

## **PROFESSIONAL BOARD FOR EMERGENCY CARE**

### **MINIMUM STANDARDS FOR THE PROFESSIONAL DEGREE IN EMERGENCY MEDICAL CARE**

#### **PREAMBLE**

The Health Professions Council of South Africa is established in terms of the Health Professions Act, 1974 (Act No. 56 of 1974) to protect the public and guide the professions which requires that certain Health Professionals practicing in South Africa shall be registered with the HPCSA and practice in accordance with and within the ethical and legal framework of the Council.

In terms of Section 17 of the Health Professions Act, 1974 every person desiring to be registered in terms of this Act shall apply to the Registrar and shall submit the qualification which, in his or her submission, may entitle him or her to registration. This qualification must be to the satisfaction of the Registrar allowing individuals to register. As such, this document, developed by the Professional Board for Emergency Care (PBEC) outlines the minimum standards that need to be obtained to allow individuals who hold a professional Bachelor's degree in Emergency Medical Care to register as Emergency Care Practitioners (ECPs)

The Professional Bachelor Degree in Emergency Medical Care (BEMC) has been developed as a qualification to allow for registration as ECP with the HPCSA. Emergency Care Practitioners are health care professionals who function as medical rescue practitioners and emergency care clinicians who practice independently within both the pre-hospital Emergency Care and the in-hospital Emergency Centre environments. Completion of the Professional BEMC at a University which is accredited by the PBEC allows for registration as an ECP at the HPCSA.

The purpose of this Minimum Standards document is twofold. Firstly, the document serves to provide Higher Education Institutions wishing to offer the BEMC programme standards which their graduates would need to achieve to allow them to register with the HPCSA as ECPs. Secondly, the document also serves as a guide for HEIs in other areas in relation to curriculum design and development. Whilst the PBEC recognizes the autonomous nature of Universities relating to their programme design, the PBEC reserve their rights to refuse registration for graduates from programmes that cannot demonstrate evidence that their students have met with the mandatory minimum standards identified below.

This Minimum Standards document should be read in conjunction with the following documents:

- Form 332
- PBEC Clinical Skills Requirements
- List of Capabilities, Skills and Medications

1. **TITLE:** Bachelor Degree in Emergency Medical Care (B EMC)  
(Institutions may have different qualification titles)  
**NQF LEVEL:** Level 8  
**CREDIT VALUE:** Minimum Credits 480  
**DURATION:** Minimum Time for completion 4-academic years

2. **INSTITUTIONS WHERE QUALIFICATION COULD BE OFFERED**

Higher Education Institutions accredited by the CHE (Universities)

3. **PURPOSE STATEMENT**

This qualification is designed to allow holders of this qualification to register as Emergency Care Practitioner (ECP) with the HPCSA. ECPs are health care professionals who function as pre-hospital clinicians, inter-facility transfer clinicians and medical rescue practitioners. ECPs practice independently, predominantly within the pre and in-hospital emergency care and critical care transport environments. The qualification will develop the knowledge, skills, attitudes and insights required to render a broad-based comprehensive quality emergency care and rescue service to all sectors of the community. The qualification will enable further personal and professional development for lifelong learning.

4. **GRADUATE ATTRIBUTES**

a. Knowledge:

An ECP graduate must have:

- Deep discipline related emergency care and rescue knowledge within the South African context
- Nuanced emergency care and rescue knowledge in relation to urban and non-urban environments
- Inter-facility related patient care and transport knowledge
- Knowledge that is steeped in research methods and practices within the South African emergency care and rescue context

b. Skills and applied competencies

An ECP graduate must be able to:

- Perform clinical assessment, diagnosis and decision-making in the South African emergency care and rescue environment
- Perform technical rescue related activities within the South African emergency care and rescue environment
- Professionally interact and effectively collaborate and communicate with all patients, the public and members of the health care team.
- Engage in clinical governance, management and quality assurance activities and systems applicable to the emergency care and medical rescue environment.
- Manage, lead and participate in a team in the emergency care and rescue environment.
- Critically think, analyse, problem-solve and reflect on activities within their practice

c. Professional attributes

An ECP graduate must:

- Present and conduct oneself in a professional manner as expected of a registered health care professional.
- Communicate appropriately and professionally with other health professionals, patients and the community.

- Be honest, trustworthy, disciplined, proactive, conscientious, humble, compassionate and empathetic.
- Take responsibility for one's mental health, wellness and levels of physical preparedness to function effectively within the emergency care and rescue environment.
- Strive for continuous professional development with the aim of becoming a lifelong learner.

