

**FACULTY OF MEDICINE &
MEDICAL SCIENCES**

**ST. GEORGE FACULTY OF
POSTGRADUATE MEDICAL
EDUCATION**

FACULTY LIST

OFFICERS OF THE FACULTY

Warrak, Elias	President of the University
El Bahr, Georges	Acting Provost
Nassar, Camille	Acting Dean
Moubayed, Walid	Acting Dean of Admissions and Registration & Student Affairs
Ayoub, Olga	Librarian

FACULTY STAFF

Al-Ammar, Monzer Grace	Secretary
Chaar, Madi Micheline	Executive Secretary
Copti, Razzouk Majd	Executive Secretary
Daher, Marie Claude	Academic Assistant
Farah, George	Administrative Assistant
Makary, Saly	Secretary
Reaidy, Raad Jessy	Secretary

FACULTY MEMBERS

DEPARTMENT OF BIOMEDICAL SCIENCES

Dr. Ziad DAOUD– Chairperson

BAHR Georges	Professor of Immunology and Virology
ECHTAY Karim	Professor of Biochemistry
DAOUD Ziad	Professor of Clinical Microbiology
NASSAR Camille	Professor of Physiology
ZAHED Laila	Professor of Cytogenetics
KHACHAB Maha	Associate Professor of Neuroscience and Physiology
HAWI Jihad	Assistant Professor of Anatomy
KANAAN Amjad	Assistant Professor of Physiology
OJAIMI (AL) Maud	Assistant Professor of Pediatrics and Pharmacology
NABBOU GHASSAN	Assistant Professor of Surgery and Anatomy
NEHME Ziad	Instructor – Medical Engineering
ZAATITI Hayat	Research Assistant

UNIVERSITY HEALTH CENTER

JURAYJ Wafaa	Internal Medicine (Infectious Diseases)
NASSIF SALEH Doris	Family Medicine
OJAIMI (AL) Maud	Pediatrics
RAZZOUK Jibrayil	Family Medicine

DEPARTMENT OF MEDICINE

Dr. Georges JUVELEKIAN – Chairman

AFIF Claude	Professor of Clinical Medicine (Infectious Diseases)
AKAR Joseph	Professor of Clinical Medicine (Cardiology)
BAHOUS Joudy	Professor of Clinical Medicine (Pulmonary Medicine)
CHAMSEDDINE Nabil	Professor of Clinical Medicine (Hematology/Oncology)
KARAM Nadim	Professor of Health Sciences & Family Medicine

