MOHAMMED BIN RASHID UNIVERSITY
OF MEDICINE AND HEALTH SCIENCES

College of Medicine Catalog

Academic Year 2018-2019

MBRU
جامعة محمد بن راشد للطب والعلوم الصحية
MOHAMMED BIN RASHID UNIVERSITY OF MEDICINE AND HEALTH SCIENCES

COLLEGE OF MEDICINE

BACHELOR OF MEDICINE AND BACHELOR OF SURGERY PROGRAM

CATALOG FOR ACADEMIC YEAR 2018-19

Table of Contents

Back to contents

Back to contents

1. Academic Calendar (2018 - 2019)

The key dates relating to the Calendar for 2018 - 2019 are set out in the table below. MBRU adheres to the academic calendar requirements of the UAE Ministry of Education.

Semester 1	Dates
New and Returning Student Orientation	August 26, 2018 – August 27, 2018
Classes Start	August 28, 2018
Semester 1	August 26, 2018 - December 06, 2018
Semester 1 – Final Exams	December 09, 2018 - December 20, 2018
WINTER BREAK – 3 weeks	December 23, 2018 - January 10, 2019
Semester 2	**Dates**
Semester 2	January 13, 2019 - May 9, 2019
SPRING BREAK – 2 weeks	March 24, 2019- April 4, 2019
Semester 2- Final Exams	May 12, 2019 - May 23, 2019
SUMMER BREAK Starts	May 26, 2019

UAE Public Holidays (2018/19)

Occasion	Dates
Al-Hijra – Islamic New Year	September 11, 2018
Birthday of the Prophet Mohammed (PBUH)	November 19, 2018
Martyr's Day	November 30, 2018
UAE National Day	December 02 - December 03, 2018
New Year's Day 2018	January 01, 2019
Israa & Miraj	April 03, 2019
Ramadan Begins	May 06, 2019
Eid Al Fitr	June 05 - June 07, 2019

Public holidays are subject to confirmation from relevant authorities and will be announced by the MBRU administration.

Any revisions to teaching and clinical skills scheduling, examination timetables, Public Holidays, and MBRU closure periods, will be published throughout the year on the university website at www.mbruniversity.ac.ae. In addition, during Phase 3 of the MBBS Program, students may elect, or be required for remedial study purposes, to undertake a period of selective study during the summer months. Students will be notified of this requirement in advance.

2. A Brief Statement of Institutional History

His Highness Sheikh Mohammed Bin Rashid Al Maktoum, Vice President and Prime Minister of the United Arab Emirates and Ruler of Dubai, announced the establishment of Mohammed Bin Rashid University of Medicine and Health Sciences (MBRU) in 2014. In June 2016, His Highness signed Decree number 7 for the formal establishment of the University.

The university is located within Dubai Health Care City (DHCC) as its education and research arm, thus creating an integrated academic and clinical environment for training medical and allied health professions, and innovative world-class standard research that is attuned to the needs of the country. The goal is to advance the quality and standard of healthcare in Dubai, the UAE, and the wider region. In addition to the existing Hamdan Bin Mohammed College of Dental Medicine and the College of Medicine, MBRU will encompass new colleges in the future.

The university is licensed by the Commission for Academic Accreditation in the Ministry of Education of the United Arab Emirates to award degrees and qualifications in higher education. All programs offered by MBRU are benchmarked against international standards to ensure a high-quality education which allows its graduates to be competitive globally, both in the job market and in securing advanced specialist training positions. MBRU's academic partner is Queen's University Belfast in the United Kingdom. This partnership aims at enhancing the quality of all aspects of the medical program and supporting the university on strategic and operational issues.

MBRU College of Medicine is listed on the World Directory of Medical Schools. Students and graduates of the MBBS program at MBRU are eligible to apply to the United States Educational Commission for Foreign Medical Graduates (ECFMG) for ECFMG Certification and for examination. Medical degrees obtained from MBRU are acceptable to the provincial/territorial medical regulatory authorities in Canada, and therefore acceptable to all medical organizations in Canada. MBRU's Foundation for Advancement of International Medical Education and Research (FAIMER) ID is F0004132.

3. MBRU Vision, Mission and Goals

Vision

A global hub for innovative and integrated healthcare education and research at the service of humanity.

Mission

To advance health in the UAE and the region through an innovative and integrated academic health system, that is nationally responsive and globally connected, serving individuals and communities.

MBRU Values

- **Respect**
- **Integrity**
- **Excellence**
- **Giving**
- **Connectivity**

Goals

- To establish the Emirate of Dubai as a hub for academic specializations in medicine and health sciences
- To contribute to achieving sustainable development through supporting scientific advancement in medicine and health sciences
- To provide the community with qualified medical and healthcare personnel who are able to efficiently address various health issues
- To create a favorable environment for conducting scientific research that enhances the health sector in the community, through supporting education, scientific research, and continued professional development in medicine and health sciences; and
- To achieve a leading position and excellence in medicine and health sciences at the local, regional, and international levels.

4. MBRU Statement of Licensure and Accreditation

MBRU, located in the Emirate of Dubai, is officially licensed to award degrees and qualifications in higher education by the Ministry of Education of the United Arab Emirates from 15 December 2014 to 14 December 2019.

5. MBRU College of Medicine Goals and Outcomes

Goal 1 and Outcomes

MBRU College of Medicine will graduate highly skilled and competent medical professionals who practice compassionately and ethically, and maintain a high level of professionalism.

Outcome 1A: Graduates secure and complete competitive postgraduate training.

Outcome 1B: Graduates pursue successful careers in medicine.

Goal 2 and Outcomes

MBRU College of Medicine will create an environment conducive to impactful and innovative medical research.

Outcome 2A: Faculty, students and graduates secure internal and external funding for scholarly activities.

Outcome 2B: Faculty and students disseminate research findings through peer reviewed publications and presentations in professional meetings.

Goal 3 and Outcomes

MBRU College of Medicine will actively engage with the community to preserve and promote health.

Outcome 3A: Faculty, staff and students organize and participate in health related community activities.

Outcome 3B: Engagement in community activities result in positive change in the health of the community.

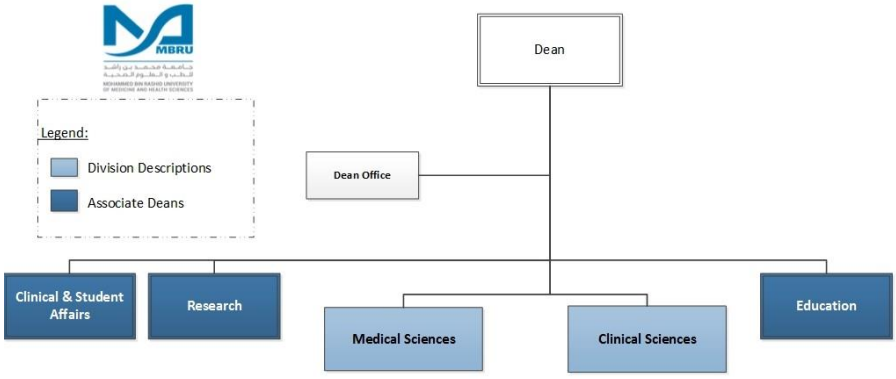
6. The Organization

6.1. MBRU Structure

The structure of the university is shown in the chart below. The University Council is the highest ruling body within the university and equates to "The Board" in the Commission for Academic Accreditation Standards.

6.2 College of Medicine Structure

The College of Medicine is one of the component Colleges of MBRU. The organization chart below provides an overview of its structure:



7. Resources and Physical Setting

The Table below provides a summary of available learning facilities at MBRU

Venue	AV/IT	Additional Comments
Basement 1 Right		
KHMSC Accident & Emergency	IP Camera	Simulation
Ground Floor Right		
Case Method Hall	Ultra-Wide Screen Video Conferencing Audio Conferencing Lecture Capture	75 – 85 Seats
Anatomy Dissection Hall	10 TV Screens 2 Projections Content Sharing with Case Method Hall	10 Tables
Ahmed Siddiqui Auditorium	Wide Screen Video Conferencing	330 Seats
First Floor Right		
Lecture Hall 1 & 2	Dual Rear Projection	40 – 50 Classroom
Lecture Hall 3	Single Front Projection	40 Classroom
Lecture Hall 4	Dual Rear Projection Video Conferencing	60 – 70 Classroom
Lecture Hall 5	Dual Rear Projection	60 – 70 Classroom
Case Method Hall	Dual Rear Projection Video Conferencing Audio Conferencing Lecture Capture	65 Seats
Small Meeting Rooms 1 & 2	TV Screen	6 – 10 Seats
Video Conference Room	Video Conferencing	6 – 8 Seats
First Floor Left		
AMML Meeting Room 1 & 2	TV Screen	8 – 10 Seats
Second Floor Right		
KHMSC Training Room	Portable Screen & Projector	40 Classroom
KHMSC Ward	IP Camera	Simulation
KHMSC ICU	IP Camera	Simulation
KHMSC OR	IP Camera	Simulation

KHMSC Debriefing Room	Portable Screen & Projector	
KHMSC Dental Simulation	Nil	Simulation
KHMSC Part Task Trainer Room	Nil	Simulation
Second Floor Left		
AMML Group Study Rooms 1-7	Interactive TV's	6 – 10 Seats
Third Floor Right		
Lecture Halls 6 -11	Provisions Only (Front Projection Screens Planned)	30 – 35 Seats in each hall
Tutorial Rooms 1-10	Provisions Only (TV's Planned)	8 Seats in each room
Clinical Consulting Rooms 1 - 12	Provisions Only (IP Cameras, TV's Planned)	Simulation
Fourth Floor Left		
Computer Lab	70 Desktops 1Front Projection Screen (Right Side)	Computer Based Teaching - Pathology, Histology, Biochemistry, Pharmacology & Molecular Biology Computer Examination Center
Multidisciplinary Lab	Nil	Wet Lab - Biochemistry, Physiology, Pharmacology & usage of wet biological specimens.
Computer Assisted Lab	2 Interactive Displays	Physiology Practicals Biochemistry Demonstrations Molecular Biology Pathology

7.1 Physical Teaching Resources and Facilities

7.1.1. Class Rooms

7.1.1.1. The Mohammed Bin Rashid Academic Medical Center is the home base for MBRU. Currently, it houses multiple large classrooms accommodating up to 100 students, all dedicated for use by College of Medicine. Most classrooms are equipped with double presentation screens and up to date audiovisual equipment. There is also electronic connectivity to the large 350-seater auditorium, with an internet port connection for each student.

7.1.1.2. In addition, 10 tutorial rooms each accommodating 8-10 students and the tutor will be added for small group learning.

7.1.1.3. The entire building has a wireless connection to the Internet. The students are expected to bring to class either an electronic tablet or a laptop.

7.1.2. Case Demonstrations

MBRU houses two state-of-the-art case method halls designed for case demonstrations. Each can accommodate 65 students. The acoustics are such that the speaker in the central part is clearly audible in all parts of the hall without the need for a microphone. The hall has connectivity to the main 350 seater auditorium.

7.1.3. Teaching Laboratories

MBRU hosts three Teaching Laboratories. Each can accommodate 50 students at a time. A 'dry' Teaching Laboratory is dedicated for projection and demonstrations in Histology, Pathology, and Microbiology. The 'wet' Teaching Laboratory is for practical sessions in subjects that involve wet preparations.

7.1.4. Computer Assisted Learning Laboratory

MBRU has a 60 station computer laboratory designed for teaching Pathology, Hematology and Anatomy through digital microscopy.

7.1.5. Anatomy Dissecting Room

MBRU has a dissecting room for teaching Anatomy and related subjects. It has 10 dissecting tables (each accommodating 8 students), a morgue for cadavers and body parts, a storage facility, student lockers, two debriefing rooms, two faculty offices, technician offices, and a case method hall for demonstrations.

7.2 Clinical Teaching Facilities

7.2.1 Simulation and Clinical Skills Training Center

7.2.1.1 The Khalaf Ahmad Al Habtoor Medical Simulation Center, located on the second floor of the academic building is a training facility where healthcare professionals will receive training to improve quality of care and teamwork in a simulated environment with no risk to patients. The Simulation Center, a 19,500 sq. ft. facility, has all the elements of a virtual hospital. It has two

fully functioning Operation Rooms; four ICU Bays - including a pediatric bay; and a ward room, three debriefing rooms, a small meeting room and a large training room on the second floor. There is a large skills training and competency testing room (e.g. intravenous cannulation, endotracheal intubation, lumber puncture). In the basement is a complete Emergency Room with facilities for imaging.

7.2.1.2 Additional consultation and meeting rooms are located on third floor of the simulation center.

7.2.2 **Affiliated Healthcare Providers and Clinical Facilities**

7.2.2.1 MBRU is located at the heart of Dubai Healthcare City which currently houses over 150 medical facilities, 4,000 physicians and three full size hospitals that are fully operational and open to patients. MBRU has already developed memoranda of understanding with key providers in DHCC and Dubai.

