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		Issue No.	01
		Effective Date	04/02/2020

SECTION A: QUALIFICATION DETAILS														
QUALIFICATION DEVELOPER (S)			University of Botswana											
TITLE		Master of Medicine in Internal Medicine								NCQF LEVEL		9		
FIELD		Health Sciences and Social Services		SUB-FIELD			Internal Medicine			CREDIT VALUE		640		
New Qualification						<input checked="" type="checkbox"/>		Review of Existing Qualification						
SUB-FRAMEWORK		General Education				<input type="checkbox"/>		TVET		<input type="checkbox"/>		Higher Education		<input checked="" type="checkbox"/>
QUALIFICATION TYPE		Certificate	I	II	III	IV	V	Diploma	Bachelor					
		Bachelor Honours			Post Graduate Certificate			Post Graduate Diploma						
		Masters					<input checked="" type="checkbox"/>	Doctorate/ PhD						

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RATIONALE AND PURPOSE OF THE QUALIFICATION


RATIONALE:

Having adequate numbers of qualified personnel, including specialist physicians, is essential for providing quality healthcare. However, there is a critical shortage of specialist physician in Botswana for many years. The specialist physician is listed among the 20 priority cadres in the 2017 national Human Resource Development Council (HRDC-health sector committee). This shortage has a significant impact on delivering quality health care given the high rate of infectious diseases and the emerging epidemic of chronic non-communicable diseases. To address the deficit and improve quality of care in-country training specialist physician was one of the approaches that the government decided (Integrated Health Service Plan: A Strategy for Changing the Health Sector for Healthy Botswana 2010-2020)

The Master of Medicine in Internal Medicine is designed to address the severe shortage of physicians and improve Botswana's quality of care. The cadre is needed in the district and tertiary hospitals, where patients from primary care are referred for advanced care of relatively complex illness. Using their up-to-date scientific knowledge, clinical expertise, and collaboration with other healthcare system providers, specialist physicians diagnose, treat, and provide prevention and compassionate care of adults across different diseases. Specialist physicians will have advanced clinical competence to solve problems through research, lifelong learning and become mentors and teachers within the discipline of Internal Medicine.

Further, graduates will qualify to undergo sub-speciality training to address sub-specialist shortage within the health care systems and academic Medicine in Botswana (and Africa).

PURPOSE: The purpose of the Master of Medicine in Internal Medicine is to produce graduates who will achieve the national goal of access to quality health care and help to address the severe shortage of specialist physicians in Botswana and Africa.

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The purpose of this qualification is to produce people who can:

- Apply scientific knowledge and clinical expertise for the prevention, diagnosis, treatment, and compassionate care of adults across the spectrum from health and complex illness.
- Provide care within a multi-disciplinary team with other providers in the healthcare system.
- Conduct clinical research & audits in their practice.
- Educate members of their care team, including medical students, interns in internal Medicine.
- Engage in lifelong learning.


ENTRY REQUIREMENTS (including access and inclusion)

Academic

1. The minimum entry qualification is a Bachelor (Honours) degree (NCQF Level 8) in Medicine (MBBS or related) from a recognised University

