

## BQA NCQF QUALIFICATION TEMPLATE

SECTION A: QUALIFICATION DETAILS												
<b>QUALIFICATION DEVELOPER (S)</b>	Boitekanelo College											
<b>TITLE</b>	Bachelor of Science in Occupational Health and Safety						<b>NCQF LEVEL</b>	7				
<b>STRANDS (where applicable)</b>	N/A											
<b>FIELD</b>	Services						<b>CREDIT VALUE</b>	480				
<b>SUB FIELD</b>	Hygiene and Occupational Health Services											
New Qualification	Legacy Qualification					Renewal Qualification					✓	
							Registration Code		Q0072			
<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

Botswana continues to grow its mining and construction sectors as witnessed by an increase in its year-to-year budget allocation in the 2022/23 budget allocation. These developments are aimed at transforming the economy to a high-income status by 2036. The government of Botswana allocated a staggering BWP21.01 billion towards development (Grant Thornton Botswana 2023). The budget allocation reveals a year-on-year (YoY) increase of 27.88 % from the 2022/2023 budget reflecting a projected increase in activities in these sectors. Moreover, the country strives to boost its economy by encouraging the growth of local industries and the agricultural sector by supporting and encouraging local production. It is worth noting that there is always a positive correlation between increased economic activities and incident occurrence. It is against this background that the country needs to adopt a proactive stance in incident prevention by increasing the number of competent Occupational Health and Safety practitioners.

Botswana has ratified 15 conventions to improve its performance in OHS and these conventions include C176, which seeks to improve health and safety in the mining sector. Despite these efforts, the country continues to grapple with a high work-related accident prevalence rate (LTIFR/LTISR) as reflected by an annual average of ~1,000 work-related accidents. Most of these accidents result in more than 3 days of missed work (Lost Time Injuries) and fatalities because some sectors are not catered for by the conventions. In an endeavour to bridge this gap, the country is in the process of drafting a country-specific Occupational Health and Safety legislation in consultation with the International Labour Organisation (ILO) to strengthen its OHS enforcement. The birth of OHS-specific legislation is projected to increase the demand for health and safety professionals in the country as institutions will be compelled to follow the dictates of the law.

Furthermore, Safety and Health practitioners are essential in ensuring that Botswana meets its mandate of attaining the following Sustainable Development goals:

- **Goal 3:** Good health and well-being for people, clean water and sanitation,
- **Goal 8:** Decent work and economic growth, industry, innovation and infrastructure,
- **Goal 16:** Peace, justice and strong institutions.

The availability of competent occupational health and safety practitioners is therefore fundamental to the attainment of these SDGs. Additionally, following a stakeholder engagement done on the 5<sup>th</sup> day of July 2024, it was evident that the uptake of the qualification is consistent with the rationale stated.

The stakeholders were also satisfied that the current graduates meet industrial expectations. Furthermore, HRDC priority skills report of 2023-24 lists Occupational Health and Safety skills as a priority area, as the industry requires personnel with these skills.

The table below shows the number of applications versus enrolment figures which supports the fact that the qualification is still needed and marketable.

YEAR	Number of applications	Total enrolled
2024	510	131
2023	400	92
2022	416	87

This qualification will provide learners with the knowledge and skills to work as occupational health and safety professionals.

**PURPOSE: (itemise exit level outcomes)**

The purpose of this qualification is to equip graduates with specialized knowledge, skills and competencies to:

- a) Identify workplace hazards, assess associated risks using appropriate qualitative and quantitative methods, and implement effective control measures to mitigate potential harm to workers and the environment.
- b) Conduct occupational health and safety audits to evaluate compliance with national and international safety regulations.
- c) Investigate workplace incidents, document findings accurately, and recommend corrective and preventive actions.
- d) Uphold ethical integrity and professional accountability in occupational health and safety practices by upholding principles such as confidentiality, fairness, and impartiality.
- e) Lead workplace safety initiatives, communicate OHS policies and procedures effectively to various stakeholders, and conduct safety training programs.

