource in the country.

Occupational health is the discipline of health focusing on the safety and wellbeing of employees at work. However, granted the complexity of modern day business or work, issues of health, safety, and welfare of employees are not as simple as they appear. Occupational Health and Safety (OHS) challenges require critical analysis and scientifically based evidence to inform policy and programming decisions to advance pro-health attitudes and habits enhancing a 'fit' between work and workers for a healthy work-life balance. Therefore internationally, Alli, (2008) alludes that occupational health programs have evolved beyond simplistic welfare activities to become an integral corporate affairs aspect, calling for integration of knowledge and skills from business administration, public health, environmental and social sciences concepts.

The public and private sector organizations throughout the world are increasingly concerned with improving occupational health and safety (OHS). In both developed and developing countries, the rapid pace of technological change, combined with the persistence of unsafe or environmentally threatening working conditions, has served to focus attention on the need to create a safe, healthy working environment and to promote a new safety culture at the workplace. Organizations increasingly seek OHS professionals who can catalyse these processes, and it is not always easy to find professionals with the right skills.

Building a seamless Education and Training System

Government and Majority of employers are slowly realising the link between workers' health and an increase in production thus leading to harnessing profits. Investing in the health of the workers and work safety is not only a need but a must across all industries benefits going beyond increased workers morale to reduced workers compensation and increased profits for the company. With reference to both the Human Resource Development Councils' Health Sector Plan (HRDC, 2016) and the National Development Plan 11 (NDP 11 April, 2017 – March, 2023:196), there is a need for health resources personnel in the country. A survey conducted by the Gaborone University College has revealed that in the Botswana Business such as mines, manufacturing industries around the country, workers are exposed to health hazards such as noise, dust, poor lighting, toxic gases, moving machinery or objects. Botswana's economy is ever on the rise and according to Botswana's Vision 2036 (2016), this gives the need for skilled manpower to aid in industry. Worldwide, occupational injuries and accidents have resulted in Governments losing large sums of money and manpower through occupational deaths and disabilities. Botswana is no exception to this situation as explained by the number of accidents and injuries reported at the recently shut down BCL mine (Daily News, Nov 8, 2016); therefore this qualification seeks to equip learners with research skills to assist with provision of safe, safety and productive environments for Botswana setting. There's also no established national Occupational Health Safety policy in place hence the need for trained professionals in Occupational safety management above Degree level.

Master of Science in Occupational Health and Safety (MSc in OHS) qualification gained support from diverse stakeholders including the Ministry of Health and wellness, the Ministry of Education (Department of Secondary Education) and Skills Development, the Ministry of Nationality, Immigration and Labor and Gender Affairs, Organizations in the private sector (see GUC Needs Assessment Report for Qualifications in the Field of Health and Social Sciences, 2018 attached). It was also endorsed by public and private tertiary education institutions including the University of Botswana's Department of Health Sciences(Public Health), (see attached copies of letters included in GUC Needs Assessment Report for Qualifications in the Field of Health and Social Sciences, 2018).

PURPOSE:

Master of Science in Occupational Health and Safety qualification will produce graduates with skills to uplift occupational health standards buttressed with economic and environmental benefits leading to better occupational health outcomes supported by healthy industrial practices for a sustained environment. Graduates

Building a seamless Education and Training System

of this qualification will be responsible for planning, implementing, and overseeing company's employee safety at work. Their main duty is to ensure that the company complies and adheres to Occupational Health and Safety (OHS) guidelines. Graduates will be able to among other duties:

- Develop and execute health and safety plans in the workplace according to legal guidelines,
- Advise and lead employees on various safety-related topics,
- Facilitate compliance with occupational health and safety (OSH) guidelines,
- Review existing OHS policies and procedures,
- Train, manage and guide staff on OHS,
- Oversee workplace repair, installations and any other work that could harm employees' safety.

