FACULTY OF MEDICINE AND MEDICAL SCIENCES

FACULTY OF MEDICINE AND MEDICAL SCIENCES &

FACULTY OF POST GRADUATE MEDICAL EDUCATION

OFFICERS OF THE UNIVERSITY

Warrak Elias	President of the University
Bahr George	Provost
Azar Sami	Vice President for Medical Affairs
Abboud Rami	Vice President for Internationalization & Engagement
Kanaan Salim	Vice President for Enrollment & Alumni Relations

OFFICERS OF THE FACULTY OF MEDICINE

Azar Sami	Dean of Faculty of Medicine and Medical Sciences and Faculty of Post Graduate Medical Education
Khachab Maha	Associate Dean for Medical Education and Academic Affairs
Yared Nadine	Associate Dean for Post Graduate Medical Education
Ibrahim Ahmad	Associate Dean for Research
Chammas Elie	Associate Dean for Faculty Affairs
Azoury Joseph	Associate Dean for Advancement
Lakkissian Zavi	Assistant Dean for Simulation
Abdulkarim Fadi	Assistant Dean for USA Affairs
Aoun Naji	Assistant Dean for Europe Affairs
Nabbout Ghassan	Assistant Dean for Continuing Medical Education
Merheb Marie	Assistant Dean for Students Affairs

OFFICE ADMINISTRATIVE STAFF

Farah George	Senior Administrative officer
Al-Ammar Grace	Administrative officer
Copti Majd	Administrative officer
Nseir Micheline	Administrative officer
Abou Madi Souha	Administrative Assistant
Sarkis Hala	Administrative Assistant
Margossian Talar	Secretary

FACULTY MEMBERS

DEPARTMENT OF BIOMEDICAL SCIENCES

Echtay Karim, Chairperson

Bahr Georges	Professor of Immunology and Virology
Echtay Karim	Professor of Biochemistry
Khachab Maha	Professor of Neuroscience and Physiology
Harb Frederic	Professor of Molecular Biophysics
Abi Khattar Ziad	Professor of Microbiology

Ghadieh Hilda	Associate Professor of Physiology
Kanaan Amjad	Clinical Associate Professor
Bazzi Samer	Assistant Professor of Immunology
Andraous Rana	Research Assistant
Nassar Aline	Research Assistant

DEPARTMENT OF INTERNAL MEDICINE
Nasr Samer, Chairperson

Division of Cardiology
Karam Nicole, Head of Division

Karam Nicole	Clinical Professor of Medicine
Nasr Samer	Clinical Professor of Medicine
Chammas Elie	Clinical Professor of Medicine
Kiwan Ghassan	Clinical Professor of Medicine
Skouri Hadi	Clinical Professor of Medicine
Saadeh George	Clinical Associate Professor of Medicine
Dib Hicham	Clinical Associate Professor of Medicine
Harbieh Bernard	Clinical Associate Professor of Medicine
Mansour Mohamad	Clinical Assistant Professor of Medicine
Estephan Antoine	Clinical Assistant Professor of Medicine
Sweidi Maroun	Clinical Assistant Professor of Medicine
Tarabay Antoine	Clinical Instructor of Medicine
Alam Bachir	Clinical Instructor of Medicine
AbdoJoseph	Clinical Instructor of Medicine
Ardo Charbel	Clinical Instructor of Medicine
ElKhoury Joseph	Clinical Instructor of Medicine
Ghawi Ragheda	Associate Physician
Achkar Mark	Associate Physician
Wajih Moussa	Associate Physician
Osman Raed	Associate Physician
El Khoury Fady	Associate Physician
Tabbah Randa	Associate Physician
Sbeiti Ali	Associate Physician

Division of General Medicine, Rheumatology and Immunology
Farah Elie, Head of Division

Farah Elie	Clinical Associate Professor of Medicine
Ali Reda Mohamad	Clinical Assistant Professor of Medicine
Saliba Georges	Clinical Assistant Professor of Medicine
Jaber Bassem	Clinical Instructor of Medicine
Jammal Mouin	Clinical Instructor of Medicine
Moussa Francis	Clinical Instructor of Medicine
Kassem Maha	Clinical Instructor of Medicine
Bitar Karim	Clinical Instructor of Medicine
Hamzeh Omar	Associate Physician

Division of Endocrinology and Metabolism
Saleh Monzer, Head of Division

Halaby Georges	Clinical Professor of Medicine
Gharios Elie	Clinical Professor of Medicine
El Hajj Georges	Clinical Associate Professor of Medicine
Merheb Marie	Clinical Associate Professor of Medicine
Saleh Monzer	Clinical Associate Professor of Medicine
Rawan Saab	Clinical Assistant Professor of Medicine
Barake Maya	Clinical Assistant Professor of Medicine
Sleilati Gina	Clinical Assistant Professor of Medicine
Abou jaoude Elizabeth	Clinical Assistant Professor of Medicine
Nakhoul Nancy	Assistant Professor of Medicine
Sleiman Dana	Clinical Instructor of Medicine
El Mais Rania	Clinical Instructor of Medicine
Souk Karina	Clinical Instructor of Medicine
Atallah Farida	Clinical Instructor of Medicine
Sabbagh Rawaa	Clinical Instructor of Medicine
Jaafar Batoul	Clinical Instructor of Medicine
Haddad Chaouki	Associate Physician

Division of Gastroenterology
Chaptini Louis, Head of Division

Chaptini Louis	Clinical Associate Professor of Medicine
Hachem Noha	Clinical Assistant Professor of Medicine
Osman Mahmoud Mohamad	Clinical Assistant Professor of Medicine
Fiani Elias	Clinical Assistant Professor of Medicine
Hani Pierre	Clinical Assistant Professor of Medicine
Salem Charelle	Clinical Instructor of Medicine
Al Bacha Rose	Clinical Instructor of Medicine
Haddad Rana	Clinical Instructor of Medicine
Melkissetian Mher	Associate Physician
Khalife Samer	Associate Physician

Division of Hematology - Oncology
Kamar Francois, Head of Division

Kamar Francois	Clinical Professor of Medicine
Ibrahim Ahmad	Clinical Professor of Medicine
Tabchy Adel	Clinical Associate Professor of Medicine
Farhat Fadi	Clinical Associate Professor of Medicine
Youssef Ali	Clinical Associate Professor of Medicine
Domloj Mesaab	Clinical Associate Professor of Medicine
Khater Roger	Clinical Associate Professor of Medicine
Abou Nasr Therese	Clinical Assistant Professor of Medicine
Khalil Ahmad	Clinical Assistant Professor of Medicine
Wehbe David	Clinical Assistant Professor of Medicine
Elias Fadia	Clinical Assistant Professor of Medicine

Younan Romy	Clinical Instructor of Medicine
Ayoubi Mona Ahmad	Clinical Instructor of Medicine
Younes Ahmad	Clinical Instructor of Medicine
El Ferkh Rachel	Associate Physician
Murr Rita	Associate Physician
Karam Elias	Associate Physician
Salem Mansour	Associate Physician
Sadek Maroun	Associate Physician

Division of Infectious Diseases
Jradeh Mona, Head of division

Jradeh Mona	Clinical Associate Professor of Medicine
El Helou Gilbert	Clinical Associate Professor of Medicine
Yared Nadine	Clinical Associate Professor of Medicine
Aoun Naji	Clinical Associate Professor of Medicine
Mallat Hassan	Clinical Associate Professor of Medicine
Youssef Mona	Clinical Assistant Professor of Medicine
El Helou Zahi	Clinical Assistant Professor of Medicine
Bou Harb Souad	Clinical Instructor of Medicine
Yammine Laure	Associate Physician
Rizk Nathalie	Associate Physician

Division of Nephrology
BouKhalil Lyn, Head of Division

Bou Khalil Lyn	Clinical Associate Professor of Medicine
Abou Jaoude Walid	Clinical Assistant Professor of Medicine
Abdo Ibrahim	Clinical Assistant Professor of Medicine
Itani Housam	Clinical Assistant Professor of Medicine
Abou Zeid Grace	Clinical Instructor of Medicine
Eid Jessica	Clinical Instructor of Medicine
Kheir Mohamad	Associate Physician

Division of Neurology
Gebeily Souheil, Head of Division

Gebeily Souheil	Clinical Professor of Medicine
Haidar Assad	Clinical Instructor of Medicine
Hilal Hanine	Associate Physician

Division of Pulmonary Medicine and Critic Care
Mourad Boutros, Head of Division

Mourad Boutros	Clinical Assistant Professor of Medicine
Fares Mirna	Clinical Assistant Professor of Medicine
Youakim Carole	Clinical Assistant Professor of Medicine
Mitri Stephanie	Clinical Assistant Professor of Medicine
ChahineZahia	Clinical Assistant Professor of Medicine
Chalouhi George	Clinical Assistant Professor of Medicine