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

1. NCQF level 4 or equivalent.
2. Applicants who did not meet the minimum entry requirements with NCQF level 4 will be considered for entry through Recognition of Prior Learning (RPL) and CAT (Credit Accumulation and Transfer) and as per institution RPL policy and CAT policy

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### SECTION B

### QUALIFICATION SPECIFICATION

GRADUATE PROFILE (LEARNING OUTCOMES)	ASSESSMENT CRITERIA
<p><b>LO 1:</b> Utilize safety principles, and practices to control hazards in various industrial sectors while working with different genders, ethnicities, age groups and people living with disabilities.</p>	<p>1.1. Apply core safety principles, hazard control techniques, and best practices specific to different industrial sectors (e.g., construction, healthcare, manufacturing, mining).</p> <p>1.2. Communicate safety procedures effectively and collaborate with diverse teams to implement safety practices. This includes addressing language barriers, cultural sensitivities, and varying physical or cognitive abilities.</p> <p>1.3. Develop safety procedures, work instructions and manuals using the safety principles to enforce workplace best practices and create safe work environments.</p>
<p><b>LO 2:</b> Interpret and analyse data, to draw evidence-based conclusions, and provide well-</p>	<p>2.1. Collect and document workplace accident, injury, and disease data,</p>

<p>reasoned justifications for identified trends, including potential risk factors and preventive measures.</p>	<p>ensuring accuracy, completeness, and relevance to occupational exposures.</p> <p>2.2. Apply appropriate statistical or qualitative analysis methods to identify patterns, correlations, and emerging trends in the causation of occupational accidents, injuries, and diseases.</p> <p>2.3. Collect, analyse, and interpret data to identify trends in the causation of accidents, injuries, and diseases by occupational exposures</p>
<p><b>LO 3:</b> Create a safe and enabling workplace environment conducive to all stakeholders through behaviour transformation, training and proactive articulation of threats to safety, health and environmental management.</p>	<p>3.1. Identify, assess, and implement proactive SHE measures that promote a safe and enabling workplaces for all stakeholders.</p> <p>3.2. Design and deliver impactful training programs that foster a culture of safety, encouraging behavioural changes that enhance workplace safety, health, and environmental management.</p> <p>3.3. Communicate potential workplace hazards and risks, effectively ensuring that all stakeholders understand and respond appropriately to threats through clear policies, awareness campaigns, and strategic interventions.</p>
<p><b>LO 4:</b> Analyze and apply occupational health and safety legislation by interpreting key legal frameworks, evaluating compliance</p>	<p>4.1. Develop tools for monitoring and measuring legislative compliance to</p>

<p>requirements, and implementing workplace policies that align with national and international OHS standards.</p>	<p>ensure that the organisation meets legal and other requirements.</p> <p>4.2. Demonstrate knowledge of international standards such as International Labor Organization (ILO) conventions, Southern African Development Community (SADC) protocols, and International Organization for Standardization (ISO).</p> <p>4.3. Analyse existing hazard control measures to identify gaps and make appropriate recommendations.</p> <p>4.4. Review policies, procedures, and plans to identify gaps and ensure effectiveness.</p>
<p><b>LO 5:</b> Evaluate the adequacy of control measures and recommend the most sustainable control measures to avoid the recurrence of incidents following international best practices.</p>	<p>5.1. Apply professional reasoning to analyse, select and employ appropriate safety interventions to avoid the negative impact associated to the exposure to various hazards.</p> <p>5.2. Evaluate the adequacy of control measures by determining the risk (raw and residual) of exposure to hazards.</p> <p>5.3. Recommend the most effective corrective and preventative actions to address unsafe acts and unsafe conditions to foster a positive safety culture.</p>

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<p><b>LO 6:</b> Collaborate with multi-disciplinary teams in implementing the most relevant and effective international best practices in an ethical manner to manage Safety, Health and Environmental concerns in various settings.</p>	<p>6.1. Communicate professionally and embrace professional behaviour in the workplace.</p> <p>6.2. Discuss effective ways of improving performance and ensuring accountability.</p> <p>6.3. Implement cross-cutting initiatives in the management of workplace concerns.</p> <p>6.4. Apply ethical decision-making, and continuous improvement in workplace safety, health, and environmental performance.</p>
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SECTION C	QUALIFICATION STRUCTURE				
COMPONENT	TITLE	Credits Per Relevant NCQF Level			Total Credits
		Level [ 5 ]	Level [ 6 ]	Level [ 7 ]	
<b>FUNDAMENTAL COMPONENT</b>	Communication and Study Skills	9			9
Subjects/ Courses/ Modules/Units	Basic Computer Applications	9			9
	Mathematics	10			10