ENTRY REQUIREMENTS (including access and inclusion)

To be considered for admission to the MSc in OHS qualification, candidates must fulfil the following requirements:

- NCQF Level 7 in a health-related field from a recognized academic institution with a minimum achievement of a pass grade or its equivalent.
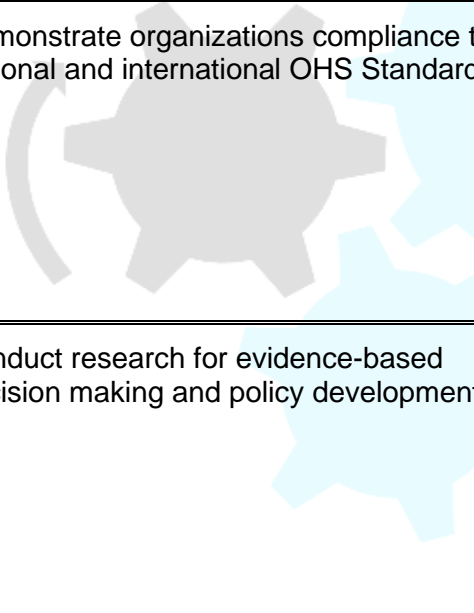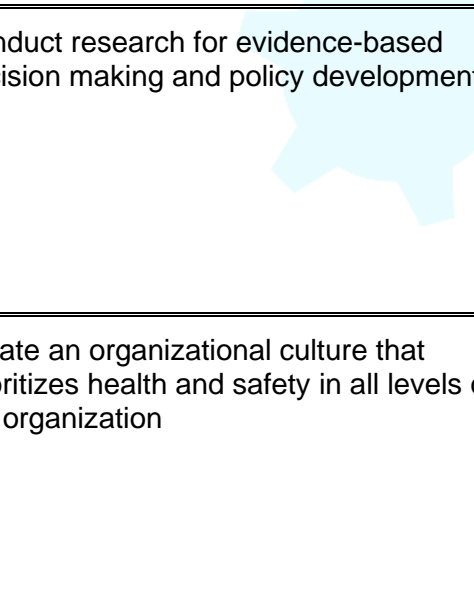
OR

- Postgraduate Diploma in OHS, Public health or related field at NQCF Level 8 obtained from a recognized educational institution.
- Admission under RPL and CAT will be considered in accordance with the national RPL policy.

Building a seamless Education and Training System

SECTION B	QUALIFICATION SPECIFICATION

GRADUATE PROFILE (LEARNING OUTCOMES)	ASSESSMENT CRITERIA
1. Analyse the integral parts of the framework that support occupational safety and health management requirements	1.1 Develop occupational health and safety policies 1.2 Evaluate major occupational hazards and risks instruments 1.3 Articulate and apply the OHS principles to develop enterprise strategies and programs 1.4 Demonstrate knowledge in applying national labour laws, policy applicable to OHS.
2. Manage pertinent occupational health and safety issues in various situations and devise strategic remedial enterprise measures	2.1 Carry out surveillance of occupational risks and hazards to proactively plan aversion strategies 2.2 Assess the importance of surveillance and monitoring of workers health to provide a baseline for planning health promotion and prevention strategies 2.3 Analyse the policy and legislative underpinnings of OHS programming 2.4 Evaluate assessments reports (surveillance and monitoring data) to support programming OHS decisions
3. Evaluate organization's risk management approaches.	3.1 Assess and determine required resources for risk management. 3.2 Compose investigation team depending on the human skills required. 3.3 Determine the training needs of workers, managers and OHS team in risk management and assessment 3.4 Develop performance measures to assess the OHS management results

Building a seamless Education and Training System

4. Lead incident investigation team	4.1 Develop occupational health and safety standards
	4.2 Analyze quality measures to ensure compliance with regulatory and organizational reporting requirements
	4.3 Establish an organisational accident investigation team
	4.4 Train the accident investigation team
5. Demonstrate organizations compliance to national and international OHS Standards	5.1 Develop codes of practice that govern and guide organizational direction towards international standards of safe practices
	5.2 Train and monitor employees to abide to set codes of standards based on industrial best practices
6. Conduct research for evidence-based decision making and policy development	6.1 Analyze international OHS acts and regulations
	6.2 Implement sound solutions through industrial research and experiments.
	6.3 Collaborate with relevant stakeholders to establish organizational and national OHS regulations.
7. Initiate an organizational culture that prioritizes health and safety in all levels of the organization	7.1 Develop a clear sense of leadership purpose, its ethical dimensions and relationship between leaders and followers in democratic environments
	7.2 Assess the impact of individual differences and various situations on leadership practice
	7.3 Enhance ability to participate in and lead groups of people with interdependent tasks within organizations
	7.4 Evaluate the role of adopting good communication approaches in leadership