7.2.2.2 The memoranda of understanding underscore the desire of the parties to collaborate on matters of medical education, research and service provision. Currently, there are agreements with, or letters of support from, Dubai Health Authority, Mediclinic Middle East, the Moorfields Eye Hospital and Sulaiman Al Habib Hospital. Academic partnership and affiliation agreement are in existence with Mediclinic Middle East and Al Jalila Children's Specialty Hospital. Similar agreements are being developed with Dubai Health Authority and Ministry of Health and Prevention.

7.3 Library Resources

The Al Maktoum Medical Library is housed in the academic building. In addition to serving MBRU and its component Colleges, the library has the capacity to serve the medical community of DHCC.

The library is a modern 30,000 square feet facility. It houses advanced collection of clinical and professional development resources (both electronic and print collection). The library has 2,300 print books added to extensive databases, more than 7,000 electronic journals, and 5,000 electronic books. The databases and electronic resources are accessible by remote connection. The Library has developed an extensive network for sharing educational resources and journals with other libraries in the region.

Library opening hours are listed below:

Regular Opening Hours	
Sundays – Wednesdays	8.00 am – 9.30 pm
Thursdays	8.00 am – 5.00 pm
Saturdays	8.30 am – 4.00 pm
Fridays and Public Holidays	Closed

New students will receive an induction into using the Library and its online facilities as part of orientation, and librarians are available throughout the academic year to help students locate and use the materials and facilities they require. The regulations for use of the Library Facilities are available in the *Student Handbook*. Library services include reference service, photocopying and printing facilities, library training and orientations, and document request and delivery.

The Al Maktoum Medical Library Databases also have 18 Core Databases including Acland Anatomy, Visible Body, BMJ Clinical Summaries and Web of Science.

7.4 Educational Technology

7.4.1. e-Learning Management System (LMS): MBRU uses an online learning management platform for posting learning and teaching resources, which provides a personalized digital learning experience.

7.4.2 Registration and Enrollment: All students, Faculty, and Human Resources Management records will be on an electronic platform.

7.4.3 Examsoft platform is used for conducting electronic examinations, archiving question banks and analyzing results.

7.4.4 Pathxl software provides virtual microscopic teaching in histology, anatomic pathology and hematology.

8 Partnerships and Collaborations

MBRU has a number of collaborative agreements and partnerships with educational, research and service institutions both within and outside the UAE. Such partnerships aim at enhancing the quality of MBRU's educational programs, widening the university network and expanding the university outreach.

Queen's University Belfast

MBRU has an academic partnership with Queen's University Belfast (QUB) in the United Kingdom. QUB is the ninth oldest university in the United Kingdom and is a member of the UK's Russell Group of leading research-intensive universities.

The goal of the partnership provides quality assurance through offering advice on

strategic planning, organization and governance of the university and its Colleges, as well as infrastructure and educational resources development, development of curriculum, faculty recruitment, senior staff recruitment, student recruitment and faculty development programs. The curriculum is developed by MBRU.

Mediclinic Middle East

Mediclinic Middle East is part of Mediclinic International, one of the top ten listed private healthcare groups in the world, operating 74 hospitals and 30 clinics across four counties, including 51 hospitals in South Africa and Namibia, 17 hospitals in Switzerland (under the name Hirslanden) and 6 hospitals and 24 clinics in the UAE. Mediclinic City Hospital in Dubai Healthcare City, currently has 229 beds across a range of specialties and is located across from MBRU.

MBRU has an academic affiliation agreement with Mediclinic Middle East to advance their common passion for medical education. Under this agreement, Mediclinic Middle East will make its excellent healthcare facilities and highly trained specialist physicians available for the training of MBRU students. Mediclinic Middle East will assign prepared adjunct faculty members as supervisors for MBRU students who will be embedded in the healthcare teams and participate in healthcare delivery under supervision and with graded responsibilities according to their skills and experience. The training will be based on a jointly developed program with clearly defined learning outcomes.

Dubai Health Authority

The Dubai Health Authority is the major public sector healthcare provider in Dubai. It belongs to the Dubai Government. The healthcare system includes four hospitals and 14 Primary Healthcare Centers supported by a full range of ancillary services. Service is provided in all the core specialties and sub-specialties.

MBRU is working with DHA to develop an affiliation agreement to provide students with clinical experiences building on a Memorandum of Understanding signed between DHA and Dubai Health Care City Authority.

Al Jalila Children's Specialty Hospital

MBRU has an academic affiliation agreement with Al Jalila Children's Specialty Hospital to advance their common passion for medical education. Under this agreement, Al Jalila Children's will make its excellent healthcare facilities and highly trained specialist physicians available for the training of MBRU students.

Al Jalila Children's is the first dedicated children's hospital in the United Arab Emirates. The state of the art medical facility was created under the directives of

His Highness Sheikh Mohammed Bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE, and Ruler of Dubai, to affirm his belief that all children should have an equal opportunity for success in life, and the treatment of children suffering from illness or disease should not be subject to geographical chance. The vision of His Highness is to have Al Jalila Children's one among the top 10 paediatric hospitals in the world. Inaugurated on November 1, 2016, Al Jalila Children's is an ultramodern hospital that aims to be the driving force behind the tertiary and quaternary care facility in the region. The hospital's highly qualified medical and clinical experts are setting new standards for healthcare excellence on a local and regional level. Al Jalila Children's comprises 200 beds in a child and family friendly environment.

9 Admissions Policy

MBRU's admissions policy and procedures are detailed in the *Student Handbook section 2.1*.

10 Financial Policies

The Department of Student Services and Registration in collaboration with the Finance Department supports students with financial documentation (e.g. statement of fees) and can advise on issues relating to tuition fees, scholarships, and financial aid.

10.1 Tuition Fees

10.1.1 The university will annually publish the tuition and fees schedule. Any changes in tuition and fees is approved by the University Council and communicated to students at least six months before taking effect. Below is the tuition and fees schedule for Academic Year 2018-2019:

2017-2018	Amount	Schedule
Seat Holding Fee (nonrefundable counted towards 1st installment)	10,000 AED	At time of acceptance of offer
First tuition and fees installment	70,000 AED	August 12, 2018
Second tuition and fees installment	80,000 AED	January 13, 2019
Total Tuition Fees	**160,000 AED**	

10.1.1.1 The yearly tuition covers all educational expenses, recreational, library, insurance, computer and lab activities. It does not cover the cost of clinical electives taken inside or outside the country.

10.1.1.2 Tuition charges are due and payable in full at the specified deadlines of

each academic term as per the Schedule of Tuition and Fees. The final responsibility for payment of tuition and fees charged rests with the individual student and their sponsors.

10.1.1.3 Students facing financial hardship could ask the Department of Student Services and Registration to reschedule payments on an exceptional basis.

10.1.1.4 Students with external scholarship for tuition charges must provide written confirmation of the scholarship as specified in the Schedule of Tuition and Fees before the payment deadline. Sponsored students who do not submit the required confirmation of sponsorship and continue in enrollment will assume personal responsibility for all tuition charges and applicable fees.

10.1.1.5 Students who fail to pay all applicable tuition charges by the established payment deadline(s) or who are late in paying their fees may be subject to denial of academic services or cancellation of current and/or future registration.

10.1.1.6 Unless otherwise specified, fees are due and payable within 15 days of the invoice date.

10.1.1.7 Payments of tuition and fees may be made by means specified in the published Schedule of Tuition and Fees, and notification of tuition and fee charges by the Finance Department via the student's university email address constitutes official notice of financial liability.

All additional policies on tuition fee refunds are detailed in the *Student Handbook.*

11 Student Services and Registration

The Department of Student Services and Registration at MBRU provides assistance to students with regards to: orientation, advising and registration, counselling, career planning, accommodation, sports and recreational activities, student life, dining facilities, health services and emergency services. Detailed information on each service is provided in the *Student Handbook* (Section 1.).

12 Students Code of Conduct

The *Student Handbook* sets out details on what students can expect from MBRU and the College of Medicine during their time of study in the University, and what their responsibilities are. Details on General Conduct, Dress Code policy, co-education conduct and conduct in the classroom are also presented in the Student Handbook (section 2).

13 Student Grievance Policy

The Student Grievance Policy and appeal mechanisms are provided in the

Student Handbook (section 4).

14 Academic Integrity

The Student Disciplinary and Appeals Procedures relating to both academic and non-academic offenses are available within the *Student Handbook* (Section 3).

15 Definition of Credit Hour

The credit system conventionally uses hours (contact and credit) per week to measure student load. This is implemented in the basic science years (years 1-3). On the other hand; clinical rotations (years 4-6) are weighted by the number of weeks in a rotation.

One "credit hour" is equal to one "contact hour" (60 minutes) of Lecture time, 2 contact hours (120 minutes) of a Practical or a Tutorial, or three-four contact hours (180-240 minutes) of Field Work or clinical work in a 15-17 week semester. A team based learning (TBL) session is considered to be a tutorial.

For example, in a 15-week semester, a course of three credits where there are two lectures and one tutorial every week will have; 30 contact hours of lecture time and 30 contact hours of tutorial time (i.e. 60 contact hours per semester). A similar three credit hour course but with three lectures per week will have 45 contact hours per semester.

16 Definitions of Academic Terminology

The MBBS program is a College degree in Medicine which requires the successful completion of six years of study. Each year is comprised of approximately 40 weeks of study divided over two semesters. There are no separate areas of concentration under the MBBS program at MBRU.

17 MBBS Program Learning Outcomes and Completion Requirements

The goal of the MBBS program is to graduate competent and safe physicians well-prepared with the knowledge, skills and behaviors to serve individuals and communities and to pursue postgraduate training programs.

17.1 MBBS Learning Outcomes

The program learning outcomes of the MBBS program at MBRU are derived from the program goal. Each outcome has sub-outcomes which address the various orders of thought according to Bloom's taxonomy. Furthermore, each outcome is aligned to Level 7 of the *QF Emirates*. At the conclusion of the MBBS program, the

learner will be able to:

1. Practice in a safe and competent manner

1A: Describe normal human development, structure, function and behavior

1B: Explain mechanisms of abnormal development, structure, function and behavior underlying human disease

1C: Apply principles of normal and abnormal development, structure, function and behavior in the recognition of disease conditions

1D: Apply principles of normal and abnormal development, structure, function and behavior in the prevention and treatment of disease

1E: Comprehend and apply principles of safe patient care and clinical governance

2. Observe ethical and professional standards

2A: Describe the principles of biomedical ethics

2B: Apply the principles of biomedical ethics in patient-centered care

2C: Demonstrate professional behavior towards self, patients, colleagues, and society

3. Practice evidence-based medicine and engage in scholarship and generation of new knowledge

3A: Comprehend the principles of research methods and evidence-based medicine

3B: Identify and critique relevant research findings and medical literature

3C: Formulate a hypothesis and design a research proposal

3D: Synthesize and apply key research findings in the care of patients and society

4. Communicate clearly and effectively

4A: Comprehend the principles of effective communication with patients and colleagues

4B: Demonstrate appropriate oral, written and electronic communication skills with various groups and within different clinical and cultural contexts

4C: Demonstrate the ability to manage and resolve conflicts

5. Advocate for health promotion of individuals and communities

5A: Comprehend principles of epidemiology and social determinants of health and disease

5B: Identify opportunities for health advocacy in society

5C: Identify barriers to health care access and their impact at the patient and population level

5D: Apply principles of health advocacy in the care of patients and communities

6. Distinguish various healthcare systems and their management

6A: Describe principles of healthcare system structure and function

6B: Describe the evolution and present trends in healthcare management
6C: Evaluate and compare different healthcare systems

7. Educate and share knowledge and skills
7A: Comprehend principles of adult teaching and learning
7B: Identify opportunities for knowledge-sharing and teaching
7C: Demonstrate effective teaching and knowledge transfer to patients, peers, and society

8. Participate effectively in multidisciplinary teams
8A: Comprehend principles of effective team work
8B: Demonstrate the ability to work effectively and respectfully in a team
8C: Critically and honestly evaluate colleagues and self

9. Demonstrate commitment to life-long, self-directed learning and performance improvement
9A: Recognize gaps in one's own knowledge and skills
9B: Identify and engage with opportunities for self-directed learning
9C: Apply new evidence to improve clinical practice and services

17.2 Program Completion Requirements

Graduation with an MBBS degree requires the student to pass all the courses with a minimum cumulative GPA of 2.5.