Baaklini Celine	Clinical Assistant Professor of Medicine
Shakaroun Noura	Clinical Instructor of Medicine
Bleibel Jerar	Clinical Instructor of Medicine
Abou Zeid Caroline	Clinical Instructor of Medicine
Chamoun Clara	Clinical Instructor of Medicine
Sassine Diana	Clinical Instructor of Medicine
Bazarbachi Taha	Associate Physician
Chebbo Mahmoud	Associate Physician

DEPARTMENT OF DERMATOLOGY

Mufarrij Nancy, Chairperson

Zeinoun Shoukrallah	Adjunct Clinical Professor of Dermatology
Mufarrij Nancy	Clinical Associate Professor of Dermatology
El Hayek Claude	Clinical Assistant Professor of Dermatology
Khodeir Joe	Clinical Assistant Professor of Dermatology
Abi Rached Johnny	Clinical Assistant Professor of Dermatology
Azar Joyce	Clinical Assistant Professor of Dermatology
Khoury Freddy	Clinical Assistant Professor of Dermatology
Aoun Aziz	Clinical Instructor of Dermatology

DEPARTMENT OF EMERGENCY MEDICINE

Bazerbachi Nisrine, Chairperson

Bazarbachi Nisrine	Clinical Associate Professor of Emergency Medicine
Raad Dany	Clinical Instructor of Emergency Medicine
El Mokdad Jihad	Clinical Instructor of Emergency Medicine
Karame Bilal	Clinical Instructor of Emergency Medicine

DEPARTMENT OF FAMILY MEDICINE

Achkar Khalil, Chairperson

Ashkar Khalil	Clinical Associate Professor of Family Medicine
Brax Nina	Clinical Associate Professor of Family Medicine
Mattar Michel	Clinical Assistant Professor of Family Medicine
Sahyoun Francois	Assistant Professor of Family Medicine
Zaarour Fady	Clinical Instructor of Family Medicine
Naja Maha	Clinical Instructor of Family Medicine
Korbani Elie Tony	Clinical Instructor of Family Medicine
Lahoud Chady	Clinical Instructor of Family Medicine
Kassouf Vicky	Clinical Instructor of Family Medicine
Lattouf Vanessa	Clinical Instructor of Family Medicine
Isber Mariam	Instructor of Family Medicine

DEPARTMENT OF PSYCHIATRY

Hachem Dory, Chairperson

Hachem Dory	Clinical Associate Professor of Psychiatry
Haddad Georges	Clinical Associate Professor of Psychiatry
Aoun Michael Angelo	Clinical Assistant Professor of Psychiatry
Assaf Abboud	Clinical Assistant Professor of Psychiatry
Atallah Elie	Clinical Instructor of Psychiatry
Najib Eliane	Clinical Instructor of Psychiatry
Jreije Sayed	Clinical Instructor of Psychiatry
Dahdouh Oussama	Clinical Instructor of Psychiatry
Bazzi Zeinab	Clinical Instructor of Psychology
Yaacoub Hiba	Associate Physician

DEPARTMENT OF RADIOLOGY

Haddad Marwan, Chairperson

Haddad Marwan	Clinical Associate Professor of Radiology
Yammine Kabalan	Clinical Associate Professor of Radiology
Faddoul Sami	Clinical Associate Professor of Radiology
Sammour Maya	Clinical Assistant Professor of Radiology
Geara Aline	Clinical Assistant Professor of Radiology
Chouraiki Gida	Clinical Assistant Professor of Radiology
Charbel Fares	Clinical Assistant Professor of Radiology
Abs Layla	Clinical Assistant Professor of Radiology
Kheir Costy	Clinical Assistant Professor of Radiology
Abi Ghosn Jean	Clinical Instructor of Radiology
Chahinian Rita	Clinical Instructor of Radiology
Sfeir Reine	Associate Physician
Kanso Hassane	Associate Physician
Naous Elios	Associate Physician
Nassar Anis	Associate Physician
Wakim Wakim	Associate Physician

DEPARTMENT OF ANESTHESIOLOGY

Ghabach Maroun, Chairperson

Ghabach Maroun	Clinical Professor of Anesthesiology
Warrak Pascale	Clinical Associate Professor of Anesthesiology
Karam Violette	Clinical Assistant Professor of Anesthesiology
Boulos Rita	Clinical Assistant Professor of Anesthesiology
Dahrouj Ghassan	Clinical Assistant Professor of Anesthesiology
Itani Omar	Clinical Assistant Professor of Anesthesiology
Chaaban Mohammad Jamil	Clinical Assistant Professor of Anesthesiology
Azar Mireille	Clinical Assistant Professor of Anesthesiology
Bachawati George	Clinical Assistant Professor of Anesthesiology
Abi Rafeh Lise	Clinical Assistant Professor of Anesthesiology

Fadlo Sayegh	Clinical Assistant Professor of Anesthesiology
Korkomaz Rizkallah	Clinical Assistant Professor of Anesthesiology
Roumoulian Caroline	Clinical Assistant Professor of Anesthesiology
Al Maalouly Joseph	Clinical Instructor of Anesthesiology
Geahchan Nathalie	Clinical Instructor of Anesthesiology
Nasr Paul	Clinical Instructor of Anesthesiology
Choueifaty Nouhad	Clinical Instructor of Anesthesiology
Mokaddem Farah	Clinical Instructor of Anesthesiology
Safi Bilal	Clinical Instructor of Anesthesiology
Moukadem Mazen	Clinical Instructor of Anesthesiology
Nakhoul Mikhael	Clinical Instructor of Anesthesiology
Nehme Patricia	Associate Physician
Machmouchi Rabih	Associate Physician
Eid Sarah	Associate Physician
Zaouk Ghaleb	Associate Physician
Salameh Sahar	Associate Physician
Nasr Elias	Associate Physician
Khairallah Roula	Associate Physician
Khairallah Louisa	Associate Physician

DEPARTMENT OF PEDIATRICS

Inati Adlette, Chairperson

Inati Adlette	Clinical Professor of Pediatrics
Kaldany Patricia	Clinical Associate Professor of Pediatrics
Salem Elie	Clinical Assistant Professor of Pediatrics
Kanso Kamal	Clinical Assistant Professor of Pediatrics
Bachir Noha	Clinical Assistant Professor of Pediatrics
Alameh Joumana	Clinical Assistant Professor of Pediatrics
Massouh Ziad	Clinical Assistant Professor of Pediatrics
Dib Guylnar	Clinical Assistant Professor of Pediatrics
Al Hage Chehade Ghada	Clinical Assistant Professor of Pediatrics
Cherfan Pamela	Clinical Assistant Professor of Pediatrics
Diab Hiba	Clinical Instructor of Pediatrics
Touma Merhej Marie Therese	Clinical Instructor of Pediatrics
Kayal Dima	Clinical Instructor of Pediatrics
Abou Nader Marina	Clinical Instructor of Pediatrics
Sabouneh Maha	Clinical Instructor of Pediatrics
Khoury Dany	Clinical Instructor of Pediatrics
Bitar Wassim	Associate Physician
Rahhal Maya	Associate Physician
Dghaily Ali	Associate Physician
Helbawi Ali	Associate Physician
Baydoun Abir	Associate Physician
Youssef Yolla	Associate Physician
Tleis Faycal	Associate Physician

Tohme Racha	Associate Physician
Abdel Massih Elia	Associate Physician
AbouJaoude Ramzi	Associate Physician
El Khoury Michel	Associate Physician
Ghabril Ramy	Associate Physician
Mourani Chebel	Associate Physician
El Zoghbi Silvana	Associate Physician
Khalife Hassan	Associate Physician
Shaker Rouba	Associate Physician
Dannaoui Maha	Associate Physician
Rachkidi Youssef	Associate Physician
Feghali Desirée	Associate Physician

DEPARTMENT OF SURGERY
Tayyar Claude, Chairperson

Division of General Surgery
Wakim Raja, Head of Division

Wakim Raja	Clinical Professor of Surgery
Geahchan Najib	Clinical Professor of Surgery
Abou Jaoude Maroun	Clinical Professor of Surgery
Tayar Claude	Clinical Professor of Surgery
Salamoun Walid	Clinical Professor of Surgery
Allouch Moustapha Ismail	Clinical Associate Professor of Surgery
Younan Antoine	Clinical Associate Professor of Surgery
Nabbout Ghassan	Assistant Professor of Surgery
Harb Mahmoud	Clinical Assistant Professor of Surgery
AounCharbel Joseph	Clinical Assistant Professor of Surgery
El Barouki Elie	Clinical Instructor of Surgery
El Khoury Michael	Clinical Instructor of Surgery
Khalifeh Georges	Clinical Instructor of Surgery
Bitar Henri	Clinical Instructor of Surgery
Hajjar Mounir	Associate Physician
Kfoury Tony	Associate Physician
Houkayem Michel	Associate Physician
Dannaoui Monzer	Associate Physician
Douaihy Youssef	Associate Physician
Chahine Jimmy	Associate Physician