WAKED Mirna	Professor of Clinical Medicine (Pulmonary Medicine)
AOUN Jean Paul	Clinical Professor of Medicine (Gastroenterology)
NASR Edgar	Clinical Professor of Medicine (Nephrology)
LAMEIRE Norbert	Adjunct Professor of Medicine (Nephrology)
ABI RACHED MEGARBANE Hala	Associate Professor of Clinical Dermatology
AMMOURY Alfred	Associate Professor of Clinical Dermatology
AZAR Eid	Associate Professor of Clinical Medicine (Infectious Diseases)
BASSIL Nazem	Associate Professor of Clinical Family Medicine
CHIDIAC WEHBE Rita Maria	Associate Professor of Clinical Medicine (Endocrinology)
CHOUAIRI Salah	Associate Professor of Clinical Medicine (Cardiology)
FARHAT Said	Associate Professor of Clinical Medicine (Gastroenterology)
JABBOUR Rosette	Associate Professor of Clinical Medicine (Neurology)
JUVELEKIAN Georges	Associate Professor of Clinical Medicine (Pulmonary Medicine)
SAID Rabih	Associate Professor of Clinical Medicine (Hematology/ Oncology)
AOUAD Antoine	Clinical Associate Professor of Medicine (Neurology)
DIB Hisham	Clinical Associate Professor of Medicine (Cardiology)
KARAM EL KEHDY Paula	Clinical Associate Professor of Dermatology
SAAD Antoine	Clinical Associate Professor of Medicine (Infectious Diseases)
SAAD (EL) DEBAHY Nada	Clinical Associate Professor of Dermatology
ABBOUD Johnny	Assistant Professor of Clinical Medicine (Cardiology)
ABI RAFEH Nidal	Assistant Professor of Clinical Medicine (Cardiology)
ABOU JAOUDE Fadi	Assistant Professor of Clinical Medicine (Cardiology)
ABOU SALBI Michel	Assistant Professor of Clinical Family Medicine
AZAR Lama	Assistant Professor of Clinical Medicine (Rheumatology)
BEDRAN Khalil	Assistant Professor of Clinical Medicine (Gastroenterology)
BOU KHALIL-FARHAT Roula	Assistant Professor of Clinical Medicine (Endocrinology)
CHAHROURI Joseph	Assistant Professor of Clinical Medicine (Rheumatology)
CHARBEL Paul	Assistant Professor of Clinical Medicine (Cardiology)
CORTAS George	Assistant Professor of Clinical Medicine (Gastroenterology)
GHARIB (EL) Nader	Assistant Professor of Clinical Medicine (Cardiology)
GHOLAM Dany	Assistant Professor of Clinical Medicine (Hematology/ Oncology)
HABRE Maya	Assistant Professor of Clinical Medicine (Dermatology)
HABER Roger	Assistant Professor of Clinical Medicine (Dermatology)
HACHEM(EL)Georges	Assistant Professor of Clinical (Hematology/Oncology)
HADDAD (EL) Boutros	Assistant Professor of Clinical Medicine (Nephrology)
HAJJ (EL) Ihab	Assistant Professor of Clinical Medicine (Gastroenterology)
HAJJ (EL) Mirna	Assistant Professor of Clinical Medicine (Hematology / Oncology)
JOUBRAN-FARES Najat	Assistant Professor of Clinical Medicine (Nephrology)
JABBOUR Gide	Assistant Professor of Clinical Medicine (Gastroenterology)
KARAM Sabine	Assistant Professor of Clinical Medicine (Nephrology)
KEHDY (EL) Jessica	Assistant Professor of Clinical Medicine (Dermatology)
KHOURY Mounir	Assistant Professor of Clinical Medicine (Neurology)

KHOURY Nabil	Assistant Professor of Clinical Medicine (Pulmonary Medicine)
KHOURY (EL) Salem	Assistant Professor of Clinical Medicine (Gastroenterology)
KOBROSSY Bassim	Assistant Professor of Clinical Medicine (Hematology / Oncology)
MAALOUF Assaad	Assistant Professor of Clinical Medicine (Cardiology)
MAALOUF Diane	Assistant Professor of Clinical Medicine (Dermatology)
MAALOUF Nancy	Assistant Professor of Clinical Medicine (Neurology)
MAKDESSI Joseph	Assistant Professor of Clinical Medicine (Hematology / Oncology)
MOURAD-AJAKA Aline	Assistant Professor of Clinical Medicine (Neurology)
NAHAS(EL)Olga	Assistant Professor of Clinical Medicine(Allergology)
SAWAN Carla	Assistant Professor of Clinical Medicine (Endocrinology)
STEPHAN Elias	Assistant Professor of Clinical Family Medicine
WANSA Nader	Assistant Professor of Clinical Medicine (Cardiology)
AZAR Nabil	Adjunct Assistant Professor of Medicine (Neurology)
NASR John	Adjunct Assistant Professor of Medicine (Neurology)
RASSAM Paul	Clinical Assistant Professor of Medicine (Gastroenterology)
WAKIM Saria	Clinical Assistant Professor of Medicine (Endocrinology)
ATALLAH Paola	Lecturer of Clinical Medicine (Endocrinology)
ASFAR Elias	Clinical Lecturer of Medicine (Allergology)
DERIAN Jean	Clinical Lecturer of Medicine (Allergology)
HITTI Michel	Clinical Lecturer of Medicine (Rheumatology)
ABOU RIZK Fadi	Instructor of Clinical Medicine (Pulmonary Medicine)
CHALLITA Antoine	Instructor of Clinical Family Medicine
GERGES Zeina	Instructor of Clinical Family Medicine
HABIB Pierrette	Instructor of Clinical Medicine (Cardiology)
HALLAK Mona	Instructor of Clinical Medicine (Gastroenterology)
NAHAS Marc	Instructor of Clinical Family Medicine
NEHME Samer	Instructor of Clinical Medicine (Pulmonary Medicine)
ABOU JAOUDE Walid	Clinical Instructor of Medicine (Nephrology)
ANTOUN Ghassan	Clinical Instructor of Family Medicine
FIANI Elias	Clinical Instructor of Medicine (Gastroenterology)
RAHI (EL) Sami	Clinical Instructor of Medicine (Neurology)
SAYED (EL) Ali	Clinical Instructor of Medicine (Cardiology)
SFEIR Mireille	Clinical Instructor of Medicine (Pulmonary Medicine)