## 5. CURRICULUM / SYLLABUS, MINIMUM PERIOD

Students are required to achieve all the credits for both the fundamental and core components of the qualification for a minimum period of four academic years. The components of the qualification must include:

### Fundamental Components:

- Human Anatomy and Physiology
- Basic Sciences including Physics and Chemistry
- Computer Literacy
- Mental and Physical Health and wellness
- Foundations of Professional Practice within a Health Care environment
- Research Methods
- General Pathology

### Core Components:

- Human Clinical Diagnostics
- Pharmacology
- Theory of Emergency Care
- Emergency Care Practice
- Authentic Clinical Practice
- Primary Health Care
- Rescue Practices within an Urban Environment
- Rescue Practices within a Rural and Wilderness Environment
- Limited Visibility Search and Rescue Practices
- Confined Space Search and Rescue Practices
- Aquatic Search and Rescue Practices
- Aviation Related Search and Rescue Practices
- Major Incident and Disaster Management Practices
- Hazardous Materials Search and Rescue Practices
- Excavation and Collapsed Structural Search and Rescue Practices
- Educational Techniques
- Applied Research Practices
- Intensive and Specialised Care Practices
- Management Practice

Below, under point 6 of the "QUALIFICATION DETAILS", is a suggested curriculum structure that institutions wishing to offer the qualification may package their curricula. Institutions are required, however, to deliver the curriculum as approved by the CHE and Institution.

## **6. WHERE AND HOW LEARNING TAKES PLACE**

Teaching, and learning will take place in the classroom, online, laboratories, as well as in simulated and authentic work environments. Institutions must ensure that they adopt, implement and abide by their institution approved teaching and learning policies.

## **7. WHERE AND HOW ASSESSMENT TAKES PLACE**

Integrated and diverse assessment strategies are applied across related modules taking into account the exit level outcomes and graduate attributes. Assessment takes place in the classroom, practical venues and authentic environments. Assessment methods include written and oral examinations, practical demonstrations of required physical and psychological attributes, problem-solving tasks, projects, presentations, case studies, portfolios, clinical learning attendance portfolios, clinical reports and objectively structured clinical examinations, reflective practice journals and participation in simulated medical and rescue scenarios. Institutions wishing to offer the programme, are required to adopt, implement and monitor their compliance to the institution approved assessment policy.

### Context and conditions of assessment:

- A variety of assessment strategies are used on a continuous basis to assess and monitor students' progress.
- Assessments relating to the medical and rescue components must at minimum be undertaken by appropriately qualified and duly registered ECPs supported by adequate infrastructural resources available.
- An adequate student: staff ratio is to be ensured to ensure that students receive sufficient individual and group assessment on a continuous basis to facilitate their personal and professional development.
- Mechanisms are in place for peer and self-assessment, particularly with regard to field practice.
- A scaffolding approach to assessment is adopted from year one to year two to ensure the incremental integration of theory and practice and the capacity for assessment of clinical decision making and provision of care, management abilities, leadership, self-critique and reflexive practice.

## **8. RECOGNITION OF PRIOR LEARNING (RPL)**

This qualification may be accessed or achieved in part through RPL in accordance with the policies and procedures of the Higher Education Institution (HEI) offering this qualification and on presenting the relevant evidence that meets the outcomes linked to achievement of the qualification.

## **9. PROGRESSION PATHWAY**

Learner mobility via vertical and horizontal articulation within the field of Health Sciences and Emergency Services is possible.

Further Horizontal articulation is possible into NQF-9 Masters Degrees with the health sciences or related fields of health professions education, disaster management, EMS management.

## **QUALIFICATION DETAILS**

### **1. FIELD AND SUB-FIELD OF THE QUALIFICATION**

Field:	09	Health Professionals and related Clinical Sciences
Sub-field:	0907	Medical Clinical Sciences
	090718	Emergency Medicine

### **2. ENTRY REQUIREMENTS**

The academic entry requirements are determined by the Institution and in line with the CHE requirements for the qualification.

Further to this, due to the nature of the academic activities inherent to Emergency Care and rescue practices, we recommend institutions offering this programme ensure that candidates are assessed for medical and baseline physical fitness such that persons registered will be able to safely and effectively participate in and successfully complete all activities in relation to the programme.