Division of Neurosurgery
Louak Elie, Head of Division

Saikaly Ibrahim	Clinical Associate Professor of Surgery
Louak Elie	Clinical Assistant Professor of Surgery
AwarOmar	Clinical Assistant Professor of Surgery
Bitar Elias	Clinical Assistant Professor of Surgery

Yahya Raafat	Clinical Instructor of Surgery
Fahed Elie	Associate Physician
Younes Philippe	Associate Physician

Division of Plastic Surgery
Abi Abboud Antoine, Head of Division

Abi Abboud Antoine	Clinical Assistant Professor of Surgery
El Hajj Hiba	Clinical Assistant Professor of Surgery
Khoury Bourgi Joseph	Clinical Assistant Professor of Surgery
Abi Saleh Riad	Clinical Assistant Professor of Surgery
Frangieh Tannous	Clinical Instructor of Surgery
Hakim Christopher	Clinical Instructor of Surgery
Hanna Cyril	Clinical Instructor of Surgery
Nassreddine Hassan	Clinical Instructor of Surgery
Kodeih Mohammad	Clinical Instructor of Surgery
Said Ghassan	Associate Physician

Division of Cardiothoracic Surgery
Teddy Georges, Head of Division

Teddy Georges	Clinical Associate Professor of Surgery
Ayoubi Amir	Clinical Assistant Professor of Surgery
Bitar Elie	Clinical Instructor of Surgery

Division of Urology
Sakr Ghazi, Head of Division

Hajj Pascal	Clinical Professor of Surgery
Ayoub Nadim	Clinical Associate Professor of Surgery
Sakr Ghazi	Clinical Assistant Professor of Surgery
Bouyounes Boutros	Clinical Assistant Professor of Surgery
Chemaly Anthony	Clinical Assistant Professor of Surgery
Armache Khalil	Clinical Assistant Professor of Surgery
Tinaoui Mohamad	Associate Physician
Chaanine Ziad	Associate Physician

Division of Vascular Surgery
Haddad Fady, Head of Division

Haddad Fady	Adjunct Clinical Professor of Surgery
Samia Zaki	Clinical Assistant Professor of Surgery
Gerges Christian	Clinical Assistant Professor of Surgery
Bandaly Fouad	Clinical Instructor of Surgery

Division of Pediatric Surgery
Diab Nabil, Head of Division

Diab Nabil	Adjunct Clinical Associate Professor of Surgery
Reva Matta	Associate Physician

DEPARTMENT OF OTORYNOLARYNGOLOGY

Moukarbel Roger, Chairperson

Moukarbel Roger	Clinical Professor of Otorynolaryngology
Abi Akl Pierre	Clinical Assistant Professor of Otorynolaryngology
Ghazi Hanna	Clinical Assistant Professor of Otorynolaryngology
Sawalhi Walid	Clinical Assistant Professor of Otorynolaryngology
Farhat Firas	Clinical Assistant Professor of Otorynolaryngology
Serhal Samer	Associate Physician

DEPARTMENT OF OBSTETRICS & GYNECOLOGY

Abu Musa Antoine, Chairperson

Abu Musa Antoine	Clinical Professor of OBGYN
Anastasiades Elie	Clinical Professor of OBGYN
AzouryJoseph	Clinical Professor of OBGYN
Nakad Toufic	Clinical Associate Professor of OBGYN
Abi Nader Khalil	Clinical Assistant Professor of OBGYN
Darazi Nicolas	Clinical Assistant Professor of OBGYN
Hamze Hassan	Clinical Assistant Professor of OBGYN
Naoufal Karim	Clinical Assistant Professor of OBGYN
Houssam Abdel Reda	Clinical Assistant Professor of OBGYN
El Aly Abdelwahab	Clinical Assistant Professor of OBGYN
Chaaban Mustapha	Clinical Assistant Professor of OBGYN
Ghanimeh Joseph	Clinical Assistant Professor of OBGYN
Chalhoub Elie	Clinical Assistant Professor of OBGYN
Naba Toufic	Clinical Assistant Professor of OBGYN
Sakr Charles	Clinical Instructor of OBGYN
Sawaya John	Clinical Instructor of OBGYN
EL Litani Nadim	Clinical Instructor of OBGYN
Charafeddine Nemr	Clinical Instructor of OBGYN
El Ghaoui Antoine	Clinical Instructor of OBGYN
El Ayat Joelle	Clinical Instructor of OBGYN
Fakih Chady	Associate Physician

DEPARTMENT OF ORTHOPEDIC SURGERY

Moucharafieh Ramzi, Chairperson

Moucharafieh Ramzi	Clinical Professor of Orthopedics
Badra Mohammad	Clinical Professor of Orthopedics
Bachour Falah	Clinical Professor of Orthopedics
El Helou Abdo	Clinical Assistant Professor of Orthopedics
Haykal Gaby	Clinical Assistant Professor of Orthopedics
Boueiri Wissam	Clinical Assistant Professor of Orthopedics
AtallahFiras	Clinical Assistant Professor of Orthopedics
Choufani Michel	Clinical Assistant Professor of Orthopedics
Maalouly Joseph	Clinical Assistant Professor of Orthopedics

Cahlouhi Mario	Clinical Instructor of Orthopedics
Sakr Mazen	Clinical Instructor of Orthopedics
Dib Gaby	Clinical Instructor of Orthopedics
Hage Samer	Associate Physician
El Rachkidi Rami	Associate Physician
Matta Jihad	Associate Physician
Kourtian Watche	Associate Physician
Bayoud Wael	Associate Physician
Makhoul Elie	Associate Physician
Haddad Ibrahim	Associate Physician
Abi Akl Joe	Associate Physician

DEPARTMENT OF OPHTHALMOLOGY

Warrak Elias, Chairperson

Warrak Elias	Professor of Ophthalmology
Warrak. Rania	Clinical Instructor of Ophthalmology
Abiad Bashir	Associate Physician

DEPARTMENT OF PATHOLOGY

Aftimos George, Chairperson

Aftimos George	Clinical Professor of Pathology

ELIAS G. EL CHAMI MEDICAL SIMULATON CENTER

Bassim Youssef	Administrative Director
Lakissian Zavi	Clinical Director
Khalil Hussam	Academic Coordinator
Zakaria Samer	Technical Coordinator
Damaa Nour	Administrative Coordinator

UNIVERSITY HEALTH CENTER

Isber Mariam	Family Medicine
Khoury Dany	Pediatrics
Jurayj Wafaa	Internal Medicine
Razzouk Jibrayil.	Family Medicine
Semaan Souha	Nurse
Laun Randa	Nurse
Farjallah Joelle	Nurse

FACULTY OF MEDICINE & MEDICAL SCIENCES

MEDICAL PROGRAM

The MD program is structured around competency-based education and spans four years. The first two years focus on foundational and pre-clinical sciences (MEDICINE I and MEDICINE II), while the final two years are dedicated to clinical clerkships (MEDICINE III and MEDICINE IV).

The Faculty of Medicine and Medical Sciences offers a vertically integrated pre-clinical curriculum. This curriculum combines basic biomedical and clinical sciences to provide students with an interconnected understanding of the main scientific principles required for acquiring and applying clinical knowledge. The thematic axes of this curriculum include: Fundamentals of Medicine, The Scientific Method, Introduction to Clinical Science, Medicine and Society, Organ-based Modules, and Introduction to Clinical Medicine.

The MEDICINE III and MEDICINE IV curricula are patient-centered, incorporating both core clerkships and elective rotations to provide students with comprehensive exposure to all medical specialties and subspecialties in a supervised academic environment. During the clinical years, students rotate through university-affiliated hospitals and participate in a variety of clerkships across different medical fields and levels of acuity, including core disciplines such as Internal Medicine, Surgery, Psychiatry, Obstetrics and Gynecology, and Pediatrics, as well as specialty and subspecialty rotations. This structured curriculum ensures the comprehensive development of clinical knowledge and skills across both core specialties and subspecialties, preparing students to become well-rounded, competent, and professional physicians.

FACULTY OF MEDICINE ADMISSIONS

Candidates are selected based on a review of their academic record and an evaluation of their personal attributes through an interview conducted by an Admissions Committee appointed and chaired by the Dean of the Faculty of Medicine.

