SECTION A:	***QUALIFICATION DETAILS***				
QUALIFICATION DEVELOPER (S)	*Boitekanelo College*				
TITLE	*Bachelor Of Science in Emergency Medical Care*			***NCQF LEVEL***	*7*
STRANDS (where applicable)	*Not Applicable*				
FIELD	*Health And Social Sciences*	***SUB-FIELD***	*Health Science*	***CREDIT VALUE***	*565*
New Qualification	✓	*Legacy 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:

Botswana currently has emergency medical technicians who have limited skills and competencies, and only a few emergency care practitioners with advanced skills and competencies. However, each year there are about 480 fatalities, and 1500 road users who are seriously injured on the roads in Botswana (MVA,2016). Motor vehicle collisions rose by 7.4% from 17 341 in 2018 to 18 623 in 2019, whereas casualties rose by 3,2% from 6243 in 2018 to 6442 in 2019 (MVA, 2019). As a result, there is currently an increased burden of time critical emergencies putting strain on emergency care technicians and in hospital personnel who are at

times required to leave their primary duties to manage critical patients. Therefore, there is a need to train, develop and educate emergency care practitioners with advanced life support skills and competencies such as advanced airway management, advanced cardio-respiratory therapies, neonatal and paediatric emergency management, and specialized medical transportation.

Graduates from this qualification will provide specialized advanced care which will improve patient outcomes. Emergency medical care training and education have have the years been a priority for Botswana. According to the HRDC 2019 report, emergency medical care remains a high priority for Botswana.

PURPOSE:

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

- Provide advanced management of medical and trauma emergencies independently in various settings.
- Participate in promotive, preventative, curative and rehabilitative care.
- Conduct academic research within health care.
- Demonstrate competencies in various rescue skills.
- Display empathy, professionalism, and advocacy in patient care.

This qualification is intended to educate and train Emergency Care Practitioners that will excel in Emergency Medical Care and become ethical, knowledgeable, and innovative leaders in pre-hospital care.

MINIMUM ENTRY REQUIREMENTS (including access and inclusion)

To be eligible for admission for this qualification, potential candidates must have:

- Certificate IV (NCQF level 4) or equivalent.

- Applicants who do not meet the above may be considered through Recognition of Prior Learning (RPL) and Credit Accumulation and Transfer (CAT) institutional policies in line with National RPL and CAT Policies for access.

SECTION B	***QUALIFICATION SPECIFICATION***
GRADUATE PROFILE (LEARNING OUTCOMES)	***ASSESSMENT CRITERIA***
1. Demonstrate specialised knowledge, skills and attitudes in clinical decision-making that are required to assess, diagnose, and manage patients according to evidence-based guidelines.	1.1 Assess, diagnose, and manage patients presenting with advanced medical and trauma emergencies. 1.2 Apply diagnostic principles during various pre-hospital clinical scenarios. 1.3 Demonstrate interpersonal skills to work effectively as a team leader and member within a multi-disciplinary team. 1.4 Use various ICT platforms to enhance clinical practice.
2. Apply the principles of medical ethics, professional behaviour, and the legal framework to the context of emergency care providers.	2.1 Adhere to professional standards and promote advocacy for the profession. 2.2 Use ethical principles to inform decision-making during patient care. 2.3 Apply knowledge of legislation statutes to discuss common medicolegal issues.
3. Apply knowledge and understanding of anatomy and physiology, microbiology, pharmacology, and pathology in the context of emergency medical care.	3.1 Demonstrate the knowledge and understanding of disease process to prevent, diagnose and treat emergency conditions. 3.2 Integrate knowledge of chemistry and physics in patient care. 3.3 Apply knowledge and understanding of pharmacokinetics and pharmacodynamics of drugs in patient management.