### **3. RULES OF COMBINATION**

Students are required to achieve all the credits for both the fundamental and core components of the qualification. There are no electives in this qualification. The qualification is competency based. Notional hours will include both theoretical, practical and clinical competencies as required by the HPCSA, Professional Board for Emergency Care. A minimum of 480 credits are required to obtain the qualification.

### **4. EXIT LEVEL OUTCOMES<sup>1</sup>**

1. Demonstrate effective communication and apply the principles of medical ethics, professional behaviour and the legal framework to the context within which emergency care practitioners operate while maintaining personal health, wellness and safety.
2. Practice, supervise and facilitate the provision of emergency medical care to all sectors of the community utilising specialised strategies and technologies.
3. Perform medical rescue in a wide range of rescue contexts.
4. Demonstrate knowledge and understanding of human and basic sciences underpinning emergency medical care.
5. Provide in-service education and training in emergency medical care and rescue.
6. Demonstrate an understanding of the management, structure and function of Emergency Medical Service (EMS) systems in South Africa and provide operational and clinical supervision within an emergency medical and rescue service.
7. Develop research skills and conduct research in emergency medical care and rescue.

<sup>1</sup> The Exit Level Outcomes have been adapted from the SAQA Qualification ID: 63129.

## 5. ASSOCIATED ASSESSMENT CRITERIA

### Assessment Criteria for Exit Level Outcome 1:

- Communication with patients, colleagues and other service providers is effective, clear, direct, and accurate, with appropriate use of modality including electronic media.
- Terminology is consistent with profession usage.
- Interactions promote human dignity and are undertaken with due sensitivity to ethnic, cultural, linguistic, and religious and gender diversity.
- Ethical principles of beneficence, autonomy and justice, truth telling, promise keeping and confidentiality are correctly applied in all contexts.
- All clinical interactions and related practices are in line with the provisions and rules of the codes of ethics of the HPCSA and professional associations.
- Accurate and comprehensive explanations are provided of the legal framework within which an emergency service provider and/or practitioner operates.
- The importance of mental health and wellness on the part of the emergency care provider is comprehensively discussed, highlighting their role and importance, with particular reference to the impact on job effectiveness.
- Suitable methods for achieving and maintaining operational fitness are identified, demonstrated and described in terms of lifestyle, diet and exercise techniques, highlighting the impact on self and job effectiveness.
- Methods for maintaining personal safety are identified, demonstrated and applied through appropriate risk assessment, scene assessment, decision making and option taking.
- Safe and effective use of emergency service vehicles and emergency response driving is described and/or demonstrated.
- Operational routines are correctly conducted within an EMS environment.

### Assessment Criteria for Exit Level Outcome 2:

- Potential hazards within the emergency service environment are correctly identified and described in terms of their origins, impact and means of management or mitigation.
- Scene safety, scene and incident management is carried out in line with best practice and established procedures.
- Emergency medical care equipment is accurately described in terms of function, storage, maintenance and use.
- Infection control is discussed and implemented in line with established procedures.
- Medical and/or trauma related disorders are accurately diagnosed based on an applied understanding of the underlying pathophysiology.
- Logical, sound clinical decision- making is demonstrated. Clinical decisions are based on, informed by and validated through comprehensive history taking, appropriate clinical assessment and diagnosis.
- Patients are correctly managed within the list of skills, capabilities and medications of an Emergency Care Practitioner and with due consideration to the context and evidence informed practice involving all body systems.
- Clinical and intensive care procedures and practices are correctly applied, described, discussed and demonstrated in circumstances requiring specialised transportation.
- Integrated patient care and clinical skills/procedures are correctly demonstrated.
- The principles of primary health care, disease prevention, health promotion and counselling are described and demonstrated.
- HIV and AIDS awareness is promoted in self and among others.
- Patient hand over is carried out in line with local protocols and procedures.
- Medical records are constructed which provide sufficient accurate details of patient information and treatment.
- Self-critique, realistic, accurate and fair reflection of own clinical competence and practice

is demonstrated.

#### Assessment Criteria for Exit Level Outcome 3:

- Safety principles are correctly considered and applied throughout the rescue operation.
- Hazards within the rescue environment are accurately evaluated in terms of their sources, impact and means for mitigation considered and applied.
- Incident management is carried out in line with established procedures.
- Appropriate level of physical preparedness and swimming proficiency required for the safe and effective participation in the academic activities is acquired, maintained and demonstrated.
- Use of rescue equipment is correctly demonstrated and comprehensively described in terms of function, specifications, storage and maintenance.
- Theoretical concepts and strategies underpinning the management strategies of specific rescue incidents are correctly identified, explained and/or applied.
- Rescue skills, procedures and techniques are safely and effectively demonstrated in a variety of contexts as listed in the “core components” above
- Simulated rescue incidents and/or scenarios are appropriately managed with regard to incident analysis, planning, preparation and execution.
- Teamwork, incident command and leadership skills are appropriately demonstrated.