Academic Record

- A Bachelor’s degree from a recognized institution with completion of premedical requirements as follows:

- Biology courses with a laboratory component. 8 credits - minimum of 2 courses

- Chemistry (General, Organic, Inorganic) with laboratory components. 12 credits - minimum of 3 courses.
- Physics/Basic Electronics with laboratory components. 6 credits - minimum of 2 courses
- Cultural Studies. At least 6 credits

- The official academic transcript
- The MCAT scores
- English Language Competency
- Three letters of reference
- Personal statement

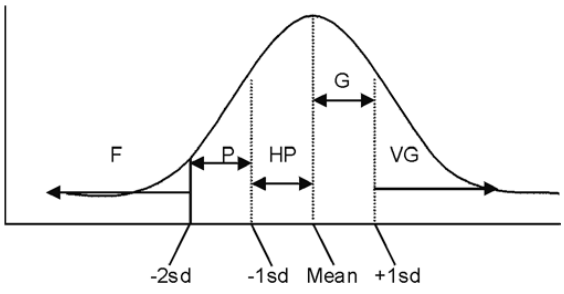
The Faculty of Medicine, in collaboration with the Faculty of Sciences, is prepared to offer an intensive remedial program designed to prepare students from diverse academic backgrounds.

ACADEMIC REGULATIONS

1. **Grading System**

The Faculty of Medicine and Medical Sciences defines the grade boundaries as follows:

- **Honors (H)** or the top 10% of assessment grades
- **Very Good** (VG > Mean + 1sd)
- **Good** (Mean < G < Mean + 1sd)
- **High Pass** (Mean-1sd < HP < Mean)
- **Pass** (Mean - 2sd < P < Mean - 1sd)
- **Fail** (F < Mean - 2sd)



2. Preclinical Attendance & Exam Policy

Preclinical students are required to attend all scheduled learning activities, including interactive Q&A sessions, clinical case presentations, case discussions, and laboratory sessions. Any unexcused absence will result in a formal warning letter. Repeated absences may lead to an Incomplete (I) or Failing (F) grade for the course. Students who are absent from sessions due to illness or other valid reasons must submit appropriate documentation to the Dean's Office via email. Only absences verified by the Dean's Office will prevent the issuance of a warning letter.

Students are required to attend all exams on the scheduled dates and times. If a student is unable to attend an exam, they must submit documentation to the Dean's Office for validation. The Dean's Office is the sole authority for approving or rejecting absences.

If an absence is validated, the student will receive an Incomplete (I) grade and will be scheduled for a make-up exam at a time determined by the preclinical committee. If the absence is not validated, the student will receive a Failing (F) grade. Requests for make-up exams submitted without prior validation will be reviewed by the preclinical committee, which will decide whether a make-up exam can be granted.

3. Clinical Attendance & Exam Policy

Clinical students must attend all scheduled hospital-based clerkship activities, including inpatient rounds, outpatient clinics, on-call shifts, procedural sessions, simulation training, grand rounds, and teaching conferences. Because clinical education relies on active participation in patient care, any absence not approved by the Dean's Office constitutes a violation of the attendance policy and will be formally recorded. Repeated or unjustified absences may result in failure of the clerkship. Students who must miss clinical duties due to illness or other valid reasons are required to notify the Dean's Office promptly and submit supporting documentation via email. Only absences approved by the Dean's Office will prevent negative academic consequences.

If a student is unable to attend an exam or OSCE due to illness or other valid reasons, they must promptly notify the Dean's Office and submit appropriate documentation via email. Only absences reviewed and approved by the Dean's Office will prevent negative academic consequences.

If the absence is validated, the student will receive an Incomplete (I) grade and will be scheduled for a make-up exam or assigned to another cohort for an OSCE at a time determined by the Dean's

Office. If the absence is not validated, the student will receive a Failing (F) grade. Requests for make-up exams or OSCEs submitted without prior validation will be reviewed by the Faculty Council, which will determine whether a make-up opportunity can be granted.

4. Preclinical Assessment Performance Regulations

1. If a student receives a final failing grade in any course, the preclinical committee will decide at the end of the academic year whether the student may sit for a make-up exam. If the student fails the make-up exam, the committee may require the student to repeat the academic year.
2. If a student accumulates up to 12 credits of failing grades, the preclinical committee may require the student to either repeat the academic year or withdraw from the Faculty of Medicine.
3. If a student who is repeating an academic year receives a final failing grade in any course, the preclinical committee may require the student to withdraw from the Faculty of Medicine.

Regardless of the number of failing credits, the preclinical committee has the authority to:

- Deny a student the opportunity to sit for make-up exam(s)
- Require a student to sit for make-up exam(s)
- Require a student to repeat the academic year
  based on the committee's evaluation of the student's overall performance at the end of the academic year.

4. All make-up exams are assigned a letter grade of either **F or P**. The grade **P** corresponds numerically to the lowest passing score achieved by the student cohort, irrespective of the actual score obtained by the student on the make-up exam.
5. If a student fails a make-up exam for a course in which they previously received an **Incomplete (I)** grade, the preclinical committee may require the student to sit for an additional make-up exam, depending on the student's overall performance.

The Below 45 Grade Policy

If a student's numerical grade is below 45/100, it is recorded as Incomplete (I), regardless of the statistical letter grade. The preclinical committee may allow a make-up exam to convert the Incomplete to a Passing grade.

If the student scores below 45/100 on the make-up exam, the grade becomes a Failing (F). The committee will decide the timing of any make-up exam.

Grade Release

Assessment results are issued as numerical grades following review and approval by the course director. Final course grades are issued as letter grades upon approval by the preclinical committee.

Students receive a warning letter from the Dean's office whenever they obtain a failing grade in any course, notifying them of their academic standing and urging improvement.

5. Clinical Assessment Performance Regulations

Student performance in each clinical rotation is assessed through three components: Clinical Performance, the Objective Structured Clinical Examination (OSCE), and the NBME Examination. To pass a rotation, a student must achieve an overall average of 60% or higher, attain at least 60% in both the Clinical Performance and OSCE components, and score a minimum of 50% on the NBME Examination. Failure to meet the minimum threshold in any component results in a conditional failure, regardless of the overall average.

If a student fails only one component, the student is required to repeat that specific component; if two or more components are failed, the student must repeat the entire clinical rotation. **Persistent unprofessional behavior or repeated unexcused absences may independently result in failure of the Clinical Performance component or in automatic failure of the rotation.**

Failure to meet the passing requirements after repeating a rotation may result in the student being required to repeat the academic year or based on the Faculty Council's review, being dismissed from the program.

6. Promotion

Promotion to the next preclinical year requires successful completion of all courses in the preceding year. Accordingly, students must pass all MEDICINE I courses to advance to MEDICINE II, and all MEDICINE II courses to advance to MEDICINE III.

Passing all preclinical courses does not ensure promotion. After reviewing the student's overall academic performance, the Preclinical Committee may require the student to complete one or more make-up examinations or, if deemed necessary, repeat the academic year.

To be promoted to the next clinical year, a student must successfully complete all required clinical rotations, meet all professionalism and attendance standards, and satisfy any additional academic or administrative requirements set by the Faculty of Medicine. Based on its evaluation of the student's overall clinical performance, the Faculty Council may require the student to repeat specific rotations, complete additional assessments, or repeat the academic year.

7. Dismissal from the MD Program

A student may be dismissed from the program for failing a course in a repeated year, accumulating failing credits, failing a clinical rotation after repetition, engaging in persistent unprofessional behavior, committing academic dishonesty, having repeated unexcused absences, or failing to meet the program academic standards as determined by the Preclinical Committee, Faculty Council, or Dean's Office.

8. Disciplinary Action

Medical students are expected to uphold the highest standards of professionalism, integrity, and responsibility. The following may result in disciplinary action:

- Repeated unexcused absences during preclinical or clinical years
- Academic dishonesty
- Persistent unprofessional behavior
- Actions that compromise patient safety or institutional policies

All disciplinary decisions are made by the Faculty **Disciplinary Committee** appointed by the Dean's Office, which evaluates each case in the context of the student's overall academic and professional performance.

COURSE DESCRIPTIONS

MEDICINE I

Medical Biochemistry (BIOC 404) Nb. of Credits: 4

The Medical Biochemistry course is designed to provide medical students with a fundamental understanding of the current concepts of human biochemistry. The course gives greater emphasis to the medical and physiological implications of biochemistry and to human metabolism and its regulation than a traditional introductory biochemistry course. Interspersed throughout the course is a substantial number of clinical cases correlated to the topics of the lecture series to demonstrate the relevance of biochemistry to health and disease.

Cellular Physiology & Biophysics (CPBI 402) Nb. of Credits: 2

This course introduces medical students to the use of biophysics and the principles of cellular physiology in determining the function of excitable membranes. The course also addresses the physical basis of the resting membrane potentials and the ionic mechanisms of generation and conduction of action potentials. The purpose of the course is to direct the attention of medical students to the importance of cellular physiology in underlying the foundation of several mechanisms in clinical science.

Medical Genetics (MGEN 402) Nb. of Credits: 2

The course introduces the basic concepts of Genetics in Medicine. The course provides medical students with a variety of genetic disorders they will encounter in their clinical practice and addresses their modes of inheritance and the techniques used for their identification and diagnosis.