DEPARTMENT OF SURGERY
Dr. Michel JABBOUR – Chairman

ABOU KHALIL Bassam	Professor of Clinical Surgery (Cardiothoracic Surgery)
JABBOUR Michel	Professor of Clinical Surgery (Urology)
KREIDY Raghid	Professor of Clinical Surgery (Vascular Surgery)
RASSI (EL) Ziad	Professor of Clinical Surgery (General Surgery)
ABOU JAOUDE Maroun	Clinical Professor of Surgery (General Surgery)
DAHER Michel	Clinical Professor of Surgery (General Surgery)
DAOU Robert	Clinical Professor of Surgery (General Surgery)
NACHANAKAIN Antoine	Clinical Professor of Clinical Surgery (Neurosurgery)
ASSAF George	Associate Professor of Clinical Surgery (Urology)
FEGHALY (EL) Michel	Associate Professor of Clinical Surgery (Vascular Surgery)

GHAZAL Georges	Associate Professor of Clinical Surgery (Urology)
HAGE Paul	Associate Professor of Clinical Surgery (Neurosurgery)
HAJJ Imad	Associate Professor of Clinical Surgery (General Surgery)
KHOURY (EL) Mansour	Associate Professor of Clinical Surgery (General Surgery)
CHIKHANY Ghassan	Clinical Associate Professor of Surgery (Vascular Surgery)
DIAB Nabil	Clinical Associate Professor of Surgery (Pediatric Surgery)
ZEIDAN Smart	Clinical Associate Professor of Surgery (Pediatric Surgery)
ABDELNOUR Amir	Senior Lecturer of Clinical Surgery (General Surgery)
HOJEILI Souheil	Clinical Senior Lecturer of Surgery (Plastic Surgery)
BAAKLINI Gerges	Assistant Professor of Clinical Surgery (Vascular Surgery)
GHANTOUS Imad	Assistant Professor of Clinical Surgery (Urology)
HABRE Samer	Assistant Professor of Clinical Surgery (Plastic Surgery)
IBRAHIM Ibrahim	Assistant Professor of Clinical Surgery (Neurosurgery)
KHOURY (EL) Fouad	Assistant Professor of Clinical Surgery (Urology)
MAALOUF Charles	Assistant Professor of Clinical Surgery (Plastic Surgery)
MALEK Alexandre	Assistant Professor of Clinical Surgery (General Surgery)
SAIKALY Elias	Assistant Professor of Clinical Surgery (General Surgery)
WATFA William	Assistant Professor of Clinical Surgery (Plastic Surgery)
ZANKOUL Fuad	Assistant Professor of Clinical Surgery (Cardiothoracic Surgery)
ABDELHAK Elie	Clinical Assistant Professor of Surgery (Plastic Surgery)
ABI GHANEM Moussa	Clinical Assistant Professor of Surgery (Cardiothoracic Surgery)
ALAYWAN Moussa	Clinical Assistant Professor of Surgery (Neurosurgery)
HAJJ (AL) OBEID	Walid Clinical Assistant Professor of Surgery (Urology)
MATTA Reva	Clinical Assistant Professor of Surgery (Pediatric Surgery)
MEDAWAR Charbel	Clinical Assistant Professor of Surgery (Plastic Surgery)
NOHRA Joe	Clinical Assistant Professor of Surgery (Urology)
YOUSSEF Pierre	Clinical Assistant Professor of Surgery (Cardiothoracic Surgery)
HACHACHE (EL) Khalil	Clinical Lecturer of Surgery (General Surgery)
HAJJAR Nicolas	Clinical Lecturer of Surgery (General Surgery)
ABDALLAH Georges	Clinical Lecturer of Surgery (General Surgery)
ABI NAKHOUL Fadi	Clinical Instructor of Surgery (Plastic Surgery)
DIB Wissam	Clinical Instructor of Surgery (General Surgery)
LAWAND DAOU Souhaïla	Clinical Instructor of Surgery (Plastic Surgery)
CHELALA Elie	Clinical Associate