Building a seamless Education and Training System

8. Assess impacts rising from built environment with negative impacts in an organization.	8.1 Analyze biological, chemical, physical, social and psychological stressors and the manner in which they impact on environmental health 8.2 Evaluate methods, practices and interventions in the core environmental health areas Environmental Protection, Occupational Health and Safety and Public Health 8.3 Develop an understanding of risk management theory and practice and its application in all the core areas of environmental health 8.4 Assess physical environment (earth), its natural processes at different spatial scales and the impacts of human activity on the environment and its ecosystems
9. Develop communication strategy that will harmonize policies for OHS compliance and performance measurement.	9.1 Engage in policy analysis and lead development of national strategies in alignment with set policies. 9.2 Apply a suitable communication plan in line with organizational standards 9.3 Train and incorporate management on communication strategy that influence improved organizational
10. Manage internal and external OHS data trends.	10.1 Evaluate collected organizational OHS data to map out common accident trends 10.2 Evaluate a range of data collection procedures 10.3 Utilize interpreted organizational data into practice for improved OHS Systems

Building a seamless Education and Training System

SECTION C	**QUALIFICATION STRUCTURE**				
COMPONENT	**TITLE**	**Credits Per Relevant NCQF Level**			**Total (Per Subject/ Course/ Module/ Units)**
		Level [8]	**Level [9]**	**Level [ ]**	
FUNDAMENTAL COMPONENT *Subjects/ Courses/ Modules/Units*	Project Management	10			10
	Monitoring and Evaluation	10			10
CORE COMPONENT *Subjects/Courses/ Modules/Units*	Management Essentials for Health and Safety		10		10
	SHEQ Management Systems		10		10
	Risk Management Systems		10		10
	Industrial Toxicology		10		10
	Principles of Environmental Health		10		10
	Advanced Occupational Hygiene		10		10
	Occupational Psychology		10		10
	Research Methods		15		15
	Human Factors and Ergonomics		10		10
	Biostatistics		15		15

Building a seamless Education and Training System

	Occupational Epidemiology		20		20
	Industrial Safety Communication		10		10
	Dissertation		50		50
	Internship		30		30
ELECTIVE/ OPTIONAL COMPONENT *Subjects/Courses/ Modules/Units*	Leadership & Organizational Change		10		10
	Trainer of trainers(program design)		10		10
	Safety engineering		10		10
	Health Information management systems		10		10

Building a seamless Education and Training System

	BQA NCQF QUALIFICATION TEMPLATE	Document No.	DNCQF.QIDD.GD02
		Issue No.	01
		Effective Date	04/02/2020

SUMMARY OF CREDIT DISTRIBUTION FOR EACH COMPONENT PER NCQF LEVEL	
TOTAL CREDITS PER NCQF LEVEL	
NCQF Level	**Credit Value**
8	20
9	240
TOTAL CREDITS	260

Rules of Combination:

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

Credits Distribution

Fundamental consists of two modules with 20 credits

Core modules consists of 14 modules with 220 credits

Electives consists of four modules (learners select two) 20 credits

Total credits 260

Building a seamless Education and Training System

ASSESSMENT ARRANGEMENTS

Assessment

All assessments leading to the MSc in OHS will be based on learning outcomes associated with the following assessment criteria.

1. **Formative assessment**

- 2 assignments- 10%
- Test 1- 10%
- Midterm Examination- 20%

The weighting of formative assessment is 40% of the final assessment mark

Practicums

- Logbook - 10%
- Presentation - 20%
- Site visit feedback - 20%
- Write up report - 50%

Dissertation

- Defense – 25%
- Proposal - 25%
- Final defense with findings -25%
- Final report - 25%

2. **Summative Assessment**
- Final Examination 60%

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

Re Assessment: In order to qualify for the re assessment the candidate should have obtained minimum of 40% in the final assessment. Those falling below this minimum level of attainment should be considering for retake.

MODERATION ARRANGEMENTS

INTERNAL MODERATION

All assessment tools undergo internal moderation. Once an exam paper has been drafted, it is moderated by internal moderators whose job is to ensure that the questions are based on and aligned to the learning outcomes for the qualification and that the paper is valid, fair and balanced throughout. The internal moderators

Building a seamless Education and Training System

also ensure that the suggested answers and marking schemes are appropriate. They check that the agreed version of the question paper, suggested answers and marking scheme have been set in accordance with the standards required for the level of the exams. They also ensure that there is no duplication of items in the assessment instruments or avoid unnecessary overlap with other papers and ensure progression. The exam papers are further moderated by external moderators before they are certified to be appropriate for the exam.