Immunology (IMUN 402) Nb. of Credits: 2

This course provides medical students with a clear understanding of the immune system, its functions in health and disease, and the approaches employed in the management of immune-based pathologies. The course discusses the various immune effector mechanisms and links them to

protection against infections or tumors. It also clarifies how over-active or diminished immune responses could result, respectively, in hypersensitivity or immunodeficiency diseases.

Biostatistics and Epidemiology (EPST 402) **Nb. of Credits: 2**

This course introduces medical students to the basic principles and applications of biostatistics and epidemiology, as they relate to problems in clinical and public health settings. The course covers topics that range from simple descriptive statistics and presentation of data to principles of hypothesis testing. The principles, methods and research designs used to describe and evaluate the patterns of illness in communities and to investigate the etiology of infectious and noninfectious diseases are also addressed. Furthermore, concepts in evaluation of epidemiological findings such as confounding, effect measure modification, and measures of attribution of disease burden to specific exposures are presented.

Medical Ethics (METH 401) **Nb. of Credits: 1**

This course is designed to introduce medical students to the ethical principles governing the medical profession in order to focus on the person-patient behind the disease, rather than the disease itself. The course is also intended to provide students with the opportunity to reflect on the ethical dimension of medicine to address the ethical issues they may encounter in their own practice.

History of Medicine and Pandemics (HMED 401) **Nb. of Credits: 1**

The course surveys the history of medical knowledge and practice from antiquity to the present in the purpose of giving students a practical introduction to the fundamental questions and methods of the history of medicine and to foster a critical understanding of medicine's role in contemporary society. Moreover, the course aims to present a historical, scientific, and cultural context about pandemics to draw parallels between the last outbreak recorded and the emergence of modern times COVID-19.

The Profession of Medicine and Community Medicine (PMCM 401) Nb. of Credits: 1

This course is intended to show medical students the importance of Medicine as a "noble profession" and to discuss the challenges and the stressors experienced during their years in medical school in order to propose solutions to boost their motivation. In addition, the course prepares students to change the view of "a doctor toward one single patient" to a "whole community health" to be by then familiar and skilled with the concept of "Community Medicine practice".

Basic Histology & Pathology (HPAT 412) Nb. of Credits: 2

This course introduces students to the fundamental principles in cellular organization into tissues, organs, and organ systems and describes the microscopic anatomy and function of the four basic tissue types. The course also addresses the cellular mechanisms of diseases with the associated microscopic processes triggering alterations in the structure and function of organs and organ systems.

Basic Pharmacology (PHAR 401) Nb. of Credits: 1

This course is designed to introduce medical students to the basic principles of pharmacology (pharmacokinetics, pharmacodynamics, and pharmacogenetics) and to several classes of therapeutic agents. The course also discusses the mechanisms of action, adverse effects and therapeutic uses of these agents and addressess the toxicology associated with these drugs (overdose) and other agents (toxins, heavy metals).

Clinical Bacteriology (CBAC 402) Nb. of Credits: 2

This course introduces students to the world of bacteria from a medical perspective. It describes the biology of bacteria as infectious agents, their major classification and interaction with the host. The course also discusses the mechanisms of infections, addresses specimen collection, handling and the major diagnostic tests required for identification of the different bacteria, and briefly introduces antibiotic stewardship and therapy.

Clinical Virology (CVIR 402) **Nb. of Credits: 2**

This course explores the epidemiology, classification, basic components, and modes of replication and pathogenesis of clinically-relevant human viruses. The course will also cover the various virus detection methods, as well as the available anti-viral treatments and vaccines.

Parasitology and Mycology (PAMY 401) **Nb. of Credits: 1**

This course covers the basic aspects of medical mycology and parasitology. The course focuses on the terminology, epidemiology, disease processes and common etiologic agents associated with cutaneous, subcutaneous, systemic and opportunistic fungal infections, as well as their treatments. The course also explores the characteristics, life cycles, pathogenicity, epidemiology, treatment, and testing methods of selected parasites.

Medical Human Gross Anatomy (MHGA 424) **Nb. of Credits: 4**

This course introduces medical students to the anatomic and medical terminology relevant to the form, structure and function of the systems of the human body. It consists primarily of regional dissections of the human body, and emphasis is placed on the integration of the anatomical concepts into the clinical setting and the use of cross-sectional and radiologic anatomy.

Cardiovascular Medicine (CARD 405) **Nb. of Credits: 5**

This course is designed to provide students with an integrated knowledge of the normal structure and function of the cardiovascular system and the cardiovascular pathology, pathophysiology and pharmacology. The course also guides students through a clinical perspective towards the diagnosis, prevention and treatment of the major diseases of the cardiovascular system.

Pulmonary Medicine (PULM 404) **Nb. of Credits: 4**

This course provides students with the knowledge about the structure and the homeostatic function of the respiratory system to build upon the pathology, pathophysiology, diagnosis and treatment of patients with pulmonary diseases. The integration of pulmonary physiology with the clinical concepts will allow students to understand the pathological and pathophysiological processes of major diseases and identify the treatments and medications that ameliorate the disease process.

Renal Medicine (NEPH 404) **Nb. of Credits: 4**

This course provides medical students with the knowledge about the excretory and homeostatic functions of the renal and urinary systems to serve as a basis to address the renal and bladder disorders along with their pathological, pathophysiological, and pharmacological treatment. The course also covers the diagnosis of acute kidney injury and chronic kidney disease along with their different unerlying etiologies, as well as renal transplantation and dialysis.

Family Medicine/Clinical Skills I (CLSK 421) **Nb. of Credits: 1**

This course provides medical students with the ability to properly communicate with the patient (by history taking) and disclose the objective complaints (by physical examination) to lead to an accurate diagnosis and provision of the appropriate treatment.

This course is a two-step process that starts with the student's acquisition of skills in history taking and ends with the acquisition of skills in performing an organized and thorough physical examination.

Principles of Medical Research Methods (PMRM401) **Nb. of Credits: 1**

This course aims to provide students with the principles of good research practice in Medicine by addressing the process of developing a research hypothesis and formulating a research proposal, as well as discussing the common research methodologies in clinical research. The course also covers the ethical, legal, and regulatory principles in research involving human subjects.

MEDICINE II

Skin and Musculoskeletal System (SKMS 504) 4 credits

This course addresses the normal skin microscopic anatomy and functions and focuses on themajor skin and soft tissue diseases with their clinical presentation, diagnosis andmanagement. The course also discusses skeletal muscle physiology and the mechanisms of neural control of skeletal muscle function with clinical correlations. Moreover, the course presents the relationship between the connective tissues of the body and the associated immune and inflammatory states, as well as the effects of the immune system in respondingto pathogens and injury and the generation of autoimmunity states. Additionally, a description of the most important treatments for the common

rheumatologic diseases, immunotherapy and immunoprophylaxis, and imaging of the musculoskeletal system are presented.

Hematology and Oncology (HEON503) 3 credits

This course discusses hematopoiesis, blood components, and the main mechanisms of hemostasis to set the background for addressing blood disorders, complications of neutropenia and lymphadenopathy, transfusion medicine, and oncologic diseases and emergencies. The course also covers the strategies for the diagnosis of blood and lymphatic disorders and the approach to their management, as well as the pharmacotherapy of anemia,chemotherapy, antiplatelets and anticoagulants.

Endocrine and Reproductive Medicine (ENRP504) 4 credits

This course addresses the hormones synthetic pathways and their mechanisms of action and emphasizes the main endocrine and metabolic disorders with their treatment strategies, as well as endocrine emergencies. The course also discusses the hormonal regulation of the maleand female reproductive cellular organization and functions in development and adulthood, their pathology and main infections and their associated behavioral and pharmacological treatments.

Medical Neuroscience (MNEU505) 5 credits

This course provides students with an integrated knowledge foundation in the development, microscopic structure, gross anatomy, physiology and imaging of the human nervous systemand the head and neck region. The course also addresses the basic mechanisms in neurophysiology and the organization of sensory and motor systems to set the framework forthe localization of the neuroanatomical lesions, presentation of the neurological diseases of the central and peripheral nervous system with emphasis on the manifestations of their symptoms and signs, pathology, pathophysiology and treatment strategies, as well as imagingin clinical practice.

Normal Human Behavior and Mental Disorders (NBMD 502) 2 credits

This course presents the normal and abnormal human behaviors and focuses on the impactof the major influences of human behavior on the presentation of diseases. The course alsoaddresses the major mental disorders and their management modalities.

Health Promotion in Public Health (HPPH 502) 2 credits

This course provides medical students with the essential concepts and principles of health promotion to develop an understanding for the significance of health promotion priorities and strategies for disease prevention within the context of public health.