4. Educate and train health care teams on emergency care to ensure quality patient care	4.1 Develop innovative teaching and learning materials for a learning programme in the Emergency Medical Care discipline. 4.2 Use a variety of learner-centred teaching strategies to facilitate learning. 4.3 Create appropriate assessment tools based on principles of assessment and learning taxonomies.
5. Lead and manage emergency medical teams to maximise utilisation of resources	5.1Use leadership and management theories, and principles to manage health care resources. 5.2 Execute managerial functions to achieve organizational goals and objectives. 5.3 Apply appropriate decision-making tools/ approaches to address organizational situations in healthcare.
6 Use research findings in decision-making to provide evidence-based emergency medical care practice	6.2 Demonstrate the ability to conduct literature reviews and gather critical scientific information related to the research proposal and the appropriate reference management software. 6.3 Apply evidence-based methodologies when conducting health research. 6.4 Apply ethical principles of research in conducting health research. 6.5 Utilise research findings to inform practice.
7 Use safe and effective rescue techniques to access and manage patients requiring specialized incident response individually or as part of a team.	7.2 Apply knowledge of extrication procedures to safely evacuate entrapped patients during motor vehicle collisions and industrial accidents. 7.3 Use principles of hazardous materials incident management, fire search and rescue to safely evacuate and manage patients. 7.4 Demonstrate ability to safely perform basic aquatic rescue.

	7.5 Adhere to incident command system in disaster preparedness and response.

SECTION C	***QUALIFICATION STRUCTURE***					
COMPONENT	***TITLE***	***Credits Per Relevant NCQF Level***				***Total Credits***
		Level [5]	***Level [6]***	***Level [7]***	***Level [8]***	
FUNDAMENTAL COMPONENT *Subjects/ Courses/ Modules/Units*	Basic Computer Application	***12***				12
	Communication & Study Skills	***12***				12
	Microbiology		***16***			***16***
	General Chemistry		***16***			***16***
	General Physics		***16***			***16***
	Primary Health Care		***10***			***10***
	Anatomy & Physiology		***32***			***32***
	Physiology			***24***		***24***
	Health Law And Ethics		***10***			***10***
	Introduction To Psychology	***8***				***8***

CORE COMPONENT *Subjects/Courses/ Modules/Units*	Emergency Medical Practice	***14***	***32***	***32***	***12***	***90***
	Work Integrated Learning	***8***	***16***	***16***	***60***	***100***
	Organizational Behaviour		***12***			***12***
	Hazardous Material Rescue	***6***				***6***
	Fire Search & Rescue	***6***				***6***
	Aquatic Rescue	***6***				***6***
	Vehicle Extrication Rescue	***6***				***6***
	Disaster Preparedness & Response			***8***		***8***
	Educational Techniques			***12***		***12***
	Introduction To Biostatistics		***16***			***16***
	Research Methods			***16***		***16***
	Research Proposal			***20***		***20***
	Healthcare Service Management			***12***		***12***
	Entrepreneuship			***12***		***12***

	Clinical Pathology				***18***	***18***
	Pharmacology			***18***		***18***
	Clinical Diagnostics			***18***		***18***
	Research Project				***33***	***33***
	NB: *All Emergency Medical Practice Modules include theory, practicals, and work integrated Learning*					

STRANDS/ SPECIALIZATION		***Credits Per Relevant NCQF Level***				***Total Credits***
		Level [5]	***Level [6]***	***Level [7]***	***Level [8]***	
Strands	***NA***					
Electives	***NA***					

SUMMARY OF CREDIT DISTRIBUTION FOR EACH COMPONENT PER NCQF LEVEL	
TOTAL CREDITS PER NCQF LEVEL	
NCQF Level	***Credit Value***
5	***78***

6	***176***
7	***188***
8	***123***
TOTAL CREDITS	***565***

Rules of Combination:

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

This qualification is worth a total of 565 credits which comprises of;

Fundamental Credits:

- Level 5 =24 credits.
- Level 6 =112 credits.
- Level 7 = 24 credits.

Core Credits:

- Level 5 = 46 credits.
- Level 6 = 64 credits.
- Level 7 = 164 credits.
- Level 8 = 123 credits.