18 General Education

The General Education requirements are designed to add breadth to the student intellectual experience. They ensure that when students complete their MBBS program, they can demonstrate competence in oral and written communication in English; in scientific quantitative and critical reasoning; and in using technology to access, evaluate, organize and communicate information. The following specific courses have been designed to address those competencies:

1. ITHS ~~1126~~1116: Innovation in Health Sciences
2. LANG 1121: English for Health Sciences
3. ETHC 1118: Principles of Bioethics
4. MEDC 1115: History of Medicine
5. MEDC ~~3634~~3624: Mind and Behavior*

* There is a component that deals with psychology as part of a broader mind and behavior content in this course.

19 Structure and Goals of the MBBS Program

This section sets out an overview of the structure and goals of the MBBS program.

19.1 MBBS Curriculum

The development of the curriculum is underpinned by the following Principles. The curriculum should be:

- aligned with the institutional mission;
- relevant to society;
- outcomes-based;
- inclusive of core components that encompasses the knowledge, skills and aspects of competency that the graduate must master to be competent and safe in the local and global environment;
- making provision for all students to engage with the community and extend their education in areas of interest beyond the core;
- benchmarked against international standards;
- laying the foundation for ongoing development of the individual throughout his or her career by:
    a. fostering an "adult learner" attitude that values independent study, reflection on performance, self-directed learning and professional development
    b. promoting critical thinking
    c. emphasizing understanding of mechanisms and pathophysiology
    d. emphasizing experiential, simulation and active case-based and problem-based learning
    e. offering a blend of biomedical, behavioral and clinical sciences through clinically oriented education;
    f. offering early purposeful interaction with patients and healthcare systems;

g. emphasizing both individual and population health;

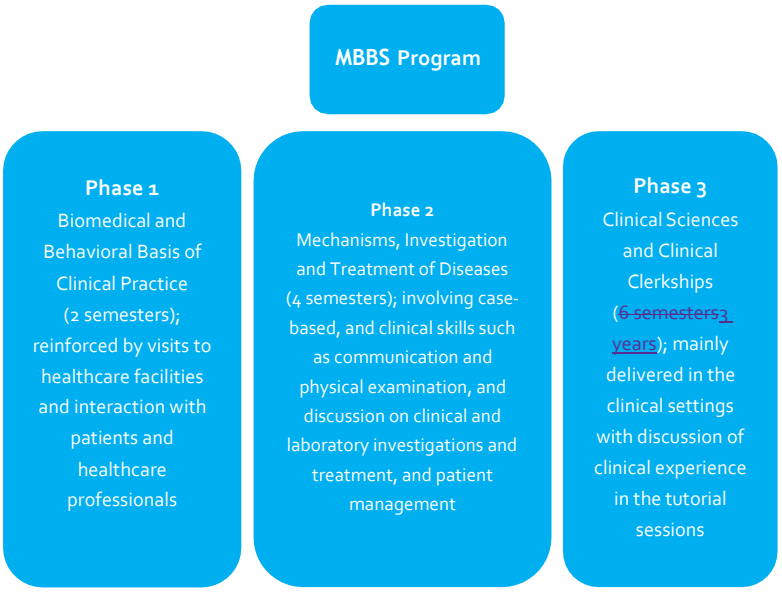
h. emphasizing the concepts of maintenance of wellness, disease prevention, disease detection and treatment at both individual and population levels;

i. focusing on academic achievement and scientific enquiry;

j. aligning assessment with learning outcomes.

19.2 Curriculum Structure

The program takes place over a six-year period. There is a strong emphasis within the curriculum structure on acquisition of clinical skills and competence, and simulation based training will be adopted to facilitate this. A key theme is the fostering of self-directed professional development. You will be guided in evaluating and managing your own professional development via the use of professional development portfolios. The MBBS program is divided into three Phases, each of which has several components and some periods assigned for "selectives" and "electives":



The Core Curriculum covers the minimum essential knowledge and skills that a newly graduated doctor must have in order to safely and competently assume

post-graduate training. It must be covered during the various periods of instruction and will be assessed. This, of course, does not preclude the introduction of additional materials that may enrich learning.

19.2.1. Duration of Program

- The duration of study for medical degree in the MBBS Program will be six academic years;
- An academic year consists of at least 30 weeks divided into two semesters;
- Each semester is 15 weeks long.

19.2.2. Optional Summer Study

During the 8 weeks of the summer holiday period, students may be offered optional courses or research experiences, or be required to take remediation courses.

19.2.3. General Education

A General Education curriculum, designed to equip the student with generic skills and provide a broad foundation for specialized medical training, is offered in the first semester and then interspersed within the program, according to the need in each Phase of study (Refer to Section 20 for list of courses).

19.3 Support for Postgraduate Training

After successful completion of the 6-year program, students will be awarded the Bachelor of Medicine and Bachelor of Surgery (MBBS) degree. Most countries, including the UAE, will require the medical graduates to undertake one year of structured internship with a healthcare provider approved by the relevant local health authorities. After successful completion of one year of internship, graduates then can apply for full license and will typically continue with further post-graduate training before independent practice. Further details on internship policy will become available in the future.

Postgraduate training positions are limited and competitive. MBRU will provide all possible support to assist graduates, national and international, with securing the necessary postgraduate training positions to progress their careers, and will leverage its relationships with programs in the UAE to help facilitate this.

MBRU will also support students in preparing for their post-graduate training through early career planning, and organizing seminars and career events, to make sure that MBRU graduates are competitive for postgraduate training.

20. Sequencing of Courses within the MBBS Program

20.1 DEGREE PLAN – CLASS OF 2022

Phase 1

Phase 1			
Code	**Course**	**Credits**	**Pre-requisite**
	SEMESTER 1		
LANG1121	English for Health Sciences	2	Nil
MEDC1132	Enzymes and Metabolism	3	Nil
MEDC1153	Foundation Concepts in Medical Sciences	5	Nil
MEDC1124	Fundamentals of Epidemiology & Biostatistics - Part 1	1	Nil
MEDC1115	History of Medicine	1	Nil
ITHS 1126	Innovation and Technology in Health Sciences	2	Nil
MEDC1127	Introduction to the Practice of Medicine - Part 1	1	Nil
ETHC 1118	Medical Ethics in Islam – Principles and Practice	1	Nil
TOTAL		**16**	Nil
	SEMESTER 2		
MEDC1251	Abdomen, Pelvis and Perineum: Structure and Function	5	
MEDC1124	Fundamentals of Epidemiology & Biostatistics 2	1	Nil
MEDC1232	Genetics and Molecular Biology	3	Nil
MEDC1127	Introduction to the Practice of Medicine -Part 2	1	Nil
MEDC1254	Limbs and spine: Structure and Function	5	Nil
MEDC1233	Thorax: Structure and Function	3	Nil
TOTAL		**18**	

Phase 2: Mechanisms of Diseases (Years 2 and 3)

Phase 2			
Code	**Course**	**Credits**	**Pre-requisite**
	SEMESTER 3		
MEDC2341	General Microbiology	4	Phase1
MEDC2342	General Pathology	4	Phase1
MEDC2313	Foundations of Clinical Medicine 1	1	Phase1
MEDC2443	Hematopoietic and Immune System	4	Phase1
MEDC2325	Research Methods 1	2	Phase1
TOTAL		**15**	
	SEMESTER 4		
MEDC2451	Cardiovascular System	5	Phase1
MEDC2412	Foundations of Clinical Medicine 2	1	Phase1
MEDC2334	Principles of Pharmacology and Therapeutics	3	Phase1
MEDC2444	Renal and Urinary System	4	Phase1
MEDC2425	Research Methods 2	2	Phase1
MEDC2436	Respiratory System	3	Phase1
TOTAL		**18**	

	SEMESTER 5		
MEDC3551	Digestion and Nutrition	5	Phase1, Phase 2 (Sem1&2)
MEDC3512	Foundations of Clinical Medicine 3	1	"
MEDC3543	Human Reproduction	4	
MEDC3524	Research Project	2	"
MEDC3525	Skin and Subcutaneous Tissue	2	"
TOTAL		**14**	
	SEMESTER 6		
MEDC3631	Endocrine System	3	Phase1, Phase 2 (Sem1&2)
MEDC3622	Foundations of Clinical Medicine 4	2	"
MEDC1223	Head and Neck	2	"
MEDC3633	Integrated Medicine	3	"
MEDC3624	Mind and Behavior	2	"
MEDC3635	Musculoskeletal System	3	"
MEDC3636	Neurosciences	3	"
TOTAL		**18**	

Phase 3 Clinical Sciences (120 Weeks) (Years 4-6)

Phase 3		
Year 4	Family Medicine (including Dermatology), Behavioral Medicine, Internal Medicine, General Surgery and Pediatrics~~, Healthcare management.~~.	40 weeks
	Breaks and Exams	12 weeks
Year 5	Surgery, Subspecialties (Ophthalmology, ~~Radiology, Anaethesia,~~ ENT~~),~~, Emergency Medicine, Orthopaedics~~ and Rehabilitation,~~), Medicine (including Geriatrics), Pediatrics (including Neonatology), ObGyn	~~32~~24 weeks
	Electives	8 weeks
	Breaks and exams	~~12~~10 weeks
Year 6	Medicine, Surgery, Pediatrics, Emergency Medicine, Elective.	48 weeks
	Breaks	4 weeks

20.2 DEGREE PLAN – CLASS OF 2023

Phase 1

Code	Course	Credits	Pre-requisite
	SEMESTER 1		
LANG1121	English for Health Sciences	2	Nil
MEDC1132	Enzymes and Metabolism	3	Nil
MEDC1153	Foundation Concepts in Medical Sciences	5	Nil
MEDC1114	Fundamentals of Epidemiology & Biostatistics 1	1	Nil
MEDC1115	History of Medicine	1	Nil
ITHS 1126	Innovation in Health Sciences	2	Nil
MEDC1117	Introduction to the Practice of Medicine 1	1	Nil
ETHC 1118	Principles of Bioethics	1	Nil
TOTAL		**16**	Nil
	SEMESTER 2		
MEDC1251	Abdomen, Pelvis and Perineum: Structure and Function	5	
MEDC1212	Fundamentals of Epidemiology & Biostatistics 2	1	Nil
MEDC1223	Head and Neck	2	Nil
MEDC1214	Introduction to the Practice of Medicine 2	1	Nil
MEDC1254	Limbs and spine: Structure and Function	5	Nil
MEDC1233	Thorax: Structure and Function	3	Nil
TOTAL		**17**	

Phase 2: Mechanisms of Diseases (Years 2 and 3)

Phase 2

Code	Course	Credits	Pre-requisite
	SEMESTER 3		
MEDC2341	General Microbiology	4	Phase1
MEDC2342	General Pathology	4	Phase1
MEDC2313	Foundations of Clinical Medicine 1	1	Phase1
MEDC2344	Hematopoietic and Immune system	4	
MEDC2325	Research Methods 1	2	Phase1
MEDC2336	Genetics and Molecular Biology	3	Phase1
TOTAL		**18**	
	SEMESTER 4		
MEDC2441	Cardiovascular system	4	Phase1
MEDC2422	Foundations of Clinical Medicine 2	2	Phase1
MEDC2433	Principles of Pharmacology and Therapeutics	3	Phase1
MEDC2424	Research Methods 2	2	Phase1
MEDC2435	Respiratory system	3	Phase1
MEDC2426	Skin and Subcutaneous Tissue	2	Phase1
TOTAL		**16**	

	SEMESTER 5		
MEDC3541	Digestion and Nutrition	4	Phase1, Phase 2 (Sem1&2)
MEDC3532	Endocrine system	3	
MEDC3523	Foundations of Clinical Medicine 3	2	"
MEDC3534	Renal System	3	
MEDC3525	Research Project	2	"
TOTAL		**14**	
	SEMESTER 6		
MEDC3621	Foundation of Clinical Medicine 4	2	Phase1, Phase 2 (Sem1&2)
MEDC3632	Human Reproduction	3	"
MEDC3633	Integrated Medicine	3	"
MEDC3624	Mind and Behavior	2	"
MEDC3635	Musculoskeletal System	3	"
MEDC3636	Neurosciences	3	"
TOTAL		**16**	

Phase 3 Clinical Sciences (120 Weeks) (Years 4-6)

Phase 3		
Year 4	Family Medicine (including Dermatology), Behavioral Medicine, Internal Medicine, General Surgery and Pediatrics~~, Healthcare management.~~	40 weeks
	Breaks and Exams	12 weeks
Year 5	Surgery, Subspecialties (Ophthalmology, ~~Radiology, Anaethesia,~~ ENT~~)~~ ~~,~~Emergency Medicine, Orthopaedics~~ and Rehabilitation,~~), Medicine (including Geriatrics) , Pediatrics (including Neonatology), ObGyn	~~32~~24 weeks
	Electives	8 weeks
	Breaks and exams	~~12~~10 weeks
Year 6	Medicine, Surgery, Pediatrics, Emergency Medicine, Elective.	48 weeks
	Breaks	4 weeks