DEPARTMENT OF OPHTHALMOLOGY

Dr. Elias WARRAK– Chairman

WARRAK Elias	Professor of Clinical Ophthalmology
KHOURY Ghassan	Clinical Associate Professor of Ophthalmology
FAKHOURY Omar	Clinical Assistant Professor of Ophthalmology
FARAH Samir	Clinical Assistant Professor of Ophthalmology
MAALOUF Fadi	Clinical Assistant Professor of Ophthalmology
NASR Youssef	Clinical Assistant Professor of Ophthalmology
SALIBA DAHER Lina	Clinical Lecturer of Ophthalmology
ALAM (EL) Dany	Clinical Instructor of Ophthalmology

DEPARTMENT OF ORTHOPEDIC SURGERY

Dr. Alexandre NEHME – Chairman

WEHBE Joseph	Professor of Clinical Orthopedic Surgery
MOUCHARAFIEH Ramzi	Clinical Professor of Orthopedic Surgery
HADDAD Fady	Associate Professor of Clinical Orthopedic Surgery
NEHME Alexandre	Associate Professor of Clinical Orthopedic Surgery
RASSI (EL) Georges	Associate Professor of Clinical Orthopedic Surgery
CORTBAOUI Chawki	Clinical Senior Lecturer of Orthopedic Surgery
DAOU Elie	Assistant Professor of Clinical Orthopedic Surgery
JABBOUR Fouad	Assistant Professor of Clinical Orthopedic Surgery
HIJJAWI Ayman	Clinical Assistant Professor of Orthopedic Surgery
MELKI Roger	Clinical Assistant Professor of Orthopedic Surgery
TANNOUS Ziad	Clinical Assistant Professor of Orthopedic Surgery
HABIB Assaad	Clinical Lecturer of Orthopedic Surgery
IMAD Joseph	Clinical Instructor of Orthopedic Surgery
RIACHI Marc	Clinical Instructor of Orthopedic Surgery
SAMAHA Dominique	Clinical Instructor of Orthopedic Surgery

DEPARTMENT OF OTORHINOLARYNGOLOGY HEAD AND NECK SURGERY

Dr. Jihad KHOURY – Chairman

FATA (EL) Fouad	Associate Professor of Clinical Otorhinolaryngology-Head & Neck Surgery
JAKLIS Antoine	Associate Professor of Clinical Otorhinolaryngology-Head & Neck Surgery
KHOURY Jihad	Associate Professor of Clinical Otorhinolaryngology-Head & Neck Surgery
CHAMI Gabriel	Clinical Associate Professor of Otorhinolaryngology-Head & Neck Surgery
FAKHOURY Raja	Assistant Professor of Clinical Otorhinolaryngology-Head & Neck Surgery
HAWAT (AL) Anthony	Assistant Professor of Clinical Otorhinolaryngology-Head & Neck Surgery
SNAIFER Patrick	Instructor of Clinical Otorhinolaryngology-Head & Neck Surgery
ADHAMI Maya	Clinical Instructor of Otorhinolaryngology-Head & Neck Surgery