Gastrointestinal Medicine & Nutrition (GAST524) 4 credits

The course introduces the principles of human nutrition with a description of prevention and management of selected diseases with diet and sets the knowledge framework for the integration of the normal principal functions of the GI system with the pathological and pathophysiological processes of diseases of the GI tract, including the hepatobiliary and pancreatic systems. The course addresses the main regulatory mechanisms of GI functions and the processes of motility, secretion, digestion and absorption and covers the pathology, pathophysiology, as well as the treatment and management of patients with GI, hepatic and pancreatic disorders.

Infectious Diseases: Pathophysiology & Treatment Strategies (INFE 502) 2 credits

This course addresses complicated, widespread and opportunistic infections as well as nosocomial and head and neck infections. In this course, the modes of transmission of bacterial, viral and mycobacterial infections along with their clinical syndromes are described. HIV, fever with rash and fever of unknown origin are presented. The pharmacology of antimicrobials, bacterial resistance to antimicrobial agents and strategies for their control as well as infection control measures are discussed.

Family Medicine - Clinical Skills

(CLSK534) 4 credits

This course aims to emphasize to students the integration of medical knowledge with clinical skills and professional attitude as a prerequisite for effective patient care. In this course, students apply the ethical standards in clinical care, identify key elements in patient history taking within each specialty, review physical examination skills acquired in Clinical Skills I course, and identify abnormal findings on physical examination.

Introduction to Clinical Immunology (ICIM502) 2 credits

The Introduction to Clinical Immunology is a comprehensive course that provides an overview of the basic knowledge in pathogenesis, diagnosis and general approach of treating patients with inherited or acquired failures of the immune system that lead to auto-immune or auto-inflammatory complications, such as autoimmune/autoinflammatory diseases and vasculitis.

Advanced Medical Research Methods (AMRM503) 3 credits

The objective of this course is to prepare medical students to critically evaluate medical literature and conduct their own research, as well as to address the ethical principles governing the conduct of human research. The course discusses the advanced research methods used to enhance medical students' understanding of various types of research designs including advanced case-control studies, cohort studies, clinical trials, systematic reviews and meta-analysis. Students will also learn about the impact of confounding and biases on research and the role of Directed Acyclic Graphs (DAGs) in identifying and controlling for confounding. Moreover, the course addresses the advanced analysis methods to introduce medical students to various innovative approaches in statistical analysis. Students will learn how to manage missing data, describe time to event, interrupt survival curves, differentiate between multivariable and multivariate analysis and appraise psychometric properties of scales.

MEDICINE III

CLINICAL CLERKSHIP IN INTERNAL MEDICINE (CCIM 612) 12 Weeks

The clinical clerkship in Internal Medicine spans 12 weeks, including a 4-week placement in a community health center. Its primary purpose is to provide students with structured opportunities to apply foundational medical knowledge in real clinical settings and to develop core competencies in patient care. Throughout the rotation, students are expected to develop proficiency in obtaining comprehensive patient histories, conducting complete physical examinations, formulating appropriate differential diagnoses, and interpreting pertinent laboratory and radiologic findings. They are also required to produce supervised progress notes that accurately document each patient's clinical course, participate in clinical conferences, and engage in structured case discussions to enhance their clinical reasoning skills. At the end of the clerkship, students complete an Objective Structured Clinical Examination (OSCE) to assess their clinical skills and overall competency.

CLINICAL CLERKSHIP IN SURGERY (CCSU 612) 12 Weeks

During the twelve-week Surgery clinical clerkship, students are introduced to the fundamental principles of surgery and rotate through general surgery, orthopedics, urology, and cardiothoracic and vascular surgery. Throughout these rotations, students develop foundational knowledge of common surgical conditions, which supports their ability to formulate appropriate differential diagnoses and to understand the management of surgical patients, including those presenting with emergent conditions. Students are expected to communicate effectively with patients, obtain comprehensive medical histories, and participate in patient evaluation and workup. Under supervision, they also learn the essential principles of preoperative preparation, operative management, and postoperative care. Moreover, students are required to attend clinical conferences and actively prepare for and participate in structured clinical discussions.

CLINICAL CLERKSHIP IN OBSTETRICS & GYNECOLOGY (CCOG 608) 8 Weeks

The eight-week clinical clerkship in obstetrics and gynecology provides students with foundational knowledge of the specialty and develops their skills in obtaining comprehensive patient histories, performing pelvic examinations, and managing obstetric and gynecologic conditions. Students

meet regularly with attending physicians to discuss cases, review charts, and engage in structured clinical learning. At the end of the clerkship, students complete an Objective Structured Clinical Examination (OSCE) to assess their clinical skills and overall competency.

CLINICAL CLERKSHIP IN PEDIATRICS (CCPE 608) 8 Weeks

The eight-week clinical clerkship in pediatrics provides students with foundational knowledge in the care of children, including both healthy and sick patients. The rotation emphasizes the unique characteristics of diseases in infancy, childhood, and adolescence, as well as nutrition, growth, and developmental assessment. Students learn to integrate preventive and curative approaches to pediatric care, participate in clinical conferences, and engage in structured case discussions with attending physicians. At the end of the clerkship, students complete an Objective Structured Clinical Examination (OSCE) to assess their clinical skills and overall competency.

CLINICAL CLERKSHIP IN PSYCHIATRY (CCPS 604) 4 Weeks

During the four-week clinical clerkship in psychiatry, medical students are supervised by attending psychiatrists as they evaluate and manage patients with mental health conditions. Students learn to conduct and document comprehensive psychiatric interviews, including chief complaints, psychiatric history, social history, developmental history, and relevant medical history. They develop the skills to perform complete mental status examinations, formulate and document differential diagnoses, and assess risk factors for harm to self or others. The rotation also includes daily seminars focused on psychopathology, case presentations and discussions, interview techniques, basic psychotherapy, and psychopharmacology.

INTRODUCTION TO PALLIATIVE CARE (ITPC 602) 30 hours

This course introduces medical students to the principles and practices of palliative care, emphasizing the provision of holistic care to patients with serious or life-limiting illnesses to improve quality of life across diverse clinical settings. Students develop knowledge, skills, and competence in symptom management, pain control, and end-of-life care, while enhancing communication with patients and families. The course also fosters empathy, compassion, and professionalism, preparing students to deliver comprehensive care to patients with complex medical needs.

EVIDENCE-BASED PRACTICE IN MEDICINE (EBPM 601) 15 hours

This course is designed to enable students to conduct an extensive evaluation of existing medical literature to improve patient care. It intends to advance the students' skills in critically analyzing research articles using the grading of Recommendations, Assessment, Development, and Evaluation (GRADE), developing PICO (Patient, Intervention, Comparison, Outcome) questions, and evaluating exciting treatment guidelines. At the end of the course, students will integrate a particular clinical question into practice to advance patient treatment.

PREVENTIVE MEDICINE AND HEALTH ADMINISTRATION (PMHA 602) 30 hours

This course is designed to enhance students' understanding of the broader context of clinical practice and to orient them toward preventive medicine and public health. It emphasizes health promotion and equips students with the tools to assess and improve population health. The course highlights the importance of human rights in medicine and strategies to reduce health inequalities. The main topics include health systems and administration, health planning and policy making in Lebanon, the organization of healthcare and public health services, health as a social and human right, social and cultural determinants of health, and the professional role of physicians in society.

MEDICINE IV

CLINICAL CLERKSHIP IN INTERNAL MEDICINE (CCIM 704) 16 Weeks

The MED IV clerkship in Internal Medicine is an advanced rotation that builds on the foundational knowledge and skills acquired in MED III. It comprises one-month placements in the Intensive Care Unit (ICU), Coronary Care Unit (CCU), Emergency Room (ER) and general medical wards. Students further refine their interviewing, communication, and diagnostic skills while managing patients with more complex and critical conditions. They gain hands-on experience in intensive care settings, perform rapid assessments, manage life-threatening emergencies, and assume responsibilities comparable to those of house interns. This clerkship emphasizes advanced clinical reasoning, the formulation of complex differential diagnoses, patient management, and professional accountability. At the end of the clerkship, students complete an Objective Structured Clinical Examination (OSCE) to assess their clinical skills and overall competency.

CLINICAL CLERKSHIP IN SURGERY (CCSU 701) 4 Weeks

During the one-month MED IV clerkship in Surgery, students develop a comprehensive understanding of the diagnosis and management of patients with surgical conditions and enhance their ability to analyze complex clinical problems and prioritize investigations and treatment. They gain proficiency in collecting, synthesizing, and communicating detailed patient information, including history, physical examination findings, differential diagnoses, and progress during hospitalization. Students assume primary responsibility for a cohort of inpatients, including writing orders, formulating diagnostic and management plans, and presenting these plans to senior residents or faculty. Participation in departmental and divisional grand rounds, morbidity and mortality conferences, and other educational meetings is required. The rotation includes dedicated surgical ward experience to consolidate clinical skills and patient management competence.