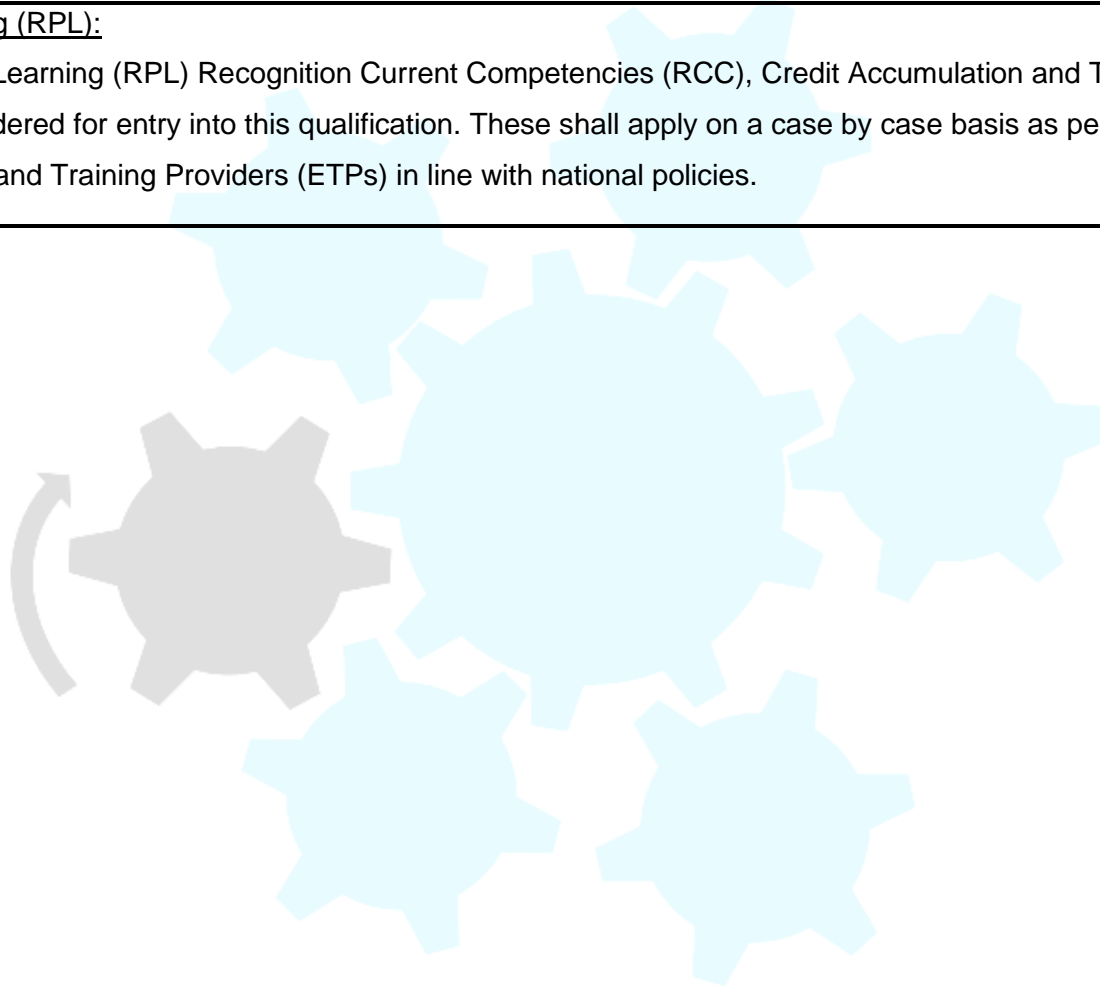
Professional


2. Applicants must have completed at least two years of clinical practice that must include at least 12 months in a recognised supervised internship programme.
3. Applicants must be registered (or be registerable) as medical practitioners with the Botswana Health Professions Council (BHPC).

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Recognition of Prior Learning (RPL):

4. Recognition of Prior Learning (RPL) Recognition Current Competencies (RCC), Credit Accumulation and Transfer (CAT) will be applicable and considered for entry into this qualification. These shall apply on a case by case basis as per the policies of the individual Education and Training Providers (ETPs) in line with national policies.




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SECTION B		QUALIFICATION SPECIFICATION	
GRADUATE PROFILE (LEARNING OUTCOMES)		ASSESSMENT CRITERIA	
<p>1. Patient care.</p> <p>Provide advanced patient-centred care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.</p>		<p>1.1 Gather and synthesise essential and accurate information (through history-taking, physical examination, and the use of laboratory data, imaging, and other tests) to define each patient's clinical problem(s).</p> <p>1.2 Prescribe and perform competently all medical procedures (invasive and non-invasive) considered essential for the scope of practice.</p> <p>1.3 Make informed diagnostic and therapeutic decisions based on patient information, up-to-date scientific evidence, clinical judgment, and patient preference.</p> <p>1.4 Organise and prioritise responsibilities to provide care that is safe, effective, and efficient.</p> <p>1.5 Provide appropriate referral of patients, including ensuring continuity of care throughout transitions between providers or settings and following up on patient progress and outcomes.</p> <p>1.6 Counsel and educate patients and their families to empower them to participate in their care and enable shared decision-making.</p> <p>1.7 Provide health care services to patients, families, and communities aimed at preventing health problems or maintaining health.</p>	

