

# Doctor of Medicine (MD) - SC 331

## 1. Preamble

The University of Mauritius wishes to develop in collaboration with the Ministry of Health and Quality of Life and University of Geneva a medical school of high quality that will help to improve the health care system of the Republic of Mauritius, by enabling Mauritian authorities to have more control on the quality of medical training of health care manpower. The school of Medicine will be responsive to local needs as well as regional needs (humanitarian aspect) and will attract international students through the quality of its teaching and curricula.

The first programme to be developed under the aegis of the proposed Public School of Medicine is a full-fledged medical undergraduate programme, in English medium, which will involve 3 partners: Faculty of Medicine of University of Geneva (UNIGE), the University of Mauritius (UOM) and the Mauritian Ministry of Health & Quality of Life (MOHQL).

The successful completion of a 6 year full-time medical undergraduate programme, in English medium, undertaken in two parts: 3 years full-time for the Bachelor of Medicine followed by 3 years full-time for the Master of Medicine programme will lead to the award of the Doctor of Medicine (*Medicinae Doctor or MD*) degree. The programme will include a research dissertation prepared as from the 4th year and submitted at the end of the 5th year. The 6th year will consist of 10 months of student internship in hospitals. A comprehensive final examination will be held at the end of the 6th year after validation of the student internship to examine whether the candidates master the knowledge, skills and attitudes as well as the social competencies and behaviors required for practicing the medical profession.

Curricular contents are derived from the similar undergraduate programme offered by UNIGE. Students need to successfully complete the Bachelor of Medicine part in order to register for Master of Medicine part of the undergraduate medical programme. Students who succeed in the final year examination held at the end of the 6th year will be awarded a MD (Doctor of Medicine) degree by UOM. Mention may be made to the effect that the medical undergraduate programme was established in collaboration with UNIGE. Students graduating with the MD degree will be eligible for pre-registration training as per the requirements of the Medical Council of Mauritius or of Regulatory bodies elsewhere, in order to be able to practice independently as registered medical practitioners. They can also thereafter engage in further post-graduate clinical studies or choose a career in biomedical research.

## 2. General Objectives

The aim of our MD programme is to train medical professionals who combine clinical competence, medical knowledge, proficiency in inter-personal and communication skills, ability to respond to the psychosocial aspects in health-care and to keep abreast of new developments in the medical field.

The learning objectives in our MD programme are, similar to those in the medical undergraduate programme offered by UNIGE, based on the *Swiss Catalogue of Learning Objectives for Undergraduate Medical Training - June 2008 (SCLO)*, prepared by the Working Group under a Mandate of the Joint Commission of the Swiss Medical Schools (Web site: <http://www.smifk.ch>). The MD programme is adapted to the local epidemiology and needs of Mauritius.

The SCLO is a catalogue of learning objectives listing knowledge, professional attitudes and clinical skills for the medical profession. It relies for a substantial part on the “*CanMEDS 2005 Framework*”<sup>1</sup> and on the British “*Curriculum for the foundation years in postgraduate education and training*”<sup>2</sup>, using also other similar frameworks for Outcome-Based Medical Education such as the “*ACGME Outcome Project*”<sup>3</sup>, the “*Global Minimum Essential Requirements*”<sup>4</sup> of the Institute for International Medical Education and the “*Project Professionalism*”<sup>5</sup> of the American Board of Internal Medicine.

- 1 Frank, JR. (Ed). 2005. The CanMEDS 2005 physician competency framework. Better standards. Better physicians. Better care. Ottawa: The Royal College of Physicians and Surgeons of Canada. [http://rcpsc.medical.org/canmeds/CanMEDS2005/CanMEDS2005\\_e.pdf](http://rcpsc.medical.org/canmeds/CanMEDS2005/CanMEDS2005_e.pdf)
- 2 The Foundation Program Committee of the Academy of Medical Royal Colleges, in co-operation with Modernising Medical Careers in the Departments of Health. Curriculum for the foundation years in postgraduate education and training. Department of Health, 2004:9
- 3 Accreditation Council for Graduate Medical Education, <http://www.acgme.org/Outcome/>
- 4 Institute for International Medical Education, <http://www.iime.org/gmer.htm>
- 5 American Board of Internal Medicine, <https://www.abim.org/pdf/publications/professionalism.pdf>

At the end of their undergraduate education we expect the MD graduates to achieve competencies related to the 7 roles embodied by competent physicians, described initially in the **CanMEDS 2005 Framework<sup>1</sup>**, which are: Medical Expert (the central role), Communicator, Collaborator, Health Advocate, Manager, Scholar and Professional. Roles to be fulfilled are the following:

- **Role of Medical Expert:** medical graduates are expected to possess a defined body of knowledge, clinical skills, procedural skills and professional attitudes, which are directed to patient care under supervision. They should apply these competencies to collect and interpret information, make proposals for clinical decisions, and carry out some defined diagnostic and therapeutic procedures. **Competencies:** *The physician is able to elicit a relevant, concise and accurate history from the patient and other sources, conduct an effective physical examination, analyze and interpret data to establish a differential and a working diagnosis and construct a management plan, carry out under supervision relevant procedures and organize further investigations, demonstrate appropriate medical data and information management, deliver good quality medical care and ensure patient safety, demonstrate safe prescribing, foster infection control, promote health of patients and of the community, access relevant information on diagnostic and therapeutic options and apply it under supervision to clinical practice.*
- **Role of Communicator:** medical graduates are expected to enable patient-centered therapeutic communication through partnership and effective dynamic interactions with patients, families, caregivers, other professionals, and important other individuals. Communication skills are essential for the functioning of a physician, effective communication is critical for optimal patient outcomes. **Competencies:** *The physician is able to develop rapport, trust, and ethical therapeutic relationships with patients and families, accurately elicit and synthesize relevant information and perspectives of patients and families, colleagues, and other professionals, accurately convey relevant information and explanations to patients and families, colleagues and other professionals and foster the development of a common understanding on issues, problems and to develop a shared plan of care, convey effective oral and written information about a medical encounter.*
- **Role of Collaborator:** medical graduates are expected to work in partnership with others who have to be appropriately involved in the care of individuals or specific groups of patients. This is increasingly important in a modern multiprofessional environment, where patient-centered care is widely shared by several teams in multiple locations. **Competencies:** *The physician is able to effectively consult with her/his supervisor and other physicians and healthcare professionals, striving for good teamwork aiming at optimal patient care and at patient safety, contribute effectively to other interdisciplinary team activities.*
- **Role of Manager:** medical graduates are expected to function as Managers when (under guidance by their supervisors) they take everyday practice decisions involving resources. They have to make systematic choices when allocating finite healthcare resources and personal time, using information technology. **Competencies:** *The physician is able to utilize personal time and resources effectively in order to balance patient care, learning needs, and private activities outside the workplace, and to protect*

*her/his own health, use effectively under supervision finite healthcare resources, while acting in the best interest of the patient, work effectively and efficiently in a healthcare organization, effectively utilize information technology for patient care, self-learning and other activities, assure and improve the quality of care and patient safety.*

- **Role of Health Advocate:** medical graduates are expected to recognize their duty and ability to improve the overall health of their patients and the society they serve. Doctors identify advocacy activities as important for the individual patient, for populations of patients and for communities.  
**Competencies:** *The physician is able to identify the important determinants of health that affect individual and population health, so as to have basic abilities to contribute to improving individual and societal health in the country where they practice, recognize issues, settings, circumstances, or situations which require advocacy on behalf of patients, professions, or society.*
- **Role of Scholar,** medical graduates are expected to engage in a lifelong pursuit of mastery of their domain of professional expertise. They recognize the need to be continually learning.  
**Competencies:** *The physician is able to develop, implement, and document a personal continuing education strategy, apply basic principles of critical appraisal to sources of medical information. This involves developing scientific curiosity and use of scientific evidence in clinical decision making, facilitate the learning of patients, students and other health professional, contribute to the development, dissemination, and translation of new knowledge and practices.*
- **Role of Professional:** medical graduates are expected to have a distinctive societal role as professionals who are dedicated to the health and caring of others. The Professional Role is guided by codes of ethics and a commitment to clinical competence and the embracing of appropriate attitudes and behavior. Physicians are accountable to the society they serve.  
**Competencies:** *The physician is able to deliver under supervision high quality care, exhibiting appropriate personal and interpersonal professional behavior, practice medicine in an ethically responsible manner that respects the medical, legal and professional obligations of belonging to a – in many respects - self-regulating body.*

### **3. General Entry Requirements**

As per General Entry Requirements for admission to the University for undergraduate degrees.

### **4. Programme Requirements**

At least five GCE 'O' Level Passes, or equivalent, including Chemistry, Biology, Mathematics and English Language, and GCE 'A' Level Passes, or equivalent, in three science subjects. The minimum grades required at 'A' Level are A, A, B. An interview may be carried out for foreign students.

Additional requirement: students should be immunised against Hepatitis B.

### **5. Programme Duration:**

Normal: 6 years (Bachelor of Medicine: 3 years; Master of Medicine: 3 years)

Maximum: 9 years (Bachelor of Medicine: 4 years maximum; Master of Medicine: 5 years maximum)

### **6. Programme Description:**

The Bachelor of Medicine (3 years full-time) is the first part of the undergraduate medical programme. It is organised in compulsory semester block modules composed of different units and 4 optional modules (one per semester as from Year 2) to be chosen from a list made available to students.

The first year is an introduction to the molecular, biological and psycho-social aspects underlying any disease, the understanding of which contributes to practice of medicine based on scientific principles. It integrates several scientific disciplines such as physics, chemistry, molecular and cell biology, physiology, biochemistry, anatomy, histology, psychology etc..., which are required for the optimal learning of basic medical sciences.

Year 1 programme consists mainly of lectures organized in themes progressing from simple molecules to structures with increasing complexity such as cells, tissues, organs (*Block Module A* in Semester 1), body systems and their regulation (*Block Module B* in Semester 2). In parallel, in both semesters, essential notions of psychology, ethics, communication are introduced as well as study of the different phases of life and interaction between the individual, society and disease (*The Individual, Health and Society Modules 1 & 2*). *Two Case Studies* illustrate the importance of integration of basic medical sciences in the practice of medicine. *Medical statistics* are taught in Semester 2.

The second and third years are organized in integrated multidisciplinary units in which students learn basic medical sciences through the prism of medically related problems bearing on different systems, in small-group tutorials. Studies are organised in Block Modules with different units in the following sequence:

Year 2 Semester 1 (*Block Module 1*): Inflammation and cancer, digestive system, reproductive system.

Year 2 Semester 2 (*Block Module 2*): Cardiovascular, urinary, respiratory systems.

Year 3 Semester 1 (*Block Module 3*): Musculo-skeletal system and nervous system.

Year 3 Semester 2 (*Block Module 4*): Microbiology, defense and immune system against infections.

In addition to learning of basic medical sciences through problem-based learning in small groups, as well as through lectures and practicals (use of virtual microscope in Histology/Pathology, DVD and 3D imaging in anatomy), the different units in year 2 and year 3 integrate components of two longitudinal programmes: *Community Dimensions* and *Clinical Skills*.