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20.3 DEGREE PLAN – CLASS OF 2024

Phase 1

Code	Course	Credits	Pre-requisite
	SEMESTER 1		
LANG1121	English for Health Sciences	2	Nil
MEDC1132	Enzymes and Metabolism	3	Nil
MEDC1153	Foundation Concepts in Medical Sciences	5	Nil
MEDC1114	Fundamentals of Epidemiology & Biostatistics 1	1	Nil
MEDC1115	History of Medicine	1	Nil
ITHS 1116	Innovation in Health Sciences	1	Nil
MEDC1117	Introduction to the Practice of Medicine 1	1	Nil
ETHC 1118	Principles of Bioethics	1	Nil
TOTAL		**15**	Nil
	SEMESTER 2		
MEDC1241	Abdomen, Pelvis and Perineum: Structure and Function	4	
MEDC1212	Fundamentals of Epidemiology & Biostatistics 2	1	Nil
MEDC1223	Head and Neck: Structure and Function	2	Nil
MEDC1214	Introduction to the Practice of Medicine 2	1	Nil
MEDC1244	Limbs and Spine: Structure and Function	4	Nil
MEDC1233	Thorax: Structure and Function	3	Nil
TOTAL		**15**	

Phase 2

Code	Course	Credits	Pre-requisite
	SEMESTER 3		
MEDC2331	General Microbiology	3	Phase1
MEDC2332	Genetics and Molecular Biology	3	Phase1
MEDC2313	Foundations of Clinical Medicine 1	1	Phase1
MEDC2334	Hematopoietic and Immune system	3	
MEDC2325	Research Methods 1	2	Phase1
MEDC2336	Pathologic Basis of Disease	3	Phase1
TOTAL		**15**	
	SEMESTER 4		
MEDC2441	Cardiovascular system	4	Phase1
MEDC2422	Foundations of Clinical Medicine 2	2	Phase1
MEDC2433	Principles of Pharmacology and Therapeutics	3	Phase1
MEDC2424	Research Methods 2	2	Phase1
MEDC2435	Respiratory system	3	Phase1
MEDC2426	Skin and Subcutaneous Tissue	2	Phase1
TOTAL		**16**	

	SEMESTER 5		
MEDC3541	Digestion and Nutrition	4	Phase1, Phase 2 (Sem1&2)
MEDC3532	Endocrine system	3	
MEDC3523	Foundations of Clinical Medicine 3	2	"
MEDC3534	Renal System	3	
MEDC3525	Research Project	2	"
TOTAL		**14**	
	SEMESTER 6		
MEDC3621	Foundation of Clinical Medicine 4	2	Phase1, Phase 2 (Sem1&2)
MEDC3632	Human Reproduction	3	"
MEDC3633	Integrated Medicine	3	"
MEDC3624	Mind and Behavior	2	"
MEDC3635	Musculoskeletal System	3	"
MEDC3636	Neurosciences	3	"
TOTAL		**16**	

Phase 3 Clinical Sciences (120 Weeks) (Years 4-6)

Phase 3		
Year 4	Family Medicine (including Dermatology), Behavioral Medicine, Internal Medicine, General Surgery and Pediatrics~~, Healthcare management.~~	40 weeks
	Breaks and Exams	12 weeks
Year 5	Surgery, Subspecialties (Ophthalmology, ~~Radiology, Anaethesia,~~ ENT~~)~~ ,Emergency Medicine, Orthopaedics~~ and Rehabilitation,~~), Medicine (including Geriatrics) , Pediatrics (including Neonatology), ObGyn	~~32~~24 weeks
	Electives	8 weeks
	Breaks and exams	~~12~~10 weeks
Year 6	Medicine, Surgery, Pediatrics, Emergency Medicine, Elective.	48 weeks
	Breaks	4 weeks

20.4 DEGREE PLAN – CLASS OF 2025

Phase 1

Code	Course	Credits	Pre-requisite
	SEMESTER 1		
LANG1121	English for Health Sciences	2	Nil
MEDC1132	Enzymes and Metabolism	3	Nil
MEDC1153	Foundation Concepts in Medical Sciences	5	Nil
MEDC1114	Fundamentals of Epidemiology & Biostatistics 1	1	Nil
MEDC1115	History of Medicine	1	Nil
ITHS 1116	Innovation in Health Sciences	1	Nil
MEDC1117	Introduction to the Practice of Medicine 1	1	Nil
ETHC 1118	Principles of Bioethics	1	Nil
TOTAL		**15**	Nil
	SEMESTER 2		
MEDC1241	Abdomen, Pelvis and Perineum: Structure and Function	4	
MEDC1212	Fundamentals of Epidemiology & Biostatistics 2	1	Nil
MEDC1223	Head and Neck: Structure and Function	2	Nil
MEDC1214	Introduction to the Practice of Medicine 2	1	Nil
MEDC1244	Limbs and Spine: Structure and Function	4	Nil
MEDC1233	Thorax: Structure and Function	3	Nil
TOTAL		**15**	

Phase 2

Code	Course	Credits	Pre-requisite
	SEMESTER 3		
MEDC2331	General Microbiology	3	Phase1
MEDC2332	Genetics and Molecular Biology	3	Phase1
MEDC2313	Foundations of Clinical Medicine 1	1	Phase1
MEDC2334	Hematopoietic and Immune system	3	
MEDC2325	Research Methods 1	2	Phase1
MEDC2336	Pathologic Basis of Disease	3	Phase1
TOTAL		**15**	
	SEMESTER 4		
MEDC2441	Cardiovascular system	4	Phase1
MEDC2422	Foundations of Clinical Medicine 2	2	Phase1
MEDC2433	Principles of Pharmacology and Therapeutics	3	Phase1
MEDC2424	Research Methods 2	2	Phase1
MEDC2435	Respiratory system	3	Phase1
MEDC2426	Skin and Subcutaneous Tissue	2	Phase1
TOTAL		**16**	

	SEMESTER 5		
MEDC3541	Digestion and Nutrition	4	Phase1, Phase 2 (Sem1&2)
MEDC3532	Endocrine system	3	
MEDC3523	Foundations of Clinical Medicine 3	2	"
MEDC3534	Renal System	3	
MEDC3525	Research Project	2	"
TOTAL		**14**	
	SEMESTER 6		
MEDC3621	Foundation of Clinical Medicine 4	2	Phase1, Phase 2 (Sem1&2)
MEDC3632	Human Reproduction	3	"
MEDC3633	Integrated Medicine	3	"
MEDC3624	Mind and Behavior	2	"
MEDC3635	Musculoskeletal System	3	"
MEDC3636	Neurosciences	3	"
TOTAL		**16**	

Phase 3 Clinical Sciences (120 Weeks) (Years 4-6)

Phase 3		
Year 4	Family Medicine (including Dermatology), Behavioral Medicine, Internal Medicine, General Surgery and Pediatrics.	40 weeks
	Breaks and Exams	12 weeks
Year 5	Surgery, Subspecialties (Ophthalmology, ENT, Emergency Medicine, Orthopaedics), Medicine (including Geriatrics) , Pediatrics (including Neonatology), ObGyn	24 weeks
	Electives	8 weeks
	Breaks and exams	10 weeks
Year 6	Medicine, Surgery, Pediatrics, Emergency Medicine, Elective.	48 weeks
	Breaks	4 weeks

21. Course Descriptions

This section details course descriptions for Phase 1 of the MBBS program. Please refer to the corresponding course booklets for more details about the courses. None of the courses listed below has a prerequisite, except for courses that are divided into two parts, where successful completion of part one is a prerequisite for part two.

21.1 Course Descriptions – Phase 1

Innovation in Health Sciences
In the current global climate, technology plays a major role in everyday life, particularly education and healthcare. This course introduces how technology is utilized in acquisition, analysis and protection of health information necessary for improving quality and efficiency of healthcare. The course also provides an overview of three key areas that influence current healthcare delivery; using technology and electronic resources in accessing information from medical literature; 'design thinking' as a problem-solving approach used to stimulate innovation; and the role of 'social media'.

English for Health Sciences
This course aims to provide students with skills in written and oral communication required for the study of medical sciences. Acquiring a range of medical and anatomical terminology forms the main contents of this course. Students will also be taught how to summarize and paraphrase information from a piece of written text. There will be in-class activities that involve teamwork, oral presentation and role-play of doctor-patient communication.

Principles of Bioethics
This course will enable the students to develop their understanding of the concepts of Biomedical Ethics and Professional Behavior with an introduction to the Islamic way of life. They will learn how this impacts on the application of general medical ethics in a specific cultural context. With this understanding, they will appreciate the multi-cultural nature of the patient population and be aware of the need to be an advocate for different segments of the population.

History of Medicine
This course will introduce students to the historical development of medicine and health related sciences. They will gain an overview of how new ideas have affected the approach to medical care, as well as the contributions made by specific scientists, physicians and surgeons. Although the focus will be on Western medical practice, students will also be introduced to the historical development of medicine in other regions and traditions.

Enzymes and Metabolism
This course introduces several basic biochemical concepts and examines fuel metabolism and its regulation, i.e. what is the energy-currency of our cells, how is it produced from different metabolic fuels, the way energy sources are catabolized and stored in the body and how abnormalities can arise in these pathways.

Foundation Concepts in Medical Sciences
This course covers a range of essential that are crucial to understanding the structural and functional organization of the normal human body. These concepts have wide application across all body systems, and through the major disciplines of Anatomy, Biochemistry, Physiology, Immunology, Hematology, Pathology and Pharmacology. A firm understanding of these concepts at this foundational stage will allow students to appreciate how disturbances to normal structures and functions result from or lead to disease processes, as will be explored throughout the rest of the medical program. This course institutes the scientific basis to medicine, encouraging students to develop their analytical and metacognitive skills, their capacity for critical appraisal of scientific information and an appreciation of the importance of life-long and self-learning, as well as in developing management skills and an ability to work as part of a team.

Introduction to the Practice of Medicine 1 & 2
This course will introduce the students to the environment in which they are being prepared to practice and the ethical principles guiding medical practice.

Fundamentals of Epidemiology and Biostatistics 1 & 2
This course is a first in a series that will be given through-out Phases 1 and 2 This course provides the background for understanding, epidemiology and biostatistics to students who have no previous knowledge. Students will be introduced to the basic principles and methods as applied to public health problems. Students will learn to recognize the role of quantitative methods in understanding clinical questions, especially in decision-making. This course will be delivered such that the emphasis will be to acquire a comprehensive understanding of the general concepts and uses of epidemiology and biostatistics as opposed to the underlying mathematical developments.

Limbs and Spine: Structure and Function
This course is about the structure of limbs and spine of the human body in relation to their function. The course will also introduce the concept of "living anatomy" as seen on conventional medical imaging and on living human body. There will be a focus on the normal mechanisms involved in locomotion and gait. Students will be able to develop an attitude of teamwork and self-directed learning through their engagement with the teaching methodology in the course.

Thorax: Structure and Function
The Thorax: Structure and Function course provides students with functional knowledge of the structure of the thorax region that will enable further understanding of organ-system courses in Phase 2. The course will also introduce the concept of "living anatomy of the thorax" as seen on conventional medical imaging and on living human body. There will be a focus on some normal mechanisms involved in cardiovascular and respiratory functions as well.
In addition, students will be able to develop an attitude of teamwork and self-directed learning through their engagement with the teaching methodology in the course.

Abdomen, Pelvis and Perineum: Structure and Function
This course deals with the structure of abdomen, pelvis and perineum of the human body in relation to the function of organs located in those regions. The course also introduces students to the concept of "living anatomy" as related to visualizing structure of the abdomen on conventional medical imaging and on the living. There will be a focus on the normal mechanisms involved in food digestion and formation of urine. Students will be able to develop an attitude of teamwork and self-directed

learning through their engagement with the teaching methodology in the course.

Head and Neck: Structure and Function

This course provides students with functional knowledge of the structure of Head and Neck region that will enable further understanding of organ-system courses in Phase 2. The course will also introduce the concept of "living anatomy of the Head and Neck" as visualized on conventional medical imaging and on the living human body.

At the end of the course, students will be able to describe the major features of the skull, the main structures present in the neck, face, temporal and infratemporal regions. They will identify the main anatomical features of the face, nose, oral cavity and tongue, pharynx, soft palate, and larynx. They should explain the basis of cranial nerve testing. They should explain the anatomical basis of upper airway obstruction, cervical swellings, facial nerve palsy, epistaxis, and dysphagia. In addition, students will be able to develop an attitude of teamwork and self-directed learning through their engagement with the teaching methodology in the course.