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<p>2. Medical Knowledge.</p> <p>Demonstrate high-level knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioural sciences, as well as the application of this knowledge to patient care.</p>	<p>2.1 Demonstrate advanced knowledge of established and evolving biomedical, clinical and social sciences, and demonstrate the application of that knowledge to patient care and education of others.</p> <p>2.2 Demonstrate applicable knowledge of the basic clinical and behavioural sciences that underlie the practice of Internal Medicine.</p> <p>2.3 Apply principles of social-behavioural sciences to the provision of patient care, including assessment of the impact of psychosocial and cultural influences on health, disease, care-seeking, care compliance, and barriers to and attitudes toward care</p> <p>2.4 Demonstrate critical thinking, clinical problem-solving and clinical decision-making skills in specific cases under care.</p> <p>2.5 Contribute to the creation, dissemination, application, and translation of new health care knowledge and practice.</p>
<p>3. Practice-based Learning and Improvement.</p> <p>Investigate and evaluate one's care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on</p>	<p>3.1 Continually identify, analyse, and implement new knowledge, guidelines, standards, technologies, products, or services that have been demonstrated to improve outcomes</p> <p>3.2 Locate, appraise, and assimilate evidence from scientific studies related to their patient's health problems.</p> <p>3.3 Obtain and use information about the individual population of patients and the larger population from which the patients are drawn to improve care.</p>

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constant self-evaluation and life-long learning.	<p>3.4 Identify and perform learning activities that address one's gaps in knowledge, skills, and/or attitudes.</p> <p>3.5 Learn and improve via feedback from peer reviews and self-assessment.</p>
<p>4. Systems-Based Practice</p> <p>Demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.</p>	<p>4.1 Practice cost-effective health care and resource allocation that does not compromise the quality of care.</p> <p>4.2 Work effectively in various health care delivery settings and systems relevant to internal Medicine.</p> <p>4.3 Work effectively within an interprofessional team (e.g. peers, consultants, nursing, ancillary professionals and other support personnel) to assess, coordinate, and improve health care.</p> <p>4.4 Recognise system error and advocates for system improvement.</p> <p>4.5 Transition patients effectively within and across health delivery systems.</p> <p>4.6 Advocate for quality patient care and optimal patient care systems.</p>
<p>5. Interpersonal and communication skills</p> <p>Demonstrate interpersonal and communication skills that result in the effective exchange of information and</p>	<p>5.1 Communicate effectively to create and sustain a therapeutic relationship with patients and families.</p> <p>5.2 Communicates effectively in interprofessional teams (e.g. peers, consultants, nursing, ancillary professionals and other support personnel).</p> <p>5.3 Demonstrate ability to maintain comprehensive, timely, and legible clinical notes and communicate effectively with the health care team.</p>

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collaboration with patients, their families, and health professionals.	5.4	Work effectively with others as a member or leader of a health care team or other professional groups.
<p>6. Professionalism</p> <p>Demonstrate commitment to professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.</p>	<p>6.1</p> <p>6.2</p> <p>6.3</p> <p>6.4</p>	<p>Demonstrate professional and respectful interactions with patients, caregivers, and interprofessional team members (e.g. peers, consultants, nursing, ancillary professionals, and support personnel).</p> <p>Respond to each patient's unique characteristics and needs, including but not limited to diversity in gender, age, culture, race, religion, disabilities and sexual orientation.</p> <p>Adhere to principles of confidentiality, scientific/academic integrity, and informed consent.</p> <p>Demonstrate sensitivity and responsiveness to patients and colleagues, including gender, age, culture, religion, sexual preference, socioeconomic status, beliefs, behaviours, and disabilities.</p>