- Community Dimensions (CD) covers proficiency in ambulatory medicine, medical ethics and public health in Year 2 and Year 3; that training is completed by 4 half-day training sessions in primary health care (TPHC) under the supervision of a medical practitioner in Year 2.
- Clinical Skills (CS) is another longitudinal programme where attitudes and basic medical skills are taught, as well as the doctor-patient relationship. Students benefit as from Year 2 from four Formative Clinical Skills Stations on standardised patients under the individual supervision by a clinician who provides immediate feedback on their performance in a portfolio kept by the students.

For each unit within the Block Modules a specific booklet describes in detail the activities (including general and specific learning objectives, lectures, tutorials with list of problems for Problem-Based Learning activities, list of references and resources for active learning), the CS and CD components to be covered, names and contact details of the Unit Coordinator and tutors.

The last semester in Year 3 ends with a *practical community survey* (for 1 month) carried out as small group work, results of which are presented as a poster, an oral presentation and as a written report.

In addition to the above, one *optional module* is required in each semester in Year 2 and Year 3. Optional modules can be taught modules or practical-based. Students indicate their preferred options (up to 3) at the beginning of each year. Year 3 students are given priority over Year 2 students. Some modules are on offer only in Year 3.

The Master of Medicine (3 years full-time) is the second part of the undergraduate medical programme. Only students who have passed in the Bachelor of Medicine part can register in this part of the programme.

In Year 1 Semester 1 of the Master of Medicine (1<sup>st</sup> semester in 4<sup>th</sup> Year), **Module “Introduction to Clinical Reasoning” (ICR)** of 15 weeks duration, constitutes a transition between the Bachelor of Medicine part and the Master of Medicine part consisting of “Learning in a Clinical Environment” (LCE) units. In Module ICR students deal with complex problems for which there is a need for a multi-disciplinary approach and a need to integrate knowledge acquired in Year 2 and 3 of the Bachelor programme. Students are prepared for the next phase of their training in a clinical environment; they learn clinical reasoning and management of a patient in different situations.

In Module ICR students learn to solve problems related to different clinical specialties (surgery, pediatrics, internal medicine, community medicine & primary health care, psychiatry). Longitudinal clinical problems that include follow-up of a patient and evolution of his/her condition over time enable integration of several medical disciplines. Depending on the objectives and contents, problems are situated in different clinical contexts (emergency, ambulatory care, admission, follow-up) and involve one or more steps to allow students to acquire a systematic and sequential diagnostic approach. Students work in small groups under the guidance of a clinical tutor, learning is completed by lectures and seminars on topics bearing on transversal disciplines that are important in clinical medicine or on themes that prepare them to learning in a clinical environment. The tutor steers and motivates the group, ensures time management, guides students through the appropriate pathway to steps of clinical reasoning and diagnostic process and provides a feedback to each student.

They also benefit during these 15 weeks from training in clinical skills and in community dimensions.

Specific booklets (one for lectures and seminars; one for problems as starting point for learning through clinical problem solving in tutorials; and one for clinical skills and community dimensions), describe in detail the learning objectives, the list of references and learning resources available as well as the names and contact details of coordinator and tutors.

As from the end of 1st Semester in the 4<sup>th</sup> year, **Module ICR is followed by 15 months of “Learning in a Clinical Environment” (LCE)** which comprises a total of 11 units of variable duration, bearing on different medical disciplines. LCE is organized in 2 parts of unequal duration:

- **LCE Part I** consists of 6 units run from the end of 4<sup>th</sup> Year Semester 1 to 5<sup>th</sup> Year Semester 1: Internal Medicine & Pharmacology (8 weeks), Surgery (8 weeks with 4 weeks General Surgery & 4 weeks Orthopedic Surgery), Community Medicine & Primary Healthcare (8 weeks), Paediatrics (8 weeks), Psychiatry (4 weeks), Obstetrics & Gynecology (4 weeks).
- **LCE Part II** consists of 5 units run in 5<sup>th</sup> Year Semester 2: Emergency Medicine & Intensive care (3 weeks); Neurology & Neuro-surgery (3 weeks), Dermatology (3 weeks), Ophthalmology (3 weeks), Oto-Rhino-Laryngology (3 weeks).

In LCE units, the student is in contact with patients and can put to use previously acquired knowledge, skills and competencies, and integrate them into the clinical practice specific to each medical discipline. Student will be involved in different types of activities in LCE units: admission of patients; participation in ward rounds and in night duties; participation in interactive seminars and in tutorials bearing on clinical problem solving.

Problems in tutorials included in LCE units are studied through “Learning Clinical Reasoning” or through “Guided Case Study” (Case Presentation and Discussion by Students). In the “Learning Clinical Reasoning” format no preparation is needed beforehand, the aim is to increase the capacity to analyse, interpret and summarise clinical data in common medical problems; students need to define the learning

objectives so as to enable targeted and efficient self-learning. The “Guided Case Study” is a format used in LCE unit “*Internal Medicine & Pharmacology*”, students are provided with the case together with specific questions one week before the tutorial. The new knowledge acquired through individual preparation by the student for problem solving is discussed by the group. The aim of this type of exercise is to enable students to acquire autonomy in the diagnosis process and patient management.

A specific booklet describes in detail for each LCE unit the learning objectives, activities, list of references, names and contact details of tutors and supervisors. Organisation of the teaching formats in different LCE units is supervised by a Master of Medicine Clinical Curriculum Committee.