#### Assessment Criteria for Exit Level Outcome 4:

- The composition, general form, spatial orientation and position of structures within the regions of the human body are acutely described and integrated within a clinical context.
- The physiological functioning of the human body is correctly explained and integrated into patient care.
- Key principles of chemistry are correctly explained and applied to emergency medical care and rescue contexts.
- Key principles of physics are correctly explained and applied to emergency medical care and rescue contexts.
- Key principles of microbiology are described and applied to emergency medical care contexts in general, with particular reference to communicable diseases and infection control.
- The pathogenesis of disease and injury is accurately and comprehensively described in relation to the anatomy and physiology of the applicable body systems.
- Problem-based scenarios are correctly interpreted based on integration of anatomy, physiology and pathology.
- Principles of pharmacology are correctly explained and applied to the emergency medical care context.
- Medications used within the scope of practice of the Emergency Care Practitioner are accurately and comprehensively described in terms of class, schedule, trade name, and generic name, mechanism of action, indications, contra-indications, precautions, side effects, packaging, dosage and administration and route of administration.

#### Assessment Criteria for Exit Level Outcome 5:

- National policies as applicable to education and training are correctly identified and explained.
- Theories of teaching and learning are correctly explained and applied.
- Key issues of teaching and learning in education and training are correctly identified and analyzed (RPL, Access etc).
- Quality assurance of teaching and learning are properly discussed.
- Educational needs are correctly identified and described.
- Learning programmes are developed in accordance with the needs of the target group.

- Learning resources are properly identified, located and developed.
- Suitable teaching methods and activities are designed which support the learning program and meets the needs of the target group.
- A learning event is professionally facilitated.
- Appropriate assessment criteria are developed to assess the learning outcome/s.

#### Assessment Criteria for Exit Level Outcome 6:

- EMRS is accurately described in terms of structure, role and function, both public and private, within the South African context.
- Correct explanations are provided of the interdependence and interrelationships occurring between EMRS and other Allied Emergency and Health Care structures.
- The role of the health care team is correctly explained in terms of key responsibilities of each role and the relationships between each role.
- National legislation as applicable to emergency care and rescue services are correctly identified and explained.
- Multi-disciplinary approaches to emergency care and rescue scenarios are correctly explained and/or demonstrated.
- Professional communication between and co-operation with patients and stakeholders are correctly explained and/or demonstrated.
- Operational needs are correctly analysed and evaluated.
- Factors influencing policy and operation of the emergency care and/or rescue services are correctly explained.
- Operational challenges are correctly identified and addressed using problem solving and decision-making techniques.
- Principles of budgeting are correctly explained and/or demonstrated.
- Applicable labour legislation and labour practice is correctly explained.
- Principles of human resource management are correctly explained.
- Principles of system design for equipment maintenance, stock control and fleet management is correctly explained and demonstrated.
- Key performance indicators for effective and efficient service delivery are correctly identified and discussed.
- Principles of disaster management are correctly explained and demonstrated.

#### Assessment Criteria for Exit Level Outcome 7:

- Research needs within the field of emergency care are correctly identified and articulated.
- Quantitative and qualitative research methods are appropriately investigated and discussed as possible solutions to research needs.
- Statistical methods are correctly discussed and compared.
- Research publications are critically evaluated according to set criteria.
- A professional research proposal is developed, motivated and presented within the field of emergency care.
- Principles of research ethics are correctly discussed and applied.
- Data is correctly collected using appropriate methods.
- Data is correctly analysed, interpreted and evaluated using appropriate statistical tools where applicable.
- Research findings are prepared and presented according to set criteria and formatting requirements.
- A research report is produced in accordance with accepted research guidelines.

## 6. COMPONENTS OF THE QUALIFICATION

As this is a professional bachelor degree at NQF level 8 and only offered by Higher Education Institutions accredited by the CHE (Universities), the PBEC recognizes the institutional autonomy to package and deliver the approved curriculum. The components below are aimed to guide providers and prospective providers as to a suggested layout for the degree programme.