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SECTION C	QUALIFICATION STRUCTURE				
COMPONENT	TITLE	Credits Per Relevant NCQF Level			Total (Per Subject/ Course/ Module/ Units)
		Level []	Level []	Level [9]	
FUNDAMENTAL COMPONENT <i>Subjects/ Courses/ Modules/Units</i>	Communication, Ethics and Professionalism			4	4
	Introduction to Clinical Research			4	4
	Introduction to Medical Literature			4	4
	Principles and Techniques of Medical Education			4	4
	Public Health Principles and International Health			4	4
	Master of Medicine Part I Examination Preparation			4	4
	Master of Medicine Part II Exam Preparation			4	4
CORE COMPONENT <i>Subjects/Courses/ Modules/Units</i>	Introduction to Internal Medicine (I, II)			135	135
	Intermediate Internal Medicine(I,II,III,IV)			270	270
	Advanced Internal Medicine (I, II)			135	135


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	Dissertation(I,II,III,IV)			72	72
ELECTIVE/ OPTIONAL COMPONENT <i>Subjects/Courses/ Modules/Units</i>					
	Not Applicable				



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SUMMARY OF CREDIT DISTRIBUTION FOR EACH COMPONENT PER NCQF LEVEL		
TOTAL CREDITS PER NCQF LEVEL		
Components	NCQF Level	Credit Value
Fundamental	Level 9	28
Core	Level 9	612
Elective	N/A	0
TOTAL CREDITS		640
Rules of Combination: (Please Indicate combinations for the different constituent components of the qualification)		
<p>The Fundamental (level 9) contributes 28 credits, and the Core (level 9) contributes 612 credits for a total of 640 credits. There is no elective.</p>		

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ASSESSMENT ARRANGEMENTS


For Fundamental Courses: each course is assessed on a pass/fail basis based on attendance and production of a project related to the course content.

For Core Courses:

- Formative assessment occurs throughout the training and is clinical (100%): clinical evaluation, assessment of competencies and logbooks.
- Summative assessments are conducted by the College of Medicine of South Africa (CMSA).
 - The Part I examination assesses the theory of basic medical science related to Internal Medicine and must be passed before the Part II examination can be attempted.
 - The Part II examination consists of two stages:
 - a. Two theory papers. This must be passed for admission to the clinical examination.
 - b. A comprehensive clinical examination

The clinical examiners will be suitably qualified in the field of Internal Medicine, registered with the Botswana Health Professions Council and or BQA, and recognised professional bodies/authorities.

- Research submitted in the form of a dissertation must be independently assessed as satisfactory by internal and external examiners.

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MODERATION ARRANGEMENTS

- There will be internal and external moderation as a quality assurance measure, in line with the policies of the Educational Training Provider.
- Internal moderators must be suitably qualified in the field of Internal Medicine, registered with the Botswana Health Professions Council and have BQA accreditation.
- External examiners are appointed for their teaching and disciplinary expertise and subject to the approval of Departmental and Faculty Boards

RECOGNITION OF PRIOR LEARNING


Recognition of Prior Learning will be applicable for the award of this qualification on a case by case basis assessment and as per the regulations of individual Education and Training Providers (ETP) and in alignment with international policies.

CREDIT ACCUMULATION AND TRANSFER

Credit Accumulation and Transfer (CAT) will apply for the award of this qualification on a case by case basis assessment and as per the regulations of individual ETP's and in alignment with international policies.

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

Candidates who have completed this qualification will be registered with the Botswana Health Professions Council to practise independently as internal medicine specialists.


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Horizontal articulation (related qualifications of a similar level that graduates may consider [NCQF level 9]):

- Candidates may also register for
 - Master of Science in Epidemiology,
 - Master of Science in Public Health,
 - Master of Science in global health
 - Master of Philosophy in Health Economics
 - Master of Philosophy in Health Systems Management

Vertical articulation (qualifications to which the holder may progress):


- Candidates may also register for a
 - Doctor of Medicine.
 - Doctor of Philosophy in Internal Medicine.
 - Doctor of Philosophy in Epidemiology.
 - Doctor of Philosophy in Cardiovascular Medicine.
 - Doctor of Philosophy in Preventive Medicine.
 - Doctor of Philosophy in Clinical and Translational Sciences.
 - Doctor of Philosophy in Infectious Disease.
- Candidates may choose to register for sub-speciality training in any branch of internal Medicine (Board certification). MMED in internal Medicine is a prerequisite for this subspeciality training.
 - Renal Medicine.
 - Gastroenterology.