Throughout Year 4 and Year 5 (1<sup>st</sup> and 2<sup>nd</sup> year Master of Medicine), in the ICR module and the different LCE units, students benefit from learning in “**Transversal**” *Disciplines* such as pathology, radiology, clinical pharmacology, legal medicine & ethics. These disciplines are useful for better understanding and acquisition of skills and competencies in LCE units. Learning formats in the transversal disciplines vary from self-learning guided by specific objectives set through clinical problem solving in LCE units, to specific tutorials. Self-learning and revision material is provided in disciplines such as pathology and radiology.

Each student works on a **Project at Master level** (375 to 450 hours) as from the beginning of the 4<sup>th</sup> year under the supervision of a Project Supervisor and submits a *dissertation* at the end of the 5<sup>th</sup> academic year. Students benefit from one afternoon every week during 4<sup>th</sup> and 5<sup>th</sup> years to work on their project and from one whole additional month at the end of 5<sup>th</sup> Year for the writing up of their dissertations. The Project may be a research project, a Case Study or a Literature Review on a specific topic. Topics may vary from basic medical science, clinical medicine, legal medicine and ethics, medical humanities, health economics, to medical education. Students should demonstrate through personal work the capacity for critical thinking when analyzing a topic related to health or medicine, as well as clear and efficient communication on a medically-related subject.

**In the 6<sup>th</sup> year (Year 3 of Master of Medicine), students undergo rotations** of 1 month duration or more in disciplines of their choice as student interns for 10 months. They have the opportunity to acquire practical experience under supervision and to further their knowledge in basic medical science and clinical medicine in different disciplines chosen to suit their future professional plans. They can be called upon to help their clinical supervisors in the tutoring of junior students. Part of the 6<sup>th</sup> year may be spent in a doctor’s office.

**At the end of the 6<sup>th</sup> year**, students who have satisfactorily completed their clinical rotations and successfully completed their Master thesis benefit from several weeks of revision and are allowed to sit for the **final comprehensive MD examination** which is based on the “*General Objectives*”, the “*Competencies*”, the “*General Skills*” and the “*Problems as starting points for training*”, listed in SCLO (AnnextoMD).

## 7. Assessment

### *Bachelor of Medicine (first part of the undergraduate medical programme).*

Compulsory modules taught in a semester, except for case studies in Year 1, are assessed through integrated examinations at the end of the same semester.

Optional modules are examined separately in the semester in which they are taught.

Pass mark in all examinations is 50%

Students who score <15% in any integrated examination are terminated.

A student who is sick or has been unable to take an examination for other valid reasons to the satisfaction of the Dean of Faculty and Chairman of Senate will be required to take a Special Examination.

Students who fail an examination in a semester (including in the optional module) are allowed one resit examination at the end of the academic year.

Students earn all marks in resit examinations (not pass mark only).

Students who fail in the resit examination for a particular semester are allowed to repeat that particular semester, provided that they have not exceeded the time limit for the programme.

Students who repeat a semester and fail again in the end of semester examination are terminated.

#### In Year 1:

- Semester 1 and Semester 2 integrated written examinations are in MCQ format, they are of 4 hour duration in each semester (organized in 2 papers of 2 hour duration including 80 MCQ each) and account for 100% of final marks for the semester.
- Students must succeed in the two end of semester integrated written examinations to be promoted to Year 2.

#### In Year 2 and Year 3:

Semester 1 and Semester 2 integrated written examinations include MCQ format based on clinical case studies, they are of 3 hour duration and account for 80% of total marks obtained for the semester.

Practicals in anatomy, histology or pathology taught during a semester are assessed through an oral examination of 1 hour duration at the end of the semester, which accounts for 20% of total marks obtained for the semester.

- Before they are allowed to undergo the written examination in Year 2 Semester 2, students need to submit a structured report on training sessions in primary health care (TPHC), graded as Satisfactory.
- Clinical skills taught in a semester are assessed in the end of semester integrated written examinations; they are also examined independently in an OSCE (observed structured clinical examination) at the end of Year 3, of one hour duration consisting in 3 different stations with Standardised Patients.
- Before they are allowed to undergo the end of year OSCE examination at the end of Year 3, students need to submit a portfolio for the 4 Formative Clinical Skills stations, graded as Satisfactory.
- Students in Year 3 Semester 2 who fail in the integrated written examinations for Module 4 or in the OSCE examination need to resit only in the examination in which they failed.

Year 2 students must succeed in the combined written and oral examinations at the end of each semester and two optional modules to be promoted to Year 3.

Year 3 students need to pass the combined written and oral examinations at the end of both semesters, the two optional modules, the OSCE examination and the practical community survey to complete the Bachelor of Medicine part of the undergraduate medical programme, and become automatically eligible to register in the Master of Medicine, the second part of the undergraduate medical programme.

***Master of Medicine (the second part of the undergraduate medical programme).***

In Year 4 and Year 5, students undergo individual summative assessments at the end of the semester in which Module or units are organised.

Pass mark is 50% in all semester examinations in Year 4 and in Year 5, in Master dissertation and in MD final examinations.

Students who score < 15 % in any examination are terminated.

Students earn all marks in resit examinations (not pass mark only).

A student who is sick or has been unable to take an examination for other valid reasons to the satisfaction of the Dean of Faculty and Chairman of Senate will be required to take a Special Examination.