ASSESSMENT ARRANGEMENTS

Professional registration and accreditation

All assessors and moderators must be registered and accredited by relevant accreditation bodies.

Assessment Weightings will be as below:

Semester modules

50% formative assessments

50% summative assessments

Year modules

60% of formative assessments

40% summative assessments

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 by any recognised institution.

RECOGNITION OF PRIOR LEARNING

Applicants may submit evidence of prior learning and current competence and/or undergo appropriate forms of Recognition of Prior Learning (RPL) assessment for the award of credits towards the qualification in accordance with applicable institution RPL policies and relevant national-level policy and legislative framework.

Implementation of RPL shall also be consistent with requirements, if any, prescribed for the field or sub-field of study by relevant national, regional, or international professional bodies.

CREDIT ACCUMULATION AND TRANSFER

Credit accumulated shall be evaluated and transferred guided by the institutional CAT policy

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

Horizontal Articulation

Graduates of this qualification may consider pursuing related qualifications where exemptions and credits may apply in the health care services, education and management sectors such as but not limited to:

Bachelor of Science Nursing

- Bachelor of Medicine,
- Bachelor of Surgery (MBBS)
- Bachelor of Arts in Psychology
- Bachelor of Science in Healthcare management
- Bachelor of Science in Health Promotion and Education
- Bachelor of Science in Occupational Health and Safety

Vertical Articulation

Graduates may progress to higher level qualifications such as Masters' degree qualifications programs such as (but not limited to):

- Master of Science in Emergency Medical Care
- Master of Philosophy in Emergency Medicine
- Master of Philosophy in Public health
- Master of Business Administration Business Administration

EMPLOYMENT PATHWAYS

Graduates will have requisite competencies and attributes to work as (but not limited to):

- Emergency Care Practitioner
- Ambulance base Officer
- Uniformed Services Emergency Care Practitioner
- Emergency Care educator
- Managers of remote and local clinics.

QUALIFICATION AWARD AND CERTIFICATION

Minimum standards of achievement for the award of the qualification

Candidates must meet the minimum standards to be awarded the qualification. Candidates must acquire the accumulative 565 credits, successfully achieve work-integrated learning outcomes and complete a research project to be awarded this qualification.

Certification

Candidates meeting prescribed requirements will be awarded the Bachelor of Science in Emergency Medical Care qualification in accordance with standards prescribed for the award of the qualification and applicable policies, including 565 credits comprising coursework, research project, and work-based learning.

SUMMARY OF REGIONAL AND INTERNATIONAL COMPARABILITY

When comparing the proposed qualifications to those offered by Monash University Australia Masinde Muliro University of Science and Technology Kenya Cape Peninsula University of Technology, and Durban University of Technology, there are several similarities and differences.

The similarities include the duration of the program, which is typically four years, and the inclusion of work-integrated learning within the training. Additionally, the credit requirements for these qualifications are similar. Subjects offered are similar i.e., modules such as organizational behaviour, entrepreneurship, health promotion and education cut across the three institutions and compare favourably with the proposed qualification. The exit outcomes are similar for all three institutions and therefore are a good comparison as the proposed qualification also has similar exit outcomes.

The course content is similar between these universities. However, there are differences in terms of the program duration, the Masinde Muliro University of Science & Technology has a longer duration which consists of three years of coursework and an additional 18 months of internship. The credits are also lower for Monash University Australia compared to others. This, therefore, means the proposed qualification compares favourably with the two institutions.

Overall, it is important to consider both the similarities and differences in the qualifications offered by various universities to make an informed decision about which qualification best suits the needs and goals of the country. This Qualification compares closely with the South African bachelor's degree in emergency medical care and has also content from the other institutions it has been compared to. Students who graduate from this qualification will be able to apply for vertical and horizontal progression in institutions offering similar outcomes and credits. Graduates from this qualification will be able to progress into a Master's degree and eventually PhD qualifications.

REVIEW PERIOD
The qualification will be reviewed in 5 years from date of registration.