21.23. Course Descriptions – Phase 2

General Microbiology

In this course students will be introduced to the diversity of microorganisms, including bacteria, protozoa, helminths, fungi, viruses and prions. They will get an overview of the structure, genetics, classification, metabolism, life cycle, identification, isolation & cultivation methods of the major groups of microorganisms focusing on those pathogenic for humans. In addition, the approaches for prevention and control of infectious diseases will be addressed. Using a diversity of teaching approaches including lectures, tutorials, laboratory practical sessions and simulation, student will be equipped with the basic principles of microbiology. It is expected that students will be able to critically evaluate knowledge about the nature of microbes of medical importance and how these characteristics relate to their pathogenic potential and onset of infectious diseases. In addition, students will be able to develop an attitude of teamwork and self-directed learning through their engagement with the teaching methodologies in the course.

Pathologic Basis of Disease (formerly General Pathology)

This course defines Pathology as a discipline. It will outline multiple disease aetiologies that underlie fundamental pathobiologic processes (pathogenesis) and link these with alterations in structure and function (morphology and pathophysiology). Through clinical case illustrations these will be integrated with clinical presentations and outcomes (clinico-pathological correlation). Thus, it will provide the transition from the study of normal anatomy, physiology and biochemistry in Phase 1 to the specific disease entities of different body systems in Phase 2 semesters 3 to 6. The case-based teaching will provide early orientation to clinical sciences based on which Phase 3 clinical knowledge will evolve.

The course covers cellular changes due to multiple disease aetiologies, adaptations to cell injury and disease and organ-specific change in structure and function. Alterations in haemodynamic balance resulting in oedema, thrombosis, embolism and shock impacting multiple organs will be addressed. General aspects of neoplasia will include classification, terminology, predisposition, carcinogenesis, molecular basis and clinical manifestations. Tissue pathology related to hereditary diseases, infancy and childhood, autoimmunity, nutrition and environment will be highlighted. The course lays the ground for integrated teaching of organ-specific pathology in Semesters 4 to 6.

Course delivery is through lectures with a strong clinical context. Tutorials will be an opportunity for participative self-directed learning, identification of knowledge gaps and team-work. Practicals, using digital pathology, will provide skills of observation and recognition of diseased organs and tissues in a clinical scenario. Simulation will be an opportunity to assimilate the diagnostic role of Pathology in the clinical context. Seminars will provide an opportunity for creativity, analytical thinking, communication, skill development in information technology and for team collaboration. All aspects of learning will have an assessment component for the domains of knowledge, skills and competency.

Foundations of Clinical Medicine 1
The expected outcomes of this course are to enable students to take and record a patient history using a patient centered systematic approach within the context of present complaint, past, family and social history. They should also be able to record an accurate medication history, perform a structured and relevant general physical examination and clearly record and subsequently present findings. The concepts introduced in this course will be re-visited and developed further in subsequent courses.

Principles of Pharmacology and Therapeutics
This course will build on the introductory concepts of pharmacology introduced in Phase 1. It is intended to aid students in understanding the basic principles of drug action. Using a combination of didactic teaching, self-directed learning and team-based learning, the students will be guided through a journey of where and how drugs work in the body (primary sites of action e.g. receptors, enzymes), the consequences of such interactions (the actions and effects of drugs on the body or 'pharmacodynamics'), how the body handles drugs (the factors that determine drug concentration changes with time following dosing or 'pharmacokinetics'), and why drugs affect people differently (pharmacogenomics). A variety of physiological models for the pharmacological action of drugs will be used to consolidate the basic principles of pharmacology.

Research Methods 1
This is the first course in a series of three courses on research methods. This course is sequential to the two previous courses given in Year 1, MEDC1114 and MEDC1212 (Fundamentals of Epidemiology and Biostatics 1 and 2), this means that the syllabus of this course builds upon the knowledge and skills obtained in Semesters 1 and 2. It will continue the scientific journey with an emphasis on analytical skills and critical thinking. The overall aim of this course is to deliver the required knowledge and skills to prepare the students for their research project. In-depth study research methods and biostatistics concepts for the analysis of categorical and continuous data relevant to the interpretation of research findings will be emphasized. The focus is on understanding when a specific statistical test is used in medical research and knowledge on interpreting the medical findings, rather than on the computational aspects. Topics include selecting appropriate measures of association, outcome measures, and quantitative analysis. By the end of this course, the student will be able to differentiate between the different research designs and list their strengths and limitations. Specifically, students will be exposed to the foundations of conducting a scientific research. In addition, each student will be able to start thinking of a potential research project that they will be able to pursue during the following two semesters.

Genetics and Molecular Biology
This course will explore aspects of molecular biology and genetics in medicine. The impact of this incessantly evolving field, in health and disease will be highlighted. Further, current understandings and new concepts relating to diagnosis, prognosis, prevention and treatment of genetic diseases will also be presented.

Cardiovascular System
Cardiovascular disease is the primary cause of human mortality and morbidity. This course builds on the introductory coverage of normal structure and function in Phase 1 and the understanding of pathological process from the "General Pathology" course to consider the disturbances to normal physiology and the specific changes in end-organ structure that ultimately lead to the pathological hallmarks of cardiovascular disease. The course deals with the study of pathophysiology of common and major diseases of the cardiovascular system, their clinical presentations, and the various approaches to treatment. The emphasis is on understanding pathophysiological mechanisms rather than on memorizing clinical details, but learning will be enhanced through integrated online tutorial and laboratory-based teaching modules that feature video interviews with patients, clinicians, caregivers and family. This will be complemented by clinical exposure to patients in hospital settings, and to observation of simulated cardiovascular disorders in the Simulation Centre.

Foundations of Clinical Medicine 2
Appropriate use of history and physical examination is essential to clinical practice. One of the most common tasks that a physician will perform is the patient interview. They will conduct between 100,000 and 200,000 patient interviews in their professional career (Nichols & Mirvis, 1998). From the medical history, physicians garner 60-80% of the information that is relevant for a diagnosis and the history alone can lead to the final diagnosis in 76% of cases (Roshan & Rao, 2000). It is "the most powerful and sensitive and most versatile instrument available to the physician" and is the cornerstone of clinical practice.

Hematopoietic and Immune System
This course will introduce the students to the principles and concepts of hematology and immunology which will guide them in understanding the immune response and its involvement in health and disease. The students will also be introduced to the pathophysiology of common hematological and immunological diseases through clinical correlations that focus on clinically applied hematological and immunological concepts.

Renal and Urinary System
This course deals with the study of pathophysiology of common and major diseases of the renal and urinary system, their clinical presentations, diagnostic investigations and the various approaches for treatment. The emphasis is on understanding pathophysiological mechanisms rather than on memorizing clinical details. Learning objectives in this course support understanding of the consequences of disease and their management during clinical clerkships.

Research Methods 2
This is the second course in a series of three courses on research methods, Research Methods 1 and 2 and Research Project. This means that the syllabus of this course builds upon the foundation knowledge and skills obtained in the previous course (i.e. Research Methods 1). It will continue the scientific journey with an emphasis on analytical skills and critical thinking. Students will learn the importance of

conducting research and will acquire the respective skills to assist young motivated inquisitive learners to be engaged in research. The course will start with the students submitting the Student's Research Project Form, as a fast-track request to the MBRU-Institutional Review Committee; and at the end of the course, the students will be able to develop a full-fledged research proposal and complete data collection. A specific focus during the development of the research proposal will be to enable the students to develop a detailed comprehensive research methods section. Data analysis, and final submission of the report will take place in Semester 5, during kthe Research Project course. Students are advised to continue working on their research projects during the summer break.

From a content perspective, this course further introduces students to the principles of research design and methods with a specific focus on enhancing their analytical skills. Specifically, the course will cover: Recap on the formulation of the problem statement; developing a research question and conducting a literature review; choice of appropriate study designs; measurement of concepts; sampling issues; modes of data collection; and analysis of quantitative and qualitative data; and practical ethical considerations will be also discussed. The data management and analysis detailed in the proposal will be carried-out during the Research Project course in Semester 5 of Year 3.

Respiratory System

This course, together with other organ-system course in Phase 2, will prepare the learner for clinical clerkships in the next Phase (Phase 3) of the program. The course addresses physiological and pathologic changes that occur in a variety of respiratory diseases. The focus is on correlating structural, pathophysiological changes with symptoms, signs, and radiological abnormalities that accompany common respiratory diseases. The learner will begin to acquire skills of physical examination of the normal respiratory system in simulated patients. Teaching approaches will facilitate in the learner, the development of effective communication with patients, independent learning, and effective team working.

Digestion and Nutrition

This course, together with other organ-system courses in Phase 2, prepares the learner for clinical clerkships in the next Phase (Phase 3) of the program. The course addresses physiological and pathological changes which occur in a variety of gastro-intestinal diseases. The focus is on correlating structural pathophysiological changes with symptoms, signs, and radiological abnormalities which accompany common gastro-intestinal diseases and the various approaches for treatment. This course also centers on the basic principles of nutrition in health and disease based on the knowledge of nutrient classes, their functions, sources and deficiency symptoms. Teaching approaches will facilitate in the learner, the development of effective communication with patients and simulated patients, independent learning, and effective team working.

Foundations of Clinical Medicine 3

This course involves learning the skills of history taking and physical examination related to the organ systems tackled in the semester.

Human Reproduction

This course describes the normal human reproductive system and breasts in males and females. In addition, the pathophysiology, clinical presentation, and principles of management of common reproductive and breast-related conditions are explained. The course will also provide the opportunity for the student to acquire skills for

history taking and physical examination of the reproductive system and breast in simulated settings, as well as exemplified in patients by visits to healthcare facilities.

Research Project
This is the third and final course in a series of three courses on research methods (Research Methods 1, Research Methods 2, and Research Project). This means that the syllabus of this course builds upon the foundation knowledge and skills obtained in the previous courses (i.e. Research Methods 1 and Research Methods 2). It will continue and then culminate the scientific journey with an emphasis on analytical skills, critical thinking, and the oral, written, and digital dissemination of research. Students will demonstrate their statistical analysis, data interpretation, and scientific communication skills by developing and delivering a conference poster, writing a dissertation, and designing a digital abstract of their student research project. Through these assignments, students will demonstrate that they have developed the required knowledge, skills, and competencies to complete a research project and disseminate the findings to both the scientific and lay community. The course will start with the students completing their data collection within the first three weeks of the semester followed by a recap on the data management and analysis skills acquired during the Research Methods 1 and Research Methods 2 courses. A specific focus of this course is developing scientific communication skills required by young motivated inquisitive learners to disseminate their research findings. Specifically, students will be required to (i) design an engaging conference poster that will be presented at the Student Research Poster Presentation Conference; (ii) write a dissertation; and (iii) develop a digital abstract that can be used on social media to disseminate the findings of their research project.

Skin and Subcutaneous Tissue
The course is designed to provide students with pathophysiological framework for explaining skin and connective tissue disorders. The course involves describing the structure and function of the integumentary system; the skin and related appendages (hair, nails, glands and mucous membrane), and the variety of mechanical, thermal and environmental impacts that affect dermal ageing process.

Endocrine System
This course involves learning about the nomenclature of endocrine glands and their hormones; the hormones' sites of biosynthesis, mechanism of action, and metabolism; their impact on overall body physiology and metabolism; and disease states resulting from various endocrine disorders. The focus will be on the pathophysiology of endocrine dysfunction.

Foundations of Clinical Medicine 4
This course involves learning the skills of history taking and physical examination related to the organ systems tackled in the semester.

Mind and Behavior
Students will be introduced to psychological and sociological models of behavior, and how these relate to the experience and response to illness in an individual or social/cultural group. They will gain an understanding of the importance of psychosocial factors in health and wellbeing and how these may influence the effectiveness of proposed treatments. Students will learn how to analyze behavioral determinants of illness, especially as applied to substance abuse, self-harm and eating disorders.

Musculoskeletal System
This course, together with other organ-system courses in this Phase (Phase 2), prepares the learner for clinical clerkships in the next Phase (Phase 3) of the program. The course illustrates pathophysiologic mechanisms of musculoskeletal disorders by addressing developmental, degenerative, infectious and inflammatory conditions of joints, muscles, tendons, and bone in both adults and children. The course introduces the student to basic knowledge and skills in the field of musculoskeletal medicine in order to address diagnostic and therapeutic questions in patient care.

Neurosciences
This course is an integrated neuroanatomy, neurophysiology, neuroradiology, neuropathology and neuropharmacology course covering normal and disturbed function. It includes study of the central and peripheral nervous systems, sensory, autonomic and motor neuroscience, special senses and provides a broad exposure to the pathophysiology of nervous system disorders, as well as signs and symptoms of neurological disorders.

Integrated Medicine
This course will integrate the knowledge of fundamentals of pathophysiology of disease in the setting of case-based presentations and discussions. Through illustrative clinical presentations it will provide horizontal and vertical integration of knowledge demonstrating the complexity of diseases that affect multiple systems either through the pathology of a primary disease and its complications or through co-existence of multiple diseases.