**Module “Introduction to Clinical Reasoning”**

- Module is assessed at the end of the 1<sup>st</sup> semester in the 4<sup>th</sup> year through **integrated written examinations of 3 hour duration which include 90 MCQ** based on small clinical problems. Emphasis is laid on assessment of clinical reasoning and application of knowledge, not on factual recall.
- Students who fail in Module “Introduction to Clinical Reasoning” (ICR) in Year 4 Semester 1 may continue with the first “Learning in a Clinical Environment” (LCE) unit. They are offered a resit examination after 3 to 4 weeks.
- If they fail in the resit examination in ICR, they have to repeat the Module in the next academic year.
- If as repeaters, they fail again in ICR examinations, they are terminated.

**Units in “Learning in a Clinical Environment” PART I** are assessed individually, except for “Internal Medicine and Pharmacology” and “Community Medicine and Primary Health Care” for which summative assessment is combined.

- Students are allowed to register for end of semester summative assessments in LCE Part I units only if they have passed in Module ICR.
- In LCE Part I units students are allowed to take end of semester examinations only if formative assessment in the clinical setting is satisfactory.
- Students who fail in one of the end of semester summative assessments of LCE Part I units are allowed a resit examination in the unit failed. They may carry on with other LCE Part I units in the meantime. If they fail in the resit examination, they repeat the LCE unit in which they failed.
- Students who fail  $\geq 2$  summative assessments of LCE Part I units at the end of a semester are not offered resit examinations; they need to repeat the LCE units in which they failed.
- Students who fail as repeaters in the end of semester summative assessment of any LCE Part I unit are terminated.

Name of LCE Part I Unit	Conditions for validation of Formative Assessment by LCE Coordinator	Format of Summative Assessment for the unit at the end of the semester
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<p>“Internal Medicine and Pharmacology”</p> <p>(IMP)</p> <p>8 weeks duration</p>	<p>≥ 80% attendance in tutorials and clinical activities.</p> <p>Satisfactory progress at 3 assessments on 4th, 6th, 7th or 8th week performed by the clinical supervisor based on observations of patients admitted in the ward.</p> <p>At least 1 case presentation and discussion in ad hoc tutorials.</p> <p><b><i>If formative assessment is not satisfactory, student may have to repeat 8 weeks in this LCE Unit</i></b></p>	<p>Formative assessment needs to be validated in each LCE unit.</p> <p>Combined assessment for the two LCE units IMP &amp; CMPHC consists of 2 formats:</p> <p><b>OSCE of 90 minutes duration using 6 stations</b> with standardized patients:</p> <p>3 stations of 12 min for IMP</p> <p>3 stations of 12 min for CMPHC (2 min between stations).</p> <p>Stations bear on commonly occurring diseases.</p> <p><b>Computer aided assessment of 3 hour duration</b>, using 120 MCQ based on clinical case scenarios (imaging and lab results may be included): 50 MCQ on Internal Medicine, 10 MCQ on Clinical Pharmacology, 60 MCQ on CMPHC, and on contents of Module ICR (Internal Medicine and Primary Health Care)</p>
<p>“Community Medicine and Primary Health Care”</p> <p>(CMPHC)</p> <p>8 weeks duration</p>	<p>≥ 80% attendance in tutorials and clinical activities.</p> <p>Management of ≥ 8 patients.</p> <p>Satisfactory performance in assessment of clinical skills and professional attitude.</p>	<p>Performance in two units IMP and CMPHC is assessed globally over the two types of summative assessment:</p> <p><b>OSCE (40%) &amp; MCQ (60%)</b></p>
<p>“Surgery”:</p> <p>4 weeks in General Surgery &amp; 4 weeks in Orthopedic Surgery</p>	<p>Logbook submitted for each clinical training placement in surgery.</p> <p>Placements are validated separately by the clinical supervisors based on logbook contents.</p> <p>If a placement is not assessed as being satisfactory, the LCE unit Coordinator decides on corrective measures needed which may include repeating the whole LCE unit</p>	<p><b>OSCE of 60 minutes duration using 4 stations</b> to assess clinical competencies.</p> <p><b>Computer aided assessment</b> (using Campus software) <b>of 2 hour duration, using 80 MCQ</b> bearing on clinical cases to assess clinical reasoning.</p> <p>Performance is assessed globally over both types of summative assessment:</p> <p><b>OSCE (40%) &amp; MCQ (60%)</b></p>
<p>“Paediatrics”</p> <p>8 weeks duration</p>	<p>Demonstrate a professional attitude during training and participate in ≥80% of activities.</p> <p>Submission of logbook.</p> <p>Placement validated by the clinical supervisor based on logbook contents assessed as satisfactory by the clinical supervisor: admission of one patient, examination of a newborn, presentation of 2 cases observed when on call, follow-up of 7 cases presented in bedside seminars &amp; follow-up of two patients admitted.</p>	<p><b>OSCE of 60 minutes duration (4 stations)</b> to assess clinical competencies: History taking, physical examination adapted to pediatrics, and management of the case.</p> <p><b>Computer aided assessment of 2 hour duration using 80 MCQ</b> on 2 clinical problems to be solved and clinical scenarios to test clinical reasoning: diagnosis, management and prognosis of common pediatric disorders, including those of the newborn, of surgical and psychiatric disorders in children.</p> <p>Performance is assessed globally over both types of summative assessment.</p> <p><b>OSCE (50%) &amp; MCQ (50%)</b></p>
<p>“Psychiatry”</p> <p>4 weeks duration</p>	<p>Participation in ≥80% of activities.</p> <p>Satisfactory performance in clinical competence &amp; professional attitude,</p>	<p><b>OSCE of 30 minutes duration</b> with a standardized patient presenting one of the 8 main pathologies studied in the LCE unit.</p> <p>Student assessed by two examiners on history taking, overall mental examination,</p>