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	Epidemiology		12		12
	Chemistry	12			12
	Physics	10			10
	Introduction to Biostatistics		10		10
	Anatomy and Physiology	12			12
	Research methods I			12	12
<b>CORE COMPONENT</b>  Subjects/Courses/ Modules/Units	Safety Principles and Practices	12			12
	Safety Principles and Practices 2		12		12
	Occupation Psychology	12			12
	Accident Prevention and Investigation		12		12
	Occupational Health and Safety Legislation			10	10
	Ethics & Professional behaviour	10			10
	SHEQ Management Systems & Theories		10		10

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	Environmental Health			10	10
	Infection Control		10		10
	Industrial hygiene 1		10		10
	Industrial hygiene 2			12	12
	Occupational toxicology		12		12
	Chemical Safety Management			12	12
	Occupational Risk Management			10	10
	Industrial Ergonomics			12	12
	Food Safety & Hygiene		10		10
	Occupational Diseases			12	12
	Research Methods II (Proposal)		16		16
	Equipment & Fleet Management			12	12
	Occupational Health and Safety Records Management			14	14

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	Safety Program Auditing & Evaluation			12	12
	Fire Safety and Emergency Preparedness			12	12
	Human Resource Management		12		12
	Safety Supervision & Leadership		10		10
	Research Project (DISSERTATION)			30	30
	Work Integrated Learning.			60	60
<b>STRANDS/ SPECIALIZATION</b>	Subjects/ Courses/ Modules/Units	<b>Credits Per Relevant NCQF Level</b>			<b>Total Credits</b>
		<b>Level [ ]</b>	<b>Level [ ]</b>	<b>Level [ ]</b>	
<b>1.</b>					

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<b>Electives</b>	Communicable and non-communicable diseases.		9		9
	Sexual and Reproductive Health		9		9
	Entrepreneurship		9		9
	Nutrition and Health		9		9
	<b>Total credits (including two electives)</b>				<b>480</b>

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

#### TOTAL CREDITS PER NCQF LEVEL

NCQF Level	Credit Value
Level 5 Credits	96
Level 6 Credits	154
Level 7 Credits	230
<b>TOTAL CREDITS</b>	<b>480</b>

**Rules of Combination:**

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

Total credits for Fundamentals, Core and electives.

Fundamentals modules: 96 credits

Core credits modules: 366 credits

Electives (Choose any 2): 18 credits

**Total credits: 480 credits**

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### ASSESSMENT ARRANGEMENTS

This will be assessed using formative at 50% and summative at 50%.

### MODERATION ARRANGEMENTS

**The following shall apply for both internal and external moderation.**

Internal moderation requirements and external moderation shall be carried out in accordance with ETP moderation policy and BQA requirements.

#### **Professional registration and accreditation**

All assessors and moderators must be registered and accredited with BQA

### RECOGNITION OF PRIOR LEARNING

There shall be a provision for the award of credits towards the qualification through Recognition of Prior Learning, RPL in accordance with ETP and national policies on RPL.

### CREDIT ACCUMULATION AND TRANSFER

There shall be a provision for the Credit Accumulation and Transfer, CAT in accordance with ETP and national policies on CAT.

### PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

**Horizontal Articulation** (related qualifications of similar level that graduates may consider) Graduates of this qualification may consider pursuing related qualifications (at this level) such as;

- a) Bachelor of Science Design Ergonomics

- b) Bachelor of Science Safety Management
- c) Bachelor of Science in Environmental Health and safety
- d) Bachelor of Science in Environmental Health
- e) Bachelor of Science in Occupational Hygiene

**Vertical Articulation** (qualifications to which the holder may progress to) Graduates may progress to higher level qualifications such as:

- a) Post graduate diploma in Occupational Health and safety
- b) Master of Science Industrial Hygiene
- c) Master occupational Health and safety
- d) Master of Science Ergonomics
- e) Master of Science Environmental Health
- f) Master of Science in Safety Management

### **Employment**

Graduates will have requisite competencies and attributes to work as:

- Occupational Health and Safety Practitioners
- Occupational Risk management Specialists
- Safety Manager
- Safety Health consultants and coordinators
- Safety Quality Assurance officers
- SHE officers
- Safety auditors
- Safety inspectors

### **QUALIFICATION AWARD AND CERTIFICATION**

For a candidate to be awarded a Bachelor of Science in Occupational Health and Safety they must have acquired a minimum of 480 credits. The candidate should pass all the core and fundamental modules in the learning.