2.3 Changes to courses
The college will seek to deliver each course in accordance with the descriptions set out in the relevant degree plan. The course descriptions can be accessed in the college catalogue.
However, there may be situations in which it is desirable or necessary for the college to make changes in course provision, either before or after enrolment.
The college will not make very substantial changes to courses (for example, a change to the course title, significant restructuring, substantial change in course content, or the introduction of a progression hurdle) which would impact on students who have already begun their course.
Other changes could be made to course content, delivery and teaching provision because of developments in the relevant subject, enhancements in teaching or assessment practice, requirements of external accreditation processes, changes in staffing, resource constraints or changes in the availability of facilities. Such changes will take account of the reasonable expectations of prospective and current students. All students to be affected by such changes will be notified.

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22. Student Assessment and Progression

The aim of students' assessment at MBRU is to satisfy student achievement and progression, promote subsequent learning through feedback, improve the quality of the curriculum (courses and programs), and evaluate the effectiveness of the teaching process.

22.1. Summary of Students' Assessment and Progression Regulations:

- Student progress will be appraised through formative and summative assessments; formative assessments monitor student learning and provide ongoing feedback that can be used by students to enhance their learning and instructors to improve their teaching. Summative assessments, on the other hand, aim at evaluating students learning by comparing it to learning outcomes
- Criterion reference standards will be used in summative assessments as appropriate
- Course assessment includes two components: in-course assessment and end of course assessment. In-course assessment comprises 40-60% of the total assessment. The examination at the end of the course comprises the remainder of the grade (i.e. 40-60%)
- Any deviation from the suggested range above must be justified by the course coordinator and approved by the Student Assessment and Progression Committee
- In order to pass the course a student must pass each of the knowledge and clinical skills components (for courses with a skills component)
- In order to progress to the next Phase, the student must have scored a cumulative grade point average (cGPA) equal to or greater than 2.5
- The exit degree of MBBS (Bachelor of Medicine and Bachelor of Surgery) is granted if the student scores a cGPA equal to or greater than 2.5
- As a general progression rule, the maximum duration within which to successfully complete any Phase shall be equal to the normal duration of the Phase plus an additional one year.

22.2. Guidelines

The following guiding principles in designing assessments instruments are followed by course coordinators and clinical instructors at MBRU:

- ensuring linkage of assessment to course objectives (Knowledge, Skills, Competencies)
- employing diverse assessment methods
- basing their marking and grading on pre-defined outcome criteria
- communicating assessment criteria to students
- providing timely, meaningful, and helpful feedback to students
- ensuring exams are proportional to the course workload
- ensuring contextual use of assessment instruments
- ascertaining assessment tools are appropriate for the competencies being measured
- ascertaining standard setting is criteria-based (criterion referenced standard)

22.3 Weights of Assessments

The weightings of examination components in a course is normally as follows:

- In-course (*in-clerkship) examinations = 40% - 60% of total assessment

- End-course (*End-year) examinations = 40% - 60% of total assessment.
- Any deviation from the suggested range above must be justified by the course coordinator and approved by the Student Assessment and Progression Committee

* in phase III

22.4 Progression Regulations in Phase 1

Phase 1	
	Course
SEMESTER 1	
	English for Health Sciences
	Enzymes and Metabolism
	Foundation Concepts in Medical Sciences
	Fundamentals of Epidemiology & Biostatistics 1
	History of Medicine
	Innovation in Health Sciences
	Introduction to the Practice of Medicine 1
	Principles of Bioethics
SEMESTER 2	
	Abdomen, Pelvis and Perineum: Structure and Function
	Fundamentals of Epidemiology & Biostatistics 2
	Head and neck
	Introduction to the Practice of Medicine 2
	Limbs and spine: Structure and Function
	Thorax: Structure and Function

22.5 Progression within Phase 1:

- The maximum duration within which to successfully complete Phase 1 shall be 2 years (4 semesters).
- At the end of regular semester 1 or 2;
    - If a student has failed in one or more courses, they shall re-sit a comprehensive examination scheduled at the end of each semester A remedial/coaching program may be organized by the course coordinators before the re-sit examination.
- The achievable grade in the resit exam should not go beyond the required Grade for the student to achieve a cGPA 2.5
- If they fail any re-sit exam, they shall repeat the failed course (s) when available provided the maximum duration within which to successfully complete Phase 1 is not exceeded.

22.6 Progression from Phase 1 to Phase 2

- A student may repeat a course in Phase 1 only once.
- To progress to Phase 2 a student shall:
    - successfully complete all courses in Phase 1 within the stipulated maximum duration of the Phase (4 semesters).
    - achieve a cumulative grade point average (cGPA) of 2.5 or higher at the end of Phase 1.
- If a student passed all courses in the Phase with a cGPA less than 2.5, they must repeat some courses passed so as to raise their cGPA provided they do not exceed the stipulated maximum duration for the Phase.

Progression Regulations in Phase 2

Phase 2	
	COURSE
SEMESTER 3	
	General Microbiology
	Pathological Basis of Disease (formerly General Pathology)
	Foundations of Clinical Medicine 1
	Hematopoietic and Immune system
	Research Methods 1
	Genetics and Molecular Biology
SEMESTER 4	
	Cardiovascular system
	Foundations of Clinical Medicine 2
	Principles of Pharmacology and Therapeutics
	Research Methods 2
	Respiratory system
	Skin and Subcutaneous Tissue
SEMESTER 5	
	Digestion and Nutrition
	Endocrine system
	Foundations of Clinical Medicine 3
	Human Reproduction
	Research Project
	Renal and Urinary system
SEMESTER 6	
	Integrated Medicine
	Foundations of Clinical Medicine 4
	Human Reproduction
	Mind and Behavior
	Musculoskeletal System
	Neurosciences

22.7 Progression within Phase 2:

- The maximum duration within which to successfully complete Phase 2 shall be six semesters.
- Once progressed to Phase 2, a student shall not retake passed Phase 1 courses in order to improve his/her grades
- A student shall progress within the academic year from semester to semester subject to passing any pre-requisite courses
- If a student fails one or more courses in a semester, they shall re-sit a comprehensive exam, scheduled at the end of each semester. A remedial/coaching program may be organized by the course coordinator before the re-sit examination.

- The achievable grade in the resit exam should not go beyond the required grade for the student to achieve a cGPA 2.5
- At the end of the re-sit;
    - If a student fails 1 or 2 courses, they may carry over the failed courses to year 3.
    - If a student fails 3 or more courses, they must repeat the failed courses before proceeding to year 3.
- Regardless of the number of courses failed, there must be sustained academic advising provided to such students.
- Please refer to Appendix (C) of the Assessment & Progression Policy for more details on Related Progression Regulations in Phase 2.

22.8 Progression from Phase 2 to Phase 3

- The maximum duration to complete Phase 2 shall be six semesters.
- To progress from Phase 2 to Phase 3 a student shall;
    - Successfully complete all courses in Phase 2.
    - Achieve a cumulative grade point average (cGPA) of 2.5 or higher at the end of Phase 2.

Course Load

In regular semesters, a student shall normally register in 4-8 courses (16-20 credits) concurrently.

Lecture (credit: contact hour ratio = 1:1)

Presentation of theoretical or conceptual material in a formal and less interactive environment. Normally a lecture hour will require about 2 hours related research, reading and follow-up. A ratio of one contact hour to one credit is maintained.

Seminar (credit: contact hour ratio = 1:1)

Small group presentation of learning material where student research and presentation forms a major portion of course materials and activity. Normal ratio of contact to credit hours is 1:1.

Tutorial (credit: contact hour ratio = 1:2)

Supervised small group interaction that includes problem solving and discussion sessions. Normal ratio of credit to contact hours is 1:2. (optional work sessions with no credit do not carry a course code). A Team-based learning activity (TBL) is considered as a tutorial.

Laboratory (Practical) (credit: contact hour ratio = 1:2)

Supervised, hands-on application of lecture material or acquisition of skills in a laboratory environment. Normally a ratio of two contact hours to one credit is maintained. In cases where warranted by the nature of the course material, a ratio of 3:1 or 4:1 may be designated by the faculty.

Field or Work Placement (credit: contact hour ratio = 1:3-4)

Supervised hands on application of lecture material or acquisition of skills through placement in an existing work setting. The instructor provides overall direction and follow-up; day-to-day supervision is provided by the on-site employer or agency. Ratio of contact to credit hours is 3:1 or 4:1.

Credit weight in rotations (credit: week ratio = 1:1)
For the purposes of credit weighting in Phase 3 rotations, a credit is equivalent to one week of rotation.

22.9 Academic Probation

A student shall be placed on academic probation if his/her academic performance is below the threshold (cGPA 2.5) for successful progression to the next Phase of the program. Such a student shall be required to have a documented interview with their academic advisor and any supportive and corrective measures noted before registering for the next semester. These may include any or all of the following:

- referral to student services for counselling
- postponement of study so as to address identified non-academic needs
- supplementary language or study skills courses

22.10 Assessment Grades

Grade Descriptions
The grades for the MBBS courses are described as follows:

A Exceptional performance; all course objectives achieved; objectives met in a consistently outstanding manner (A and A-).

B Very good performance; significantly more than the majority of the course objectives achieved (majority being at least two-thirds); objectives met in a consistently thorough manner (B+, B and B-).

C Satisfactory performance: at least the majority of course objectives achieved; objectives met satisfactorily (C+, C and C-).

D Minimally acceptable performance: less than the majority but more than the minimum required course objectives achieved; objectives met at a minimally acceptable level (D+ and D).

F Unacceptable performance: minimum required course objectives not met; objectives not met at a minimally acceptable level; no credit earned (F).

Other Grade designations

The following grade designations shall form part of the overall University grading system, but shall not carry numeric value.

(I) Incomplete

The 'Incomplete' grade shall be used when the student has been prevented by circumstances beyond their control (e.g. illness, accident or family emergency) from successfully completing all course components, in-course examinations or sitting for the final end-course examination. The incomplete grade should be converted to the usual A-F grade scale or Pass/Fail once the student resits the exam . Any exception to this rule shall only be approved by the student assessment and progression committee and the Dean.

(WW) Withdrawn without Penalty

A 'WW' shall be assigned to a student who withdraws formally from a course within the prescribed deadline after the period of Drop & Add. The deadline to withdraw formally from a course shall be 6 weeks from the beginning of classes in the semester.

(WF) Withdrawn with Failure

A 'WF' shall be assigned to a student who withdraws formally from a course after the prescribed deadline.

(TC) Transfer Credit

A 'TC' shall be awarded to a student who has been granted credit from elsewhere. These credits shall contribute to the total required for graduation in a particular degree program, but shall not contribute to the grade point average.

(AU) Audit

An 'AU' shall designate a course registration with audit status. This status must be declared at the time of registration.

(P/F) Pass/Fail

A 'P/F' shall be assigned for a course that is not graded on the A-F scale, but does carry credit value in a degree program. A 'Pass/Fail' course does not contribute to the grade point average.

(CC) Continuing Course

Shall be assigned to any course covering more than one semester. After the first semester, the 'CC' grade is shown against the course on the student's transcript. At the end of the second semester an A- F or Pass/Fail grade replaces the 'CC' grade.

22.11 Grading System

MBRU uses a letter based grading system to report course grades. Assessments are typically recorded on a percentage scale (0-100) and converted into a letter grade as outlined below. The GPA is derived from the weight of each letter grade and course credit hours.

Grade	Grade points	Definition
A	4.00	Exceptional performance; all course objectives achieved; objectives met in a consistently outstanding manner (A and A-).
A-	3.70	
B+	3.30	Very good performance; significantly more than the majority of the course objectives achieved (majority being at least two-thirds); objectives met in a consistently thorough manner (B+, B and B-).
B	3.00	
B-	2.70	
C+	2.30	This grade is awarded for an achievement considered by content experts as meeting the course requirements in all respects (C+, C, and C-)
C	2.00	
C-	1.70	
D+	1.30	Minimally acceptable performance: less than the majority but more than the minimum required course objectives achieved; objectives met at a minimally acceptable level (D+ and D).
D	1.00	
F	0.00	Unacceptable performance: minimum required course objectives not met; objectives not met at a minimally acceptable level; no credit earned (F).

22.12 Appealing an Assessment Process

A student may make a written appeal regarding the process of the assessment in any course. The appeal should be addressed to the Dean within 5 working days of the release of the examination results. The appeal should identify specific and objective grounds for the grievance as they pertain to the process of assessment. The Dean will direct the Student Assessment and Progression Committee to review the circumstances in consultation with the course coordinator and other relevant faculty before making a decision, typically within five working days. Possible outcomes from the deliberation of the committee include: upholding the grade, repeating the assessment, adjusting the grade, or seeking an assessment by another faculty not involved with the course.