	<p>Presentation to the supervisor of a clinical scenario bearing on one of the 8 main pathologies studied in the unit based on interview of a patient by the student during the clinical placement.</p> <p>Main pathologies: depression, bipolar disorder, anxiety, schizophrenia, borderline, dementia, eating disorders and addictions.</p>	<p>communication skills and attitude, diagnostic hypotheses and global evaluation. Examiners may ask other questions on differential diagnoses.</p> <p><b>Computer aided examination of 90 minutes duration with 60 MCQ</b> based on clinical scenarios, and additional general questions. Contents based on discipline related objectives on psychiatry (excluding Pedopsychiatry). Performance is assessed globally over both types of summative assessment: <b>OSCE (50%) &amp; MCQ (50%)</b></p>
<p><i>“Obstetrics-Gynecology”</i> 4 weeks duration</p>	<p>Participation in <math>\geq 80\%</math> of activities.</p> <p>Satisfactory performance in clinical competence &amp; professional attitude.</p>	<p><b>Computer aided examination of 2 hour duration</b> on Gynecology (one hour) and on Obstetrics (one hour).</p> <p>In each part, 15 MCQ bear on a clinical case and on other topics. They also include radiology, pharmacotherapy, legal medicine and ethics and interpretation of photographs from the operative theatre.</p>

**Assessment in “Learning in a Clinical Environment” Part II units and in Transversal Disciplines** takes place at the end of Year 5 Semester 2:

Students are allowed to register for summative assessments in LCE Part II units only if they have passed in Module ICR and in end of semester summative assessments of all LCE Part I units.

<b>Five LCE Part II Units</b>	<b>Type of Summative Assessment at the end of year 5 Semester 2</b>
<i>“Neurology &amp; Neuro-Surgery”</i>	<b>Computer aided assessment of 1 hour duration</b> with 40 MCQ bearing on clinical scenarios. Themes examined correspond to objectives and lectures in LCE unit booklet.
<i>“Emergency Medicine”</i>	<b>Computer assisted assessment of 1 hour duration</b> with 40 MCQ bearing on clinical scenarios, assessing the specificity of management of patients in Emergency Medicine (vital signs using ABC concept; importance of team work in emergency situations; rapid diagnosis and medical management in patients suffering from polytrauma, shock, coma, respiratory distress, acute chest pain, acute pain) and the legal and ethical aspects in Emergency Medicine.
<i>“Oto-Rhino-Laryngology”</i>	<b>Computer assisted assessment of 1 hour duration</b> with 40 MCQ bearing on clinical scenarios. Assessment on ability to propose a diagnosis, differential diagnoses, and to discuss treatment for each case. Themes examined correspond to objectives and lectures in the LCE unit booklet.
<i>“Ophthalmology”</i>	<b>Computer assisted assessment of 1 hour duration</b> with 40 MCQ bearing on 2 to 3 clinical cases with photographic documents. Assessment on ability to propose diagnosis hypotheses, differential diagnoses, treatment modalities and prognosis. Themes examined correspond to discipline oriented objectives pertaining to Ophthalmology and lectures in LCE unit booklet.
<i>“Dermatology”</i>	<b>Computer assisted assessment of 1 hour duration</b> with 40 MCQ bearing

	on clinical scenarios with photographs of patients. Assessment on ability to describe elementary lesions, propose a diagnosis, differential diagnoses, and treatment. Themes examined correspond to lectures in the LCE unit, and objectives listed in discipline oriented objectives pertaining to Dermatology in SCLO.
<b>Three Transversal Disciplines</b>	<b>Type of Summative Assessment at the end of year 5 Semester 2</b>
“Pathology”	<b>Computer assisted assessment of 90 min duration</b> , with 60 MCQ bearing on 9 to 10 clinical scenarios, and additional questions independent from the clinical cases. Proportion of cases and questions are based on proportion of lectures and tutorials bearing on different LCE: Internal Medicine and Paediatrics (40%), Surgery (40%), Obstetrics and Gynecology (10%), Neurology and Neurosurgery (10%).
“Clinical Radiology”	<b>Computer assisted assessment of 90 minutes duration</b> on diagnostic imaging (65%), nuclear imaging and radiotherapy (35%).
“Legal Medicine and Medical Ethics”	<b>Oral examination by 2 examiners with questions on one case randomly selected out of clinical cases</b> bearing on objectives set in SCLO on Legal Medicine and Medical Ethics. Student is allowed 30 minutes preparation on the selected case where s/he is able to use books and lecture notes. Oral Examination by two examiners is of 30 minutes duration: on the case initially, additional questions are asked later on other topics.

**Marks from individual summative assessments in the 5 LCE Part II units and in 3 transversal disciplines are combined:**

- Students should score  $\geq 50\%$  of marks combined for the 8 disciplines assessed.
- Students may however score less than pass mark in up to 2 of the 8 disciplines considered individually, provided that the combined marks for the 8 disciplines are  $\geq 50\%$
- Students who score  $< 50\%$  in combined marks {for the 5 LCE Part II units and 3 transversal disciplines} and students who score  $< 50\%$  in 2 or more of the 8 disciplines assessed (even if combined marks  $\geq 50\%$ ) are offered a resit examination in all the LCE units and transversal disciplines involved.
- If they fail the resit examination they can repeat the semester provided they have not exceeded the maximum number of years in the programme.

**Assessment of the Master dissertation submitted at the end of Year 5:**

Dissertation is assessed independently by the supervisor and a second assessor as per University of Mauritius Regulations. The mark of the student’s dissertation will be the weighted average of the marks awarded by the supervisor (50%) and the second assessor (50%). This mark may change after moderation by the External Examiner. Where the marks of the supervisor and second assessor for dissertation differ by more than 10%, the Project Coordinator will request the Supervisor/Assessor to consult among themselves so as to arrive at an agreed mark.