EXTERNAL MODERATION

All assessments leading to the award of credit or qualification must be externally moderated. Where the qualification is offered or awarded in collaboration with other institutions, external moderation processes and standards followed should be consistent with the NCQF quality standards (Qualifying body will ensure consistency of assessment tools by the ETP). Results are published after external moderation through the Academic Board or similar structure.

NB: All external and internal moderators and assessors will be BQA accredited in the subject matter with relevant experience.

RECOGNITION OF PRIOR LEARNING

Provision of Recognition of Prior Learning (RPL) will be done according to the National RPL Policies.

CREDIT ACCUMULATION AND TRANSFER

Any relevant vocational qualification at NCQF Levels 7 or 8 may render the candidate eligible for exemptions or credit transfer in accordance with applicable University policies and National CAT Policy.

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

PROGRESSION PATHWAY
This qualification provides learners with both horizontal and vertical articulation possibilities.
Horizontal Articulation
- Masters of Public health
- Masters of Science in work place safety
- Masters of Health and Safety Management
- Master of Science safety & Risk Management
- Masters of Science Safety Health and Environment

Building a seamless Education and Training System

Vertically articulation is to a

- Doctoral degree in Occupational Health and Safety Management
- Doctoral degree in Public Health
- Doctoral degree in Safety Health and Environment
- Doctoral Degree in Health and Safety Management

EMPLOYMENT PATHWAYS

Graduates are employed by companies, environmental, health and safety consultancies, universities, and government agencies.

Occupational Health and Safety is an area of prime importance in the management of enterprises and other workplaces, generating a demand for qualified occupational health and safety professional. This program is designed to enable graduates to work effectively in a range of OHS professional roles, such as:

- OHS Managers and program coordinators in private industry or the public sector

- Occupational physicians, occupational health nurses, occupational hygienists, ergonomists

- Government OHS inspectors and OHS Advisors

- Independent OHS consultants and advisers

- OHS advisers working with unions and worker organizations

- OHS educators.

- OHS researchers

On a day-to-day basis OHS professionals are involved in: monitoring and modifying the work environment; delivering education programs, including wellness programs; analyzing workplace data; devising, evaluating and implementing OHS management systems; undertaking OHS auditing and inspections; completing accident investigation; ensuring compliance with legislation.

Occupational health and safety graduates enjoy a well-paid and diverse career with an ability to work anywhere, including: remote, rural or urban regions; nationally or internationally; across all industries (including: mining, agricultural, retail, hospitality, construction, transport, manufacturing, health care); in government, private sector in research and consultancy, and enjoy flexible working conditions (including options for part-time work).

Building a seamless Education and Training System

QUALIFICATION AWARD AND CERTIFICATION

Upon successful completion of theory and practicum units of this qualification and satisfying the 250 credits. The candidate will be awarded a qualification of a Master of Science in Occupational Health and Safety after satisfying minimum of 2 years .

REGIONAL AND INTERNATIONAL COMPARABILITY

To establish the international comparability, the developer benchmarked against four similar qualifications regionally and internationally. The benchmarking was looking at the title of the qualification, credits allocated (if applicable), NQF level at the country of origin, entry requirements, and modules and/or exit level outcomes. The comparability shows how this qualification compares to others benchmarked against and how well that qualification covers the breadth of possible aspects in OHS.

Comparability statement: Credit allocation of this qualification differs to the ones benchmarked against because of the national qualification framework of the particular country; it depends on how the country or ETP determine the credits of the qualification. The entry requirements also differ, some require Honours degree in related fields while others require National Diploma or Bachelor's degree in related fields. However, the level of the qualifications is the same, Master's Degree. When mapping RQF Level 7, AQF Level 9 and KNQF Level 7 into the NCQF, they equate to NCQF Level 9. Although all the qualifications benchmarked against do not have internship module, most modules outlined compare similarly to this qualification. There are components of research, risk management, safety health and environmental law and many others across all the qualifications.

REVIEW PERIOD

This qualification will be reviewed after 5 years upon registration.

Building a seamless Education and Training System