### SUMMARY OF REGIONAL AND INTERNATIONAL COMPARABILITY

#### Bachelor in Occupational Health and Safety Management, Unicaf University (Zambia)

##### Similarities

**NQF Level-** Both qualifications are pitched at same NQF Level of 7.

**Credit Load and duration:** Both qualifications also have similar credit load of 480 and duration of 4 years.

**Learning Outcomes-** The learning outcomes for both qualifications are also similar e.g.

- Identify and monitor hazards by thoroughly analysing the working spaces and working conditions.
- Integrate health and safety-related measures and solutions, in collaboration with professionals from other disciplines, in order to minimize and prevent hazards at work.
- Conduct accident investigations to determine their root cause.
- Manage organizational changes through health and safety principles within management systems, cultures, practices, and priorities.
- Assess the design, development and delivery of training and information for differing levels within the workplace.
- Use effective communication skills and methods to clearly convey regulatory and technical information and data to designated audiences.

##### Differences:

**Title:** The title of the qualification is Bachelor of Science in Occupational health and safety, whilst that of the qualification benchmarked is Bachelor in Occupational health and safety Management. Even though the titles are different, the main learner exit outcomes and content covered are similar.

**Modules:** The modules offered which are different in their nomenclature in Bachelor of occupational health and safety management from Unicaf are: Financial Accounting, Business Decision, Theory and accident, health and safety auditing, and performance management .However these are embedded in the core modules of BSc in Occupational Health and safety like Occupational Health and Safety Records Management, Safety Program Auditing & Evaluation, Accident Prevention Investigation and Safety Supervision & Leadership.

**Assessment Strategies:** The assessment strategies in Bachelor in Occupational health and Safety Management is 60:40 whilst the BSc in Occupational health and safety is 50:50.

**Bachelor of Science (Occupational Health and Safety Management), University of Galloway, Ireland**

### Similarities

**Duration:** Both the qualifications are offered for a duration of 4 years.

**Learning Outcomes:** Four out of six learning outcomes are similar to the benchmarked qualification of BSc in Occupational health and Safety Management e.g.

- Understanding scientific principles underpinning occupational health and safety.
- Assessing workplace risks and designing safety systems.
- Undertaking professional-level project and research work.
- Managing safety and human reliability within organizational contexts.

**Employment Pathways:** Both the qualifications offer similar employment pathways to the graduates like EHS managers, Occupational and safety officers, Regulators and compliance officers and consultant in private and govt sectors.

### Differences:

**NQF level:** BSc in Occupational health and safety management by the benchmarked university is offered at NQF level 8 whilst the BSc in Occupational health and safety is at BNCQF level 7. This difference is due to difference in National qualification framework in different countries.

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**Credits:** BSc in Occupational health and safety management by University of Gallway has 240 ECTS credits which is equivalent to a full Bachelor's degree according to European qualification framework.

The reviewed qualification overall compares well with other qualifications which it was benchmarked against. The title of the reviewed qualification is preferred over the ones benchmarked as it addresses the current market trends and industry demands and is also aligned to HRDC skills set. The reviewed qualification and other benchmarked qualification are equipped with competencies which met the academic requirements, clinical competencies as outlined in the qualification and accreditation standards, proficiency in evidence-based practice, critical thinking, problem-solving, and decision-making, commitment to lifelong learning, continuing education, and professional growth in the field of Occupational health and safety. The similarity of the courses consequently translates to the graduate profile of the qualifications from the above-mentioned institutions being comparable to the reviewed qualification. Generally, the qualification compares well with the benchmarked institutions in terms of Learning outcomes and modules offered which facilitates easy articulation for the learners into the same qualifications identified both horizontally and vertically.

### REVIEW PERIOD

To be reviewed once every Five (05) years.

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

**BOTSWANA**  
Qualifications Authority