Evaluation is based on clear definition of the aim of study, description of study design, appropriately referenced literature review, analysis and discussion of findings, limitations of the study, concise and well-structured presentation.

**Assessment in Year 6: Evaluation of Rotations in Master Year 3**

Students are eligible to start their clinical rotations in Year 6 if they have passed in Module ICR, in summative assessments of all LCE Part I and Part II units, and have submitted their Master dissertation.

Evaluations are performed during and at the end of the internship by the internship supervisors on a scale from 1 to 3 (1: to improve; 2: Appropriate to expected level; 3: Above expectations) on aspects pertaining to the seven “CanMed” roles (Professional, Medical Expert, Communicator, Collaborator, Manager, Health Advocate, Scholar) and with regard to achievements of the specific objectives. A global appreciation is given at the end of the internship for each rotation and student internship is validated or not by the supervisor.

### ***MD final examinations:***

Year 6 students are considered to have completed the Master of Medicine part of the undergraduate medical programme and are eligible for the final MD examinations if they have passed summative assessments in Module ICR and in all LCE Part I and Part II units, if they have validated the Master dissertation and if they have successfully completed all clinical rotations during a period of 10 months.

These students are allowed to undergo the final comprehensive MD examination based on “*Problems as starting points*”, “*Competencies*” and “*Clinical Skills*” listed in the SCLO. Adequate representation in dimensions is ensured such as setting (Inpatient/Outpatient), type of care (Preventive/ Emergency/ Acute/ Chronic/ Rehabilitation/ Palliative Care), age (Child/Adult/Elderly), and gender (Female/Male/Either).

MD examinations consist of two MCQ papers (marks are combined for the two papers) and one Objective Structured Clinical Examination (OSCE) session using standardized patients.

**MCQ papers are of 4 and half hours duration and composed of 150 MCQ** each, bearing mostly on problems or clinical scenarios and testing a spectrum of interdisciplinary knowledge and clinical skills.

- Problems as starting points in MCQ papers may be: general symptoms; metabolic alterations, abnormal laboratory values; skin manifestations; head, face, neck; ear, nose, mouth, throat, voice; eyes; breast, chest, heart, blood pressure, pulse; abdomen, stomach, bowels; pelvic symptoms, urogenital problems; bones, joints, back, extremities; newborn, child, adolescent; elderly persons, aging; disorders of consciousness, balance, orientation, gait, movement; mental, behavioural, and psychological problems; other reasons for medical consultation or problems in medical care; psychosocial and interpersonal problems; problems related to population.
- Competencies assessed in MCQ papers are: structure, function, pathophysiology, etiology, epidemiology; diagnostic procedures; differential diagnosis, prognosis; management and treatment modalities; preventive measures; social, legal, ethical, economical aspects; research and evidence-based medicine principles; comprehensive, others.

**The OSCE** lasts half a day; it consists of **12 stations** in which student perform a clinical activity on a standardized patient: taking a history, diagnosis and management, communicating with the patient. It enables to assess communication skills, clinical skills and knowledge.

- Problems as starting points used in OSCE are those which occur commonly, or those which necessitate immediate and adequate diagnosis and management. Emphasis is laid mostly on two competencies: medical expert and communicator.

Students who fail in one of the two MD final examinations (MCQ examinations or OSCE) need to resit only in the one they failed.

In case of failure in resit examinations one additional attempt is allowed in the next year provided students have not exceeded the maximum number of years in the programme.

Students are awarded the MD degree if they have passed in both types of final MD examinations.

## 8. Grading:

### Semester 1

### Semester 2

#### Bachelor of Medicine Part

	Module or Unit	Total Marks	Module or Unit	Total Marks
<b>YEAR 1</b>	Block Module A	100	Block Module B	100
<b>YEAR 2</b>	Block Module 1 <i>Paper (80%) + Practical (20%)</i>	90	Block Module 2 <i>Paper (80%) + Practical (20%)</i>	90
	Optional Module	10	Optional Module	10
<b>YEAR 3</b>	Block Module 3 <i>Paper (80%) + Practical (20%)</i>	90	Block Module 4 <i>paper</i>	40
	Optional Module	10	OSCE	25
			Optional Module	10
			Community Survey	25

#### Master of Medicine Part

<b>YEAR 1</b>	Introduction to Clinical Reasoning	60	LCE Part I unit "Internal Medicine & Pharmacology"	50
			LCE Part I unit "Surgery"	40
			LCE Part I unit "Community Medicine & Primary Health Care"	40
<b>YEAR 2</b>	LCE Part I unit "Pediatrics"	40	LCE Part II unit "Emergency Medicine and Intensive Care"	10
	LCE Part I unit "Psychiatry"	20	LCE Part II unit "Neurology and Neurosurgery"	10
	LCE Part I unit "Obstetrics & Gynaecology"	20	LCE Part II unit "Ophthalmology"	10
			LCE Part II unit "Oto-Rhino-Laryngology"	10
			LCE Part II unit "Dermatology"	10
			Radiology	10
			Pathology	10
			Legal Medicine & Ethics	10
			Master Project	50

#### MD Year 6

Clinical Rotations: 10 months (Grade S or U)  
MCQ papers: 150 marks each (Total: 150 x 2)  
OSCE: Total 120 marks

Grade	Marks, x (%)
A+	$\geq 80$
A	$70 \leq x < 80$
B	$60 \leq x < 70$
C	$50 \leq x < 60$
F	$< 50$