Components	Year / Semester	Recommended number of credits allocated	NQF Level	Core Fundamental	Year
ANATOMY 1	Y	12	5	Fundamental	1
BASIC SCIENCE: CHEMISTRY	S	6	5	Fundamental	1
COMPUTING LITERACY	S	6	5	Fundamental	1
EMERGENCY MEDICAL CARE 1 THEORY	Y	24	5	Core	1
EMERGENCY MEDICAL CARE 1 PRACTICAL	Y	12	5	Core	1
CLINICAL PRACTICE 1	Y	24	6	Core	1
FOUNDATIONS OF PROFESSIONAL PRACTICE	Y	12	5	Fundamental	1
MENTAL HEALTH AND WELLNESS	S	6	5	Fundamental	1
PHYSICAL PREPAREDNESS 1	Y	3	5	Core	1
BASIC SCIENCE: PHYSICS	S	6	5	Fundamental	1
PHYSIOLOGY 1	Y	12	5	Fundamental	2
EMERGENCY MEDICAL CARE 2 THEORY	Y	12	6	Core	2
EMERGENCY MEDICAL CARE 2 PRACTICAL	Y	6	6	Core	2
CLINICAL PRACTICE 2	Y	24	6	Core	2
DIAGNOSTICS 1	Y	12	6	Core	2
FIRE SEARCH AND RESCUE	Y	12	6	Core	2
GENERAL PATHOLOGY	Y	12	6	Core	2
HIGH ANGLE 1	Y	12	6	Core	2
INDUSTRIAL AND AGRICULTURAL RESCUE	Y	3	6	Core	2

MOTOR VEHICLE RESCUE	Y	12	6	Core	2
PHYSICAL PREPAREDNESS 2	Y	3	6	Core	2
PRIMARY HEALTH CARE	S	6	6	Core	2
PHYSIOLOGY 2	Y	12	6	Core	2
AQUATIC RESCUE	Y	12	7	Core	3
AVIATION RESCUE	Y	3	7	Core	3
EMERGENCY MEDICAL CARE 3 THEORY	Y	12	7	Core	3
EMERGENCY MEDICAL CARE 3 PRACTICAL	Y	24	7	Core	3
CLINICAL PRACTICE 3	Y	24	7	Core	3
HIGH ANGLE 2	Y	12	7	Core	3
PHYSICAL PREPAREDNESS 3	Y	3	7	Core	3
PHARMACOLOGY 1	Y	12	7	Core	3
RESEARCH METHODOLOGY	Y	12	7	Fundamental	3
WILDERNESS SEARCH & RESCUE	Y	12	7	Core	3
CONFINED SPACE RESCUE	Y	10	8	Core	4
DISASTER MANAGEMENT	S	4	8	Core	4
EDUCATIONAL TECHNIQUES	Y	6	8	Core	4
INTENSIVE AND SPECIALISED CARE	Y	12	8	Core	4
PAEDIATRIC AND NEONATAL EMERGENCY CARE	Y	12	8	Core	4
CLINICAL PRACTICE 4	Y	20	8	Core	4
EMERGENCY SERVICE ADMINISTRATION	Y	6	8	Core	4
HAZARDOUS MATERIALS RESCUE	Y	6	8	Core	4

PHYSICAL PREPAREDNESS 4	Y	3	8	Core	4
RESEARCH ELECTIVE 4	Y	30	8	Core	4
STRUCTURAL COLLAPSE RESCUE	Y	10	8	Core	4
TRENCH RESCUE	Y	10	8	Core	4

## 7. INDIVIDUAL SUBJECT / MODULE OUTCOMES

Universities are responsible to ensure that their individual subject / module learning outcomes are designed, interpreted, packaged and applied within the context of the approved institutional curriculum as well as related skills and capabilities of ECPs as defined by the HPCSA PBEC. This must also take into account each of the exit level outcomes and the associated assessment criteria as listed above.

## 8. CLINICAL LEARNING

Providers and prospective providers of this qualification are reminded that the Professional Board for Emergency Care prescribes a minimum number of skills and skill sets that need to be completed during the course of the degree programme.

The onus is on the Universities offering EMC programmes (and those considering making application to offer such programmes) to ensure that their current and envisaged student numbers including new enrollments are managed in such a way as to ensure adequate pre-hospital clinical exposure, caseload and mentorship opportunities exist within their clinical learning platforms to facilitate the supervised completion of the prescribe clinical learning requirements prior to graduation.