CLINICAL CLERKSHIP IN FAMILY MEDICINE (CCFM 701) 4 Weeks

The one-month clinical clerkship in Family Medicine for fourth-year medical students provides advanced learning experience in ambulatory and community-based care. Under the supervision of family physicians, students engage in direct patient care, developing the skills to diagnose and manage common, undifferentiated conditions while integrating preventive and lifestyle medicine.

The rotation emphasizes understanding patients within the context of their family, occupation, and community, and teaches the appropriate use of referrals and community resources within a continuity-of-care framework. By the end of the clerkship, students are expected to demonstrate advanced problem-solving, communication, and clinical decision-making skills, as well as a comprehensive understanding of the family physician's role in contemporary healthcare. The rotation concludes with an Objective Structured Clinical Examination (OSCE) to assess clinical competence and overall performance.

CLINICAL CLERKSHIP IN ANESTHESIOLOGY (CCAN 712) 2 Weeks

During the two-week Anesthesiology clerkship, MED IV students are expected to acquire the knowledge and skills necessary for safe perioperative patient care. Students learn to perform comprehensive preoperative and postoperative assessments, develop anesthetic and airway management plans for routine surgical patients, and gain practical experience in direct laryngoscopy and endotracheal intubation. The rotation also includes training in preoperative fluid management, peripheral and central intravenous catheter placement, and functioning effectively within the operating room environment.

CLINICAL CLERKSHIP IN OPHTHALMOLOGY (CCOP 712) 2 Weeks

The two-week clinical rotation in Ophthalmology provides students with an introduction to common eye pathologies and exposure to relevant surgical procedures. Students participate in teaching activities across various subspecialties as well as with comprehensive ophthalmologists. The rotation also includes seminars, conducted as part of the resident grand rounds, to consolidate learning and encourage discussion of clinical cases.

ELECTIVE CLERKSHIP (CCCE 703) 3 Months

The curriculum provides a range of elective rotations across multiple departments, from which students may select one, two, or three clerkships, each of one-month duration. Electives may be undertaken at the home institution or at accredited institutions abroad, including sites in Europe and the United States, provided that these rotations comply with the medical school's academic standards and regulations. Participation in off-site electives requires submission of documentation verifying attendance, evaluation reports from the host institution, and formal approval from the

medical school to ensure alignment with the clerkship's learning objectives. These elective rotations enable students to pursue specialized areas of interest, gain exposure to diverse healthcare systems, and enhance their clinical knowledge and skills.

TRANSITION TO CLINICAL PRACTICE: IMMERSIVE SIMULATION (TCIS 701) 4 weeks

The Transition to Clinical Practice is an intensive immersive program designed to prepare fourth year medical students for the clinical realities of residency. This rotation progresses from individual skills acquisition to complex team-based simulations. The rotation is founded on practice-based learning and improvement per the ACGME's core competencies. It equips students with the clinical, procedural, communication, and teamwork competencies required for safe and effective patient care. Each week builds on the previous, providing structured opportunities for deliberate practice, feedback, and reflection. The rotation culminates in an integrative OSCE simulating the objectives of the rotation.

ADVANCED EVIDENCE-BASED PRACTICE IN MEDICINE (AEBM 701) 15 hours

This course equips students with the skills to evaluate how diagnostic test accuracy translates into meaningful patient health outcomes. Students will explore the principles and criteria used to move from evidence to clinical recommendations, with a focus on examples from clinical practice guidelines that address diagnostic tests and strategies. In scenarios where direct evidence is limited, students will learn to apply analytic modeling techniques such as constructing decision trees and forecasting outcomes based on probabilistic assumptions under defined conditions. By the end of the course, each student will present a case study demonstrating their ability to assess the potential impact of a specific diagnostic test on patient outcomes, particularly in the context of limited or indirect evidence.

MASTER OF SCIENCE PROGRAM IN BIOMEDICAL SCIENCES

The Faculty of Medicine and Medical Sciences offers a graduate program in Biomedical Sciences that leads to a Master of Science degree. This program is aimed to develop the students' capacity to conduct scientific research and to prepare them for pursuing doctoral qualifications in Biomedical Sciences. During the 2-year period of this program, students will be offered graduate courses in the fields of Biochemistry, Immunology, Microbiology, Genetics, Physiology, and Molecular Biology. Students will then select, after the first year, a specific field of study and will be integrated into research projects within a defined domain of interest. To qualify for graduation, a student should write a thesis describing the research project and the results obtained. Graduates of the program are introduced to recent sophisticated technologies, and will have acquired the essential skills for conducting independent scientific research. The degree given by the Faculty of Medicine and Medical Sciences opens new venues for those wishing to start work in laboratories or in health-oriented industries, and provides the key to open the door leading to a PhD or MD degree.

ADMISSION REQUIREMENTS

A candidate must:

- Hold a Bachelor Degree in Biology or related sciences with a minimum major average of 80 (from a 100 point scale). Admission under probation can be given to students with a minimum major average of 75.
- Pass the Test of English as a Foreign Language (TOEFL) with a minimum of 600 on the paper-based TOEFL, or 100 on the internet based TOEFL

GRADUATION

To qualify for graduation the student must:

- Complete all the requirements for the degree within a maximum period of 4 years from the date of first enrollment

- Complete at least 24 credit hours of courses with a minimum grade average of 80
- Write and defend the thesis successfully (6 credits)

FEES AND GRADUATE ASSISTANTSHIPS

For detailed information about the graduate assistantships, please contact the Graduate Committee at the Faculty of Medicine and Medical Sciences or the Registrar's Office.

Curriculum – MS. Biomedical Sciences

YEAR I

During the first academic year of study, the student needs to complete 21 credits of the following courses:

BIOM 300 Medical Biochemistry	**4 credits**
BIOM 301 Quantitative Analysis and Biostatistics	**2 credits**
BIOM 302 Techniques of Scientific Communications	**2 credits**
BIOM 303 Antimicrobial Chemotherapy and Resistance	**3 credits**
BIOM 304 Nanobiotechnology	**3 credits**
BIOM 306 Advanced Biochemistry (Enzymology/Metabolism)	**4 credits**
BIOM 320 Advanced Medical Immunology	**3 credits**
BIOM 321 Medical Microbiology	**3 credits**
BIOM 324 Advanced Topics in Infection and Immunity	**3 credits**
BIOM 325 Techniques in Immunology	**1 credit**
BIOM 326 Clinical Microbiology and Infection	**6 credits**
BIOM 327 Infectious Diseases	**2 credits**
BIOM 330 Advanced Molecular Biology	**3 credits**
BIOM 331 Medical Genetics	**3 credits**
BIOM 332 Advanced Topics in Biochemistry	**3 credits**
BIOM 333 Techniques in Biochemistry	**1 credits**
BIOM 334 Advances in Cancer Immunotherapy	**3 credits**
BIOM 336 Advanced topic in Genetics	**3 credits**
BIOM 337 Techniques in Genetics	**1 credit**
BIOM 338 Advanced Topics in Cell Biology	**3 credits**

YEAR II

During the second academic year of study, the student needs to complete 9 credits related to the following courses:

BIOM 335 Research Tutorials in Biomedical Sciences **3 credits**

BIOM 399 Thesis **6 credits**

The student should finalize a research project, complete the writing of the Master's thesis and submit it for evaluation.

COURSE DESCRIPTIONS

BIOM 300 Medical Biochemistry **4 credits**

The Graduate Medical Biochemistry Course is a lecture and discussion course designed for graduate students majoring in Biomedical Sciences whose educational goals require more extensive exposure to biochemistry. The course gives greater emphasis to the medical and physiological implications of biochemistry and to human metabolism and its regulation than a more traditional introductory biochemistry course. Interspersed throughout the course will be a substantial number of medical cases, relating to the current topics of the main lecture series to demonstrate the relevance of biochemistry to health and disease. The course also includes sessions aimed at discussing review articles or original research publications in selected topics of biochemistry.

Prerequisite: Biochemistry (BC 205) or equivalent

BIOM 301 Quantitative analysis and Biostatistics **2 credits**

The course provides students, in the field of biological and medical sciences, with the statistical tools and skills necessary to organize and summarize data in a meaningful way and to interpret and analyze data intelligently to reach sound understanding of observed biological phenomena. The course emphasizes computer applications for most of the statistical techniques covered, using SPSS statistical software.

BIOM 302 Techniques of Scientific Communications **3 credits**

The course provides a graduate-level overview of the techniques used for platform, poster and written scientific presentations. After having successfully completed the course, students will be able to form logical arguments, discuss the mission of making scientific presentations aimed at delivering clear and concise messages, dissect and summarize scientific publications,

constructively criticize scientific presentations, and draft a scientific proposal. Approaches and criteria for scientific research will be presented.