Grade S: satisfactory completion

Grade U: unsatisfactory completion

#### Classification of Award for Bachelor of Medicine programme & Master of Medicine programme

Pass:  $50 \leq x < 80$

Distinction:  $\geq 80$

#### Classification of Award for MD:

Pass:  $x \geq 50$  (in both parts of the final examinations in Year 6)

## 9. Programme Plan- Bachelor of Medicine

Year 1									
Semester 1					Semester 2				
Code	Module Name	L	T	P	Code	Module Name	L	T	P
BMED 1101	<b>Block Module A</b>				BMED 1201	<b>Block Module B</b>			
(Unit)	<i>From Molecules to Cells</i>	120	58	14	(Unit)	<i>Unit From Organs to systems</i>	117	10	16
(Unit)	<i>Unit From Cells to Organs</i>	74		11	(Unit)	<i>Unit Integration</i>	51		
BMED 1102	The Individual, Health and Society 1	36			BMED 1202	The Individual, Health and Society 2	55		
BMED 1003(Y)	Case Studies	8			BMED 1003(Y)	Case Studies	8		
					BMED 1203	Medical Statistics	20		
Year 2									
Semester 1					Semester 2				
Code	Module Name	L	T	P	Code	Module Name	L	T	P
BMED 2101	<b>Block Module 1</b>				BMED 2201	<b>Block Module 2</b>			
(Unit)	<i>Introduction</i>	12	18		(Unit)	<i>Cardio-Vascular System</i>	13	38	13
(Unit)	<i>Cellular Growth and Aging</i>	18	29	7	(Unit)	<i>Excretion and Homeostasis</i>	15	36	7
(Unit)	<i>Nutrition, Digestion and Metabolism</i>	18	30	8	(Unit)	<i>Respiratory System</i>	17	33	14
(Unit)	<i>The Reproductive System</i>	22	34	14	(Unit)	<i>Synthesis 2</i>	8	21	2
(Unit)	<i>Synthesis 1</i>	15	8		Placement TPHC	4 x 4h			
	Optional Module	25				Optional Module	25		
Year 3									
Semester 1					Semester 2				
Code	Module Title	L	T	P	Code	Module Title	L	T	P
BMED 3101	<b>Block Module 3</b>				BMED 3201	<b>Block Module 4</b>			
(Unit)	<i>Introduction to Nervous System</i>	4	19	10	(Unit)	<i>Defence and Immune System</i>	18	39	4
(Unit)	<i>Perception, Emotion, Behaviour</i>	49	83	27	(Unit)	<i>Infections</i>	32	73	
(Unit)	<i>Bones and Joints</i>	8	20	10		<i>Community Survey</i>	21	15	[20]
	Optional Module	25				Optional Module	25		

L: Lectures  
T: Tutorials  
P: Practicals

Optional Modules may be lecture based, tutorial or practical based or a mix of those (specified in module outline as well as types of assessment)  
TPHC: Training in Primary Health Care

## 10. Programme Plan- Master of Medicine

Master Year 1						
Semester 1				Semester 2		
Code	Module Name	Duration		Code	Module Name	Duration
MMED 1101	<b>“Introduction to Clinical Reasoning”</b>	15 weeks		<b>“Learning in Clinical Environment” (LCE) Part I starts in end of Semester 1</b>		
	<i>(L:65h; IS:100 h; T:85h)</i>			MMED 1201	LCE Unit “Internal Medicine” <i>(L:62h; IS:72h; T:30h)</i>	8 weeks
<i>L: Lectures IS: Interactive Seminars T: Tutorials</i>				MMED 1202	LCE Unit “Surgery” <i>(L:10h; IS:74h; T:36h)</i>	8 weeks
				MMED 1203	LCE Unit “Community Medicine & Primary Health Care” <i>(L:2h; IS=51h; T:44h)</i>	8 weeks
MMED 1000	<b>Project</b>			MMED1000	<b>Project</b>	
Master Year 2						
Semester 1				Semester 2		
<b>“Learning in Clinical Environment” (LCE) Part I</b> continues with 3 additional units				<b>“Learning in Clinical Environment” (LCE) Part II</b>		
MMED 2101	LCE unit “Pediatrics” <i>(IS:93h; T:48h)</i>	8 weeks		MMED 2201	LCE unit “Emergency Medicine and Intensive Care” <i>(IS:20h; T:20h)</i>	3 weeks
MMED 2102	LCE unit “Psychiatry” <i>(IS:51h; T:23h)</i>	4 weeks		MMED 2202	LCE unit “Neurology and Neurosurgery” <i>(IS:43h; T:18h)</i>	3 weeks
MMED 2103	LCE unit “Obstetrics-Gynecology” <i>(IS=14h; T:26h)</i>	4 weeks		MMED 2203	LCE unit “Ophthalmology” <i>(IS=8h; T:24h)</i>	3 weeks
<i>L: Lectures IS: Interactive Seminars T: Tutorials</i>				MMED 2204	LCE unit “Oto-Rhino-Laryngology” <i>(L:34h; IS=2h; T:16h)</i>	3 weeks
				MMED 2205	LCE unit “Dermatology” <i>(L:32h; IS:17h; T:20h)</i>	3 weeks
MMED1000	<b>Project</b>			MMED1000	<b>Project</b>	
MD Year 6						
<b>MD 6001: Rotations as student interns in different disciplines for 10 months,</b> <b>MD final examinations at the end of 6<sup>th</sup> year:</b> 2 theoretical papers (MD 6002) and OSCE with 12 stations (MD 6003)						