23 Examination Regulations

23.1 Responsibilities of the Student Assessment and Progression Committee (SAPC)

The SAPC is responsible for scrutinizing and monitoring of examination quality by:

1. Ensuring University and College regulations are adhered to
2. Reviewing reports from course coordinators
3. Reviewing external examiners' reports (if applicable) in matters related to the examination
4. Verifying with course coordinators that examination papers are vetted
5. Reviewing a sample of examination question papers
6. Confirming that appropriate standard-setting procedures are adopted
7. Reviewing examination 'item' performance
8. Reviewing the distribution of grades
9. Recommending improvements and ratifying changes to examination process
10. Approval of timetables and invigilation guidelines of final examinations
11. Receipt and consideration of final examinations results
12. Recommendation, in consultation with course coordinators, of supplementary examinations and/or re-sits
13. Handling misconduct in examinations
14. Liaising with appropriate bodies in cases of student appeals that relate to examinations

15. Recommending amendments to the College examinations policy
16. Any other duties that may, from time to time, be assigned to the Committee

23.2 Examination Guidelines

Design

Examinations should be both formative and summative. The methods of assessment used will be dictated by the purpose of the assessment.

Summative assessment is any form of assessment that will contribute to the final grade of a student. Guidelines for conducting summative assessments are as follows:

a. Each course coordinator shall draw out a blueprint of course objectives and the examination instruments to be used to test these objectives. Multiple methods are usually required to achieve blueprint objectives. The different examination instruments allow a balance of strengths and weaknesses of each method.

b. As much as possible, questions should assess higher-order thinking and not just a simple recall of information

c. For skills/performance-based assessments, properly constructed checklists and/or rating scales should be used. Tasks should be as clinically authentic as possible.

23.3 Review of Examinations

For all exams (in-course and final), exam questions/stations/cases should be reviewed and amended by the course coordinator in consultation with the Student Assessment and Progression Committee.

23.4Standard Setting

For each course, a defensible standard-setting method should be used by trained faculty. Arbitrary methods should not be used. The standard-setting procedure should be declared to the College Examinations Committee.

23.5 Marking of Examinations

Multiple choice questions (MCQs) shall be marked electronically and subjected to item analysis. For short notes and essays, model answers should be provided and used as the basis for marking and feedback to students. Several examiners should be available, but one examiner should mark the same question for all students for consistency. Double marking is encouraged. For Objective Structured Clinical Examination (OSCE)

stations and short cases, properly designed checklists and rating scales should be used. Several examiners should be available. Each OSCE station should be assigned to one examiner.

23.6 Grades and Grading

Letter grades shall be used to describe the achievement level attained within a particular course. A final semester grade shall be based on continuous assessment throughout the semester as well as a final examination. A final examination is customary but may not be considered necessary in certain types of courses.

23.7 Item Analysis and Test Statistics

Student performance on exam questions should be analyzed using appropriate item analysis software by the course coordinators. Results of these analyses should be discussed
by the relevant committees to assist in making informed decisions about the assessment process. For all examinations used by instructors, reliability indices should be determined and the data used to improve on the assessment process in the College.

23.8 Feedback to Students on Examinations

Feedback on in-course examinations should be given to students within 1 week of the examination. Feedback should not involve the release of questions but a discussion of points of weaknesses with students. Feedback on final examinations is not typically provided.

23.9 Training of Students in Examination Methods

Students should be familiarized with the type of examinations in the College. Practice questions should be provided by the concerned coordinators.

23.10 Access to Old/Previous Exams

Students should not have access to questions used in previous examinations and stored in the College's examination questions bank.

23.11 Repeat Exams

If a student is eligible for a resit/supplementary exam, this exam should be cleared after a remedial activity/course as may be prescribed by the concerned parties (see assessment and progression document). The format of the repeat exam should be exactly the same, except for content, as the failed exam.

23.12 Absenteeism from Examinations

Please refer to the attendance policy in the Assessment & Progression Policy and the

MBRU Student Handbook. Additionally, the following will apply to the College of Medicine:

Sick leave accompanied by detailed medical reports may be accepted as an excuse for absence from course examinations subject to confirmation by an expert panel set up by the SAPC.

Note: A student exempted due to bereavement, hospital admission, or in extreme ill health should be offered the option of sitting for the examination in accordance with the circumstance prevailing at the time and must be in-line with University regulations.

23.13 Misconduct in Examinations

Please refer to the policy in the MBRU Student Handbook. Additionally, the following procedure of reporting misconduct will be applied in the College of Medicine:

Misconduct in examinations should be reported to the SAPC by the senior invigilator of the examination during which the misconduct occurred. The SAPC will deliberate on the report. Thereafter, a recommendation will be made to the Dean.

23.14 Online Exams

23.14.1 General Conduct of Students

A. Students must not indulge in any behavior or conduct that may disturb other candidates or disrupt the smooth progress of an examination.

B. Students are not permitted to smoke in any part of the examination room.

C. Students must obey the instructions of any invigilator and their attention is drawn to the regulations governing admission to and departure from the examination room.

D. Students are not allowed to take into the examination room any unauthorized books, manuscripts, notes, bags, cases, or any means whereby they may improperly obtain assistance in their work. All such materials, including handbags, must be placed on a table outside the examination room.

E. Students are not allowed to take into the examination room electronic transmission devices such as mobile phones, pagers, PDAs, or any digital storage media such as flash drives or CD.

F. Students are not allowed to take into the examination hall paper of any sort. A plain sheet of paper (or similar material) shall be provided in the examination hall should any student require it.

G. Students must be at the venue of the examination at least 10 minutes before exam commencement.

H. Students can be allowed to enter the exam room up to 30-minutes after the start of an exam. If a student arrives after 30-minutes, they will not be allowed entrance and will be advised to email the course coordinator and the Department of Student Services & Registration to inform them of the reason for being late.

I. Before the commencement of the examination, the student must place on the top right hand corner of the desk their ID card for inspection by one of the invigilators.

J. Students must not use any means whatsoever to communicate or obtain, directly or indirectly, assistance in their work, or give or attempt to give, directly or indirectly, assistance to any other candidate.

K. Any suspected breach of the foregoing regulations will be investigated by the College.

24. Listing of Faculty

MBRU College of Medicine is committed to recruiting qualified, experienced, and dedicated faculty to set a foundation and culture of excellence. Full time faculty members will, as core teachers, have a major role in the design and delivery of teaching. In addition, MBRU College of Medicine will seek and recruit adjunct and part-time faculty members to contribute to teaching and assessment. Criteria for appointment of faculty are described in the University's Policy and Procedures on Recruitment and Appointment of Faculty and are based on the standards set by UAE Commission for Academic Accreditation. The table below lists full time faculty members with academic appointments in the College of Medicine at the time of this writing. New faculty members are expected to join as the College continues its recruitment campaign.

COLLEGE OF MEDICINE FACULTY LIST

Faculty Name	Designation
Abiola Senok	Associate Professor - Microbiology & Infectious Diseases
Aida Azar	Associate Professor – Epidemiology
Alawi Alsheikh-Ali	Professor - Cardiovascular Medicine Dean – College of Medicine
Bakhrom Berdiev	Associate Professor – Physiology
David Hickey	Professor – Surgery

Essa Kazim	Associate Professor – Surgery
Fahad Ali	Assistant Professor – Molecular Biology
Farhad Janahi	Assistant Professor – Anatomy
Gemma Peachey	Lecturer – Psychiatry
Glenn Matfin	Professor – Medicine
Hany Swidan	Assistant Professor – Family Medicine
Homero Rivas	Professor – Surgery Associate Dean for Innovation and the Future
Ibrahim Inuwa	Professor – Anatomy
Laila Alsuwaidi	Assistant Professor – Molecular Hematology Assistant Dean for Student Happiness and Wellbeing
Mohamad Alameddine	Associate Professor - Health Management and Policy Director – Strategy and Institutional Excellence
Mohammed Uddin	Assistant Professor - Human Genetics
Mutairu Ezimokhai	Professor of Obstetrics and Gynecology Provost
Nerissa Naidoo	Assistant Professor – Anatomy
Norbert Nowotny	Professor – Microbiology
Rajan Radhakrishnan	Professor – Pharmacology
Reem Al Gurg	Assistant Professor – Health Policy
Reem Jan	Assistant Professor – Pharmacology
Riad Bayoumi	Chair & Professor - Basic Medical Sciences
Ritu Lakhtakia	Professor – Pathology
Saba Al-Heialy	Assistant Professor - Immunology
Saif Al Qasim	Assistant Professor - Biochemistry
Samuel Ho	Professor – Medicine Chair – Clinical Sciences
Thomas Adrian	Professor – Physiology
Tom Loney	Associate Professor – Public Health & Epidemiology
Yajnavalka Banerjee	Associate Professor - Biochemistry
Yrsa Sverrisdottir	Associate Professor - Physiology

25. Professional Behavior and Student Fitness to Practice

Medical students enjoy special privileges, which come with responsibilities and expectations by the society. Because of this, medical students need to be aware of the higher standards of professional behavior. MBRU College of Medicine will ensure that students are aware of this relationship with the society and provide them with opportunities to learn and practice the expected standards of professional behavior.

This guidance considers medical students' fitness to practice in relation to their behavior and in relation to their health when appropriate. Poor health can affect a student's fitness to practice either directly or by being a cause of misconduct.

25.1. Expectations for appropriate 'Fitness to practice'

25.1.1. Displaying professional conduct

Medical students should acquire and demonstrate the types of behavior that mark them as fit to practice as doctors by

- maintaining the standards of competence and care that will not put patients and the public at risk
- striving for high ethical standards in their professional and personal lives

25.1.2. Providing good clinical care

- Being able to provide good clinical care is fundamental to becoming a doctor. This objective should guide a student's behavior in both their clinical and academic work. Medical students should reflect on how they can support and promote good clinical care as part of their medical education.
- In order to demonstrate that they are fit to practice, students should:
    - recognize and work within the limits of their competence and ask for help when necessary
    - accurately represent their position or abilities
    - make sure they are supervised appropriately for any clinical task they perform
    - respect the decisions and rights of patients
    - be aware that treatment should be based on clinical need and the effectiveness of treatment options, and that decisions should be arrived at through assessment and discussion with the patient

- not discriminate against patients by allowing their personal views to affect their professional relationship or the treatment they provide or arrange (this includes their views about a patient's age, color, culture, disability, ethnic or national origin, gender, lifestyle, marital or parental status, race, religion or beliefs, sex, sexual orientation, or social or economic status)
- behave with courtesy
- report any concerns they have about patient safety to the appropriate person.

25.1.3. Maintaining good medical practice

- Students must be aware of their responsibility to maintain their knowledge and skills throughout their careers.
- Students are expected to keep up to date and to apply the knowledge necessary for good clinical care. They should understand that as doctors they will have to participate in audit, assessments and performance reviews throughout their careers as part of re-licensing.
- In order to demonstrate that they are fit to practice, students should:
  - reflect regularly on standards of medical practice in accordance with locally agreed and adopted guidance by MBRU and the local hospitals
  - attend required learning sessions
  - complete and submit course work on time
  - be responsible for their own learning
  - reflect on feedback about their performance and achievements and respond constructively
  - be familiar with guidelines of local healthcare providers
  - respect the knowledge and skills of those involved in their education
  - make sure they can be contacted and always respond to calls in relation to care of patients or their own education

25.1.4. Engaging in teaching and training

- Medical education has strong professional and academic aspects to it. Medical students must engage with patients and gain experience in clinical settings.

- Doctors and students must be willing to contribute to the teaching, training, appraising and assessing of students and colleagues.
- They should be honest and objective when appraising self and others
- In order to demonstrate that they are fit to practice, students should:
    - demonstrate basic teaching skills
    - be aware of the principles of education in medicine
    - be willing to contribute to the education of other students
    - give constructive feedback on the quality of their learning and teaching experiences.