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- Pulmonology.
- Rheumatology.
- Critical Care Medicine.
- Infectious Diseases.
- Cardiology.
- Endocrinology.
- Medical Oncology.
- Neurology.

Employment pathways open to qualification holders include:

- Specialist physician.
- Consultant physician.
- Medical academic.
- Medical researcher.
- Medical administrator.
- Advisory capacities (e.g., medical boards, medical insurance, drug company or medical device boards)

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QUALIFICATION AWARD AND CERTIFICATION

The qualification of the Master of Medicine in Internal Medicine and a certificate will be awarded to candidates who achieve 640 credits and satisfy the rules of combination, as shown on page 9.

REGIONAL AND INTERNATIONAL COMPARABILITY

Benchmarking for Learning Outcome Domains and competences (assessment criteria) was done against international standards determined by the Association of American Medical Colleges (AAMC) and the Accreditation Council for Graduate Medical Education (ACGME). Furthermore, the scope and depth of content were benchmarked against those of qualifications from leading regional and international universities as shown next.

The qualification has been compared to the following two similar qualifications.

1. Regional:


1.1 MMED in Internal Medicine: University of the Stellenbosch, South Africa.

1.2 MMED in Internal Medicine: University of Pretoria, South Africa

1.2.1 Master of Medicine in Internal Medicine, NQF level 9, 600 credits (University of the Stellenbosch) and 624 (University of Pretoria), four years of full-time training.

2. International:


2.1 Royal College of Physicians, London, United Kingdom NQF level 7

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2.2 Association of American Medical Colleges [AAMC], Accreditation Council for Graduate Medical Education [ACGME] for medical domains and competencies

Summary of similarities and differences observed

- The University of Stellenbosch and Pretoria (NQF level 9) qualifications are very similar to this qualification. The duration of the qualifications is the same (4 years). The summative exams for all three qualifications are conducted by the same institution, namely the College of Physician of South Africa. All three qualifications produce specialist physician. The difference in the number of credits may partly be due to the differences in the basic science modules and the variation in the calculation of credit values. Consequently, the South African Qualifications Authority (SAQA) is in the process of reviewing the correct qualification information and requirements (i.e. name, NQF-level, the minimum number of credits required for obtaining a different qualification, including MMED).
- The 5-year qualification of the Royal College of Physician (UK NQFI level 7) is longer than this qualification (4 years). It is structured differently, although the concept of starting at a basic level of skill and progressing to more complex and responsible work is maintained. The 'domains of learning' are similar because they are all benchmarked from the international domain standards. The examination system is different in that there is only one set of exams undertaken at 2-3 years, after which further progress is monitored using portfolio evidence. However, the examination is very similar to those conducted by CMSA. Similarly, the bother qualifications use a portfolio system as a form of continuous assessment. Both qualifications aim to produce competent specialist physician.

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Comparability and articulation of the proposed qualification with the ones examined

- This qualification compares well with the qualifications studied since the scope of the exit-level descriptors are aligned to and typical of this level and type of qualification in the region and internationally. The duration of training is also comparable. The competencies resulting from the qualifications are similarly aligned to those required for registration and accreditation with professional bodies such as the Health Professions Council of South Africa and the General Medical Council of the UK, the Association of American Medical Colleges [AAMC] and Accreditation Council for Graduate Medical Education [ACGME]. The significance of this qualification is that it will produce locally trained Botswana physicians to fill a critical gap in the nation's current health services. Holders of this qualification can register for subspeciality training in the region and internationally.

REVIEW PERIOD

The qualification will be reviewed every five years in line with the NCQF policy.