BIOM 303 Antimicrobial Chemotherapy and Resistance (course with lab component) 3 credits

In the first section, this course describes the different classes of antimicrobial agents and their mechanisms of action. In the second part, the course classifies and details the mechanisms of resistance manifested by the most important pathogens. Phenotypic and genotypic techniques for the identification of these mechanisms are presented, analyzed, and performed where applicable. A final part dealing with antibiotic consumption and its effect of bacterial resistance is discussed.

BIOM 304 Nanobiotechnology: Concepts and Applications in Health 3 credits

Nanobiotechnology is a new area in biology with significant medical applications. It is a tribute to the emerging fields of interdisciplinary study that are growing prevalent in the twenty-first century, bridging disciplines in physics, chemistry, and biology. Students and researchers interested in nanoscale physical and biological systems and their applications in medicine can benefit from this course. It explores nanomaterials principles and their use with biocomponents to synthesis and address bigger systems. Systems for visualization, labeling, drug delivery, and cancer research are among the applications. The technological effect of nanoscale systems, as well as their production and characterization, are examined.

BIOM 306 Advanced Biochemistry (Enzymology/Metabolism) 4 credits

This course is a lecture and discussion course designed for graduate students whose educational goals require more extensive exposure to biochemistry. This course provides detailed insights into the mechanisms of catalysis of various classes of enzymes including kinetic analysis, catalytic mechanisms, transition state stabilization and regulation of activity, strategies for active site characterization and regulatory properties. Cellular metabolism of carbohydrates, lipids, amino acids and nucleotides will be studied. This course also introduces the graduate students to critical reading of scientific papers**. Prerequisite:** Principles of Biochemistry (BIOL 251) or equivalent

BIOM 320 Advanced Medical Immunology **3 credits**

The course explores the cellular and humoral components of the immune system, emphasizes the genetic and molecular elements controlling cellular interactions and immune responsiveness, highlights the nature of protective responses to infections and tumors, and provides advanced knowledge of the consequences of abnormal immune regulation or function. The course includes sessions, with student participation, aimed at discussing the state of the art in selected topics on innate immunity and regulatory T cells.

Prerequisite: Immunobiology (BIOL 229) or equivalent

BIOM 321 Medical Microbiology **3 credits**

The course describes the microbial world from a medical perspective. It details bacterial pathogenesis, genetics, treatment, and resistance. The course presents sizeable information on human viruses, viral replication strategies, viral diseases, and treatment. Concise components of the course include parasitic and fungal infection of humans. An advanced element of the course will focus on novel generations of anti- microbial drugs, and on alternative strategies in the management of infections with drug-resistant microbes or in subjects with immune deficiencies.

BIOM 324 Advanced Topics in Infection and Immunity **3 credits**

The course targets intracellular microbial infections with the aim of elaborating on the immunopathogenesis and the immune evasion strategies developed by these microbes. The bacteria to be discussed include Mycobacteria, Listeria, Brucella, Chlamidya and Legionella. The selected protozoa are Leishmania, Plasmodium, Toxoplasma and Trypanosoma whereas retroviruses, hepativiruses, and herpesviruses will constitute the 3 viral families to be studied. The host-microbe interactions will be a primary component of this course, and students would be required to prepare and present term papers on selected topics.

Pre-requisites: BIOM 320 and BIOM 321 or equivalent graduate courses.

BIOM 325 Techniques in Immunology **1 credit**

The course is aimed to introduce the students to the commonly used immunological techniques including enzyme linked immunosorbent assays, radioimmunoassay, cell activation and cytokine measurement, flow cytometry, and lymphocyte proliferation assays.

BIOM 326 Clinical Microbiology and Infection **6 credits**

This course aims at introducing the students to the microbial world from a medical and clinical perspective. The course covers a selection of the most clinically important bacteria detailing the major bacterial pathogens of humans. The course also covers important area in virology, mycology, and parasitology. The course includes two credits of laboratory advanced techniques in microbiology.

BIOM 327 Infectious Diseases **2 credits**

This course deals with the infectious diseases from a diagnostic and clinical perspective. It offers an advanced knowledge of bacterial, fungal, viral, and parasitic infections from bedside to bench top. The material of the course is arranged by organ system and provides transition for clinical considerations. The course includes lectures and case discussions through which the student will be expected to acquire an in-depth knowledge in the field of clinical and diagnostic microbiology and infectious diseases.

BIOM 330 Advanced Molecular Biology **3 credits**

The course is aimed to provide students with advanced knowledge in (1) understanding biochemical processes fundamental to gene structure and function: DNA replication, transcription, translation, and regulation of gene expression; (2) exploring the techniques and applications recombinant DNA research, and the value of this technology in elucidating the mechanisms of complex genetic control. The course is based on advanced lectures as well as on critical reading and discussion of review articles or original research publications in selected topics of molecular biology.

Pre-requisite: BIOL 285 (Molecular Biology) or equivalent undergraduate course.

BIOM 331 Medical Genetics **3 credits**

The Medical Genetics Course provides the fundamental concepts of human medical genetics in didactic and small group presentations. This course explores the fundamental concepts in human genetics at the molecular, cellular and clinical levels. It details the principles of classical genetics, biochemistry of nucleic acids, control of gene expression, gene therapy, and investigates recent developments in genetic technology. Students will acquire advanced knowledge of (1)structure and function of genes and the general organization of the human genome; (2)genes and diseases; (3)causes and general pathology of chromosomal abnormalities; (4) the basic genetic foundation upon which treatments might be available. Pre-requisite: BIOL 283 (Genetics) or equivalent undergraduate course.

BIOM 332 Advanced Topics in Biochemistry **3 credits**

The objective of the course is to highlight various aspects of mitochondrial function and visualize the central role that mitochondrial dysfunction plays in many diseases. The course consists of a series of lectures reviews combined with discussions and presentations by students. Topics presented will cover mitochondrial homeostasis, including mitochondrial DNA, oxidative stress, calcium signaling, apoptosis, aging and energy metabolism.

Pre-requisite: BIOM 300 or equivalent graduate course

BIOM 333 Techniques in Biochemistry **1 credit**

The course is aimed to introduce the students to fundamentals of biochemical methodology: buffers, spectrophotometry, gel electrophoresis, chromatography, protein determination and purification.

BIOM 334 Advances in Cancer Immunotherapy **3 credits**

The main goal of this course is to provide graduate students with the fundamental information about novel immunotherapies currently used in cancer treatment. The course will cover five major types of cancer immunotherapy: therapeutic cancer vaccines (dendritic cell-based vaccines, peptide vaccines, DNA vaccines and tumor cell vaccines), adoptive cell therapy (T cells, NK cells, and macrophages), cytokine-armed oncolytic viruses, monoclonal antibody therapy (naked, drug-conjugated and bispecific antibodies), and immunomodulators (cytokines and TLR agonists).

Graduate students will also have the chance to present and discuss recent research articles related to the aforementioned cancer immunotherapy concepts.

BIOM 336 Advanced Topics in Genetics 3 credits

The advanced topics in Genetics course is designed to introduce the students to the different types of genetic testing and their uses. Each of the major subspecialties will be addressed: cytogenetics, molecular genetics, biochemical genetics, clinical genetics, and genetic counseling.

Pre-requisite: BIOM 331 or equivalent graduate course.

BIOM 337 Techniques in Genetics 1 credit

The course is aimed to introduce the students to the commonly used Genetics techniques including karyotyping, conventional cytogenetic analysis, fluorescence in situ hybridization (FISH), Southern Hybridization and single gel electrophoresis (Comet) assays.

BIOM 338 Advanced Topics in Cell Biology 3 credits

This course offers an advanced, in depth analysis of selected topics in cell biology. Students who successfully complete this course will develop insight into the complexities of cell structure and function, the molecular events that mediate cellular processes, their dynamic properties in living cells and how this contributes to the functioning of the whole organism and its development. The course format will include student-led discussion sessions both providing an overview of a topic as well as focusing on important papers in cell biology. Students will be evaluated on their presentations and participation,

BIOM 335 Research Tutorials in Biomedical Sciences 3 credits

The course focuses on the areas pertinent to research conducted by faculty members in the field of Biomedical Sciences.

BIOM 399 Thesis 6 credits

A 6 credits hour course in which students conduct original research under staff supervision. The projects center around topics related to physiology, immunology-microbiology, biochemistry and genetics. The Core Laboratory Facility at UOB aims to provide an environment and a facility for research in many diverse biomedical fields. The core provides an infrastructure for research applications in cell and animal model system. The major component of the facility is a Molecular

and Cellular Biology which includes Molecular Biology, Protein Chemistry, Flow Cytometry, Bioenergetics and Cell Culture facilities. A core facility in physiological research is also available and is equipped with radioactive isotope detection technologies. After completion of their experimental work, students are expected to write a thesis, and to pass an oral examination by defending their work in front of an independent committee of professors with expertise in the respective research domain of each thesis.

FOR APPLICATIONS

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More about the MD Program

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