25.1.5. Building ethical and respectful relationships with patients

- Medical students will have extensive contact with patients during their medical course and must build relationships with patients based on openness, trust and good communication.
- Students should maintain a professional boundary between themselves and their patients. They must not use their professional position to cause distress or to exploit patients.
- Students should obtain patient consent for any treatment, teaching or research.
- Patients have a right to expect information about them to be held in confidence. A patient's case must not be discussed in a way that would identify them with anyone not directly involved in their care, or in a public place. Academic work that contains specific information about a patient must not identify the patient if it is to be seen outside the patient's care team. This includes case or log reports that are submitted as part of the student's course work or assessment.
- In order to demonstrate that they are fit to practice, students should:
    - respect patients and treat them with dignity
    - be aware of ethical issues in their professional behavior with patients
    - be open and honest when dealing with patients, their carers, relatives, or anyone else close to them
    - make sure that patients have consented to a student being involved in their care
    - make sure they are clearly identified as students

- dress in an appropriate and professional way and be aware that patients will respond to their appearance, presentation and hygiene
- make sure they follow the hospital adopted guidance on consent and confidentiality

25.1.6. Working collaboratively with colleagues

- Medical students need to be able to work effectively with colleagues inside and outside of healthcare facilities in order to deliver a high standard of care and to ensure patient safety.
- Doctors and students must develop skills to work in multi- disciplinary teams. This involves respecting the skills and contributions of colleagues and other professionals, and developing effective communication with other members of the team and with patients.
- It is also important that doctors and students protect patients from harm posed by another colleague's behavior, performance or health. They should take steps to raise any concerns with the appropriate person.
- In order to demonstrate that they are fit to practice, students should:
  - demonstrate skills that allow them to deal with uncertainty and change in the workplace
  - be able to work effectively in a team and to take on different roles as appropriate, including taking responsibility for tasks
  - develop and demonstrate teamwork and leadership skills
  - be aware of the roles and responsibilities of other people involved in delivering healthcare
  - respect the skills and contributions of colleagues and other professionals and not discriminate against them
  - raise concerns about overall practice in a healthcare setting or about colleagues, including other students, medical practitioners and other healthcare workers, with the appropriate person if patients are at risk

25.1.7 Demonstrating ethical behavior

- Good medical practice requires doctors to make sure that their behavior at all times justifies the trust that patients and the public place in the medical profession.
- In order to demonstrate that they are fit to practice, students should:
  - bring attention to any concerns about, or errors in, their clinical

work

- be honest, genuine and original in their academic work, including when conducting research, and take effective action if they have concerns about the honesty of others
- be honest and trustworthy when writing reports and logbooks, and when completing and signing forms
- be honest in citing their qualifications and not misrepresent their qualifications, position or abilities
- not plagiarize others' work or use their own work repeatedly in a way that could mislead
- be honest and trustworthy in any financial dealings, especially if they are managing finances, and make sure that any funds are used for the purpose they were intended for
- co-operate with any formal inquiry by the University or other hospitals or organization into their health, behavior or performance, or that of anybody else
- comply with the laws of the UAE and, where relevant, any laws that apply specifically to an individual Emirate
- comply with the regulations of the University, hospitals or other health organization.

25.1.8 Understanding risks associated with their own health

- It is important that medical students are aware that their own poor health may put patients and colleagues at risk.
- Good medical practice requires doctors to seek and follow advice from a suitably qualified professional about their health. This is particularly important if they have, or suspect they have, a serious condition that could be passed on to patients, or if they are receiving treatment that could affect their judgement or performance.
- In order to demonstrate that they are fit to practice, students should:
  - be aware that their own health problems may put patients and colleagues at risk
  - seek medical or occupational health advice, or both, if there is a concern about their health, including mental health
  - accept that they may not be able to accurately assess their own health, and be willing to be referred for treatment and to engage in any recommended treatment programs

- protect patients, colleagues and themselves by being immunized against common serious communicable diseases if vaccines are available and are recommended by the relevant health authority
- not rely on their own or another student's assessment of the risk posed to patients by their health, and should seek advice, when necessary, from a qualified clinician or other qualified healthcare professional
- be aware that when they graduate they are responsible for informing their employer or other appropriate person if their health poses a risk to patients or the public

25.1.9 Demonstrate appropriate social behavior

- Students are viewed as representatives of the university, and should not allow their actions to reflect negatively upon the university or upon their profession. In order to demonstrate fitness to practice, the student is expected to:
  - recognize the right of all individuals to be treated with respect without regard to race, age, gender, disability, national origin, position, or religion
  - avoid physical, verbal or written physical or sexual harassment
  - avoid obstruction of due process through lying, using pressure, threat, abuse, or similar practices against any person, or withholding of pertinent information.

25.1.10 Consequences of breaching the fitness to practice

If there are grounds for concern as to the fitness of the medical student for medical practice and upon investigation the student was found to be in breach of the fitness to practice code, the fitness to practice committee may recommend any of the following:

- continue his or her studies without limitation
- continue his or her studies under specified limitations and conditions
- be prohibited from entering specified clinical facilities as a medical student
- suspension from studies
- dismissal from University
- informing law enforcement agencies
- informing concerned professional licensing bodies

- other penalties or corrective actions as deemed appropriate and necessary by the fitness to practice committee

25.2 Policies and procedures for dealing with suspected breaches of Fitness to Practice

25.2.1 Committee for Fitness to Practice

The following committees will be involved in the handling of the rare cases of report or evidence of infraction of this code to the extent that raises concern about the fitness of the student to practice. The committee mandate includes:

- review the Medical Students' Code of Conduct on a regular basis.
- initiate the process for dealing with a report of infringement of Code of Conduct on instruction from the Dean
- raise an independent ad hoc investigation committee when needed
- adjudicate on the basis of the report of the ad hoc investigation committee

25.2.2 Membership:

- Associate Dean for Education (ex-officio)
- Four faculty members, elected by Faculty
- A student representative selected by MBRU student council
- The Dean appoints the Chairperson from among the membership.
- The Committee on Fitness to practice shall meet at least once per term and whenever the need arises.

25.2.3 The ad hoc Investigation Committee

An ad hoc committee is constituted for each case and it reports to the Committee on Fitness to practice. The ad hoc committee mandate is to gather information and evidence sufficient to enable the Committee on Fitness to practice to make a decision on the existence and seriousness of the breach of the code of conduct.

25.2.4 Membership:

Three members with appropriate expertise to conduct the investigation, appointed by the Committee for Fitness to practice. None shall be a member of the Committee on Fitness to practice.

25.2.5 The ad hoc Dispute Resolution Committee

An ad hoc committee established by and reporting to the Dean constituted for each case. The mandate of the ad hoc dispute resolution committee is to determine whether due process has been followed in handling the allegation

and receive new facts if these become available. The committee will also consider the appeal from the student in the event of a dispute regarding the outcome of adjudication.

25.2.6 Membership:

This committee is made up of three members drawn from the College Dispute Resolution Panel.

- One nominated by the Dean, who shall Chair the Committee and submit reports.
- One member nominated by the student.
- One member nominated by the Committee on Fitness to practice.

25.3 Procedure for handling an allegation of a breach to fitness to practice by a medical student

The handling of an allegation of misconduct must be confidential, expeditious and strictly in accordance with laid down process as follows: Preliminary Evaluation, Investigation, Adjudication, Appeal.

25.3.1 Preliminary Evaluation

- A report of allegation of potential infarction of the Code of Conduct shall be directed to the Dean, who will evaluate and share with the Chairperson of the Committee on Fitness to Practice, if he/she considers that there are enough grounds to proceed.
- Anonymous allegations shall not normally be considered. If the nature of the allegation makes anonymity of the reporter expedient, the name and identification of the author will be removed from any written document but be known to the Dean
- Within two weeks of receiving a complaint, the Committee on Fitness to Practice shall determine whether:
    - the matter should be dealt with informally
    - investigation should proceed
    - any action regarding the status of the student should be taken; for example:
        - continue his or her studies without limitation
        - continue his or her studies under specified limitations and conditions
        - be prohibited from entering specified clinical facilities as a medical student

- The Chairperson may, during the proceedings, review and change a decision regarding a medical student's status.
- The student may appeal to the Dean if dissatisfied with the decision of the Committee.
- The Dean may refer the appeal to the Adjudication Committee. Pending any such adjudication the Committee's decision shall remain in force.
- Any member (including the Chairperson) of the Fitness for Practice Committee that has any involvement or interest in the case arising other than by way of rules of procedure, shall stand down from the Committee while the case is being considered, and another member of the Committee shall be appointed.

25.3.2 Investigation

- The Fitness to Practice Committee shall set-up an ad hoc Investigation Committee. The membership shall not include anyone with previous involvement in the case.
- The Chairperson of the Committee on Fitness to Practice shall write to inform the medical student concerned that an investigation of the student's fitness for practice is going to take place stating the nature of the concern and the grounds for launching the investigation.
- The ad hoc Investigation Committee shall investigate the allegations and associated circumstances and submit a written report prepared and submitted by the Chairperson of the ad hoc Investigation Committee to the Chairperson of the Fitness to Practice Committee within two weeks. The report shall be limited to facts, without judgement.
- The medical student may be accompanied by a member of the MBRU community of his/her choice.
- The student shall be given the opportunity to comment on the accuracy of the facts gathered by the ad hoc Investigation Committee by appending his/her signature to the report.

25.3.3 Adjudication

- The medical student shall be required to attend the meeting for Adjudication in person.
- The medical student shall inform the Chairperson of the Committee on Fitness to Practice in writing of the details in advance of the meeting if he/she has good cause to object to the membership of the Committee.
- The Chairperson shall decide on whether to advise the Committee that the

member(s) should be replaced and shall inform the medical student accordingly.

- The adjudication may proceed in the student's absence, if the student fails to attend the meeting without reasonable explanation. The Committee on Fitness to Practice shall have discretion to decide what constitutes a "reasonable explanation".
- The Committee or the medical student may invite anyone who may have information relevant to the case to attend the adjudication meeting to give evidence in writing or in person.
- The meeting shall be held in private and all proceedings shall be confidential
- The Committee shall determine its own procedure for the conduct of the meeting but shall include the following elements:
    - A statement of the allegation and the findings of the ad hoc Investigation Committee
    - Response of the student to the allegation and the outcome of investigation
    - Summary and conclusion of facts on both sides
    - Pronouncement of the adjudication.
- Possible outcome of the adjudication
    - the medical student is fit for medical practice and recommend that he/she may continue on the course with no conditions.
    - there are grounds for concern as to the fitness of the medical student for medical practice but he or she may continue his or her course of study under specified conditions.
    - the medical student is unfit for medical practice with recommendations that may include:
        - suspension from studies
        - dismissal from University
        - informing law enforcement agencies
        - informing concerned professional licensing bodies
- The Chairperson of Committee on Fitness to Practice shall communicate the decision of the Committee in writing to the medical student and the Dean.

25.3.4 Appeal

- A medical student shall have the right of appeal against a decision of the

Committee on Fitness to Practice.

- The appeal shall be submitted in writing within twenty-eight consecutive days of the notification of the result of the decision to the Dean stating the grounds of appeal.
- The Dean will raise the ad hoc Dispute Resolution Committee to consider the appeal.
- During the consideration of the appeal, the decision of the Committee on Fitness to Practice shall remain in force.
- An Appeal hearing shall be arranged within one week of receiving the appeal in accordance with the following procedure:
- The medical student may choose to be accompanied by a nominated 'friend' from the MBRU community (for example, a student representative).
- The meeting shall be held in private
- The case by the Committee on Fitness to Practice shall be presented by its Chairperson, or nominee
- The student shall state his grounds for appeal and then his defense.
- The Committee on Fitness to Practice shall respond
- The student shall be given the opportunity to react to the response of the Committee on Fitness to Practice
- The Chairperson of ad hoc Dispute Resolution Committee shall summarize proceedings
- The Chairperson of ad hoc Dispute Resolution Committee shall pronounce the Committee's decision at the same or another sitting
- The ad hoc Dispute Resolution Committee may confirm, amend, or refer the decision back to the Committee on Fitness to Practice
- The Chairperson of the ad hoc Dispute Resolution Committee shall inform the Dean of the decision and the reasons for the decision within seven working days
- If, at any stage, it becomes apparent or it is suspected that the medical student's alleged problems are caused by ill health or disability, these procedures shall be suspended and the Committee's procedures for dealing with serious ill health shall be commenced
- If the Chairperson of any of the bodies involved considers that the medical student may have committed a legal offence, the Chairperson shall suspend proceedings and refer the circumstances to the Dean

25.4 Procedures for dealing with a medical student's serious illness or disability likely to affect fitness to practice medicine.

- Any member of the MBRU Community who has information, knowledge, or concern about any medical student's illness or disability likely to affect their fitness to practice medicine, has a responsibility to report to Dean.
- Medical students have a responsibility to report any illness or disability likely to affect their fitness to practice medicine to the Dean.
- The following procedures shall be followed for medical students whose health is considered to make them unfit for medical practice.
- The case shall be referred to the Chairperson of the Committee on Fitness to Practice.
- The Committee shall appoint a sub-committee of three of its members (with the option to co-opt experts as needed) to investigate the medical student's fitness to practice based on his/her health or disability and report to the full Committee.
- The Committee shall make a decision based on the findings of the sub-committee and shall communicate the decision in writing to the Dean.
- The Dean shall inform the student of the Committee recommendations.
- A medical student shall have the right to appeal against a decision of the Committee on Fitness to Practice to the Dean, who may decide on whether to appoint an ad hoc Dispute Resolution Committee.
- No member of the Committee who has had any involvement or interest in the case shall take part in the procedures set out above.