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

Dr. Rana SKAF SFEIR – Chairperson

ANASTASIADES Elie	Associate Professor of Clinical Obstetrics and Gynecology
KEHDY (EL) Georges	Associate Professor of Clinical Obstetrics and Gynecology
ARIDA Bahige	Senior Lecturer of Clinical Obstetrics and Gynecology
GHANEM Joseph	Clinical Senior Lecturer of Obstetrics and Gynecology
ABI KHALIL Elias	Assistant Professor of Clinical Obstetrics and Gynecology
CHAMMAS Mary	Assistant Professor of Clinical Obstetrics and Gynecology
HAJAL (EL) Elias	Assistant Professor of Clinical Obstetrics and Gynecology
HAJAL (EL) Nadim	Assistant Professor of Clinical Obstetrics and Gynecology
SKAF-SFEIR Rana	Assistant Professor of Clinical Obstetrics and Gynecology
SNAIFER Elie	Assistant Professor of Clinical Obstetrics and Gynecology

CASSIR HADDAD Youmna
CORDAHI TABET Caroline
KRAYEM Zaher

Instructor of Clinical Psychology
Instructor of Clinical Psychology
Instructor of Clinical Psychology

DEPARTMENT OF MEDICAL IMAGING
Dr. Raja ASHOU – Chairman

ACHRAM Mitri	Clinical Professor of Medical Imaging
CHAMSEDDINE Abbas	Clinical Professor of Medical Imaging
KARAM Maroun	Clinical Professor of Medical Imaging
ASHOU Raja	Associate Professor of Clinical Medical Imaging
CHEMALI Rami	Associate Professor of Clinical Medical Imaging
ADEM Carmen	Assistant Professor of Clinical Medical Imaging
RAAD Roy	Assistant Professor of Clinical Medical Imaging
FARHA Georges	Clinical Assistant Professor of Radiation Oncology
KANJ Vladimir	Clinical Assistant Professor of Radiation Oncology
NADER-ABOU JAOUDE Lucie	Clinical Assistant Professor of Medical Imaging
ZOUAIN Nicolas	Clinical Assistant Professor of Radiation Oncology
FAYAD Emilie	Instructor of Clinical Medical Imaging
ABI GHOSN Jean	Clinical Instructor of Medical Imaging

DEPARTMENT OF ANESTHESIOLOGY
Dr. Wissam TOHME – A/Chairman

SFEIR Samia	Associate Professor of Clinical Anesthesiology
JALBOUT Nadim	Clinical Associate Professor of Anesthesiology
KAWKABANI Nadine	Clinical Associate Professor of Anesthesiology
HOBEIKA Samia	Clinical Senior Lecturer of Anesthesiology
DARWICH Rola	Assistant Professor of Clinical Anesthesiology
KAFROUNI Hazem	Assistant Professor of Clinical Anesthesiology
MANSOUR Nabil	Assistant Professor of Clinical Anesthesiology
TOHME Wissam	Assistant Professor of Clinical Anesthesiology
AROUSTAMIAN Silva	Clinical Assistant Professor of Anesthesiology
HAJJ (EL) Viviane	Instructor of Clinical Anesthesiology
MAROUN Walid	Instructor of Clinical Anesthesiology
RIZK Fadi	Instructor of Clinical Anesthesiology
SFEIR Roupheal	Instructor of Clinical Anesthesiology
TABBAL Jean Elie	Instructor of Clinical Anesthesiology

DEPARTMENT OF PATHOLOGY
Dr. Fatima GHANDOUR – Chairperson

MANSOUR Amira	Professor of Pathology
ABDUL-KARIM Fadi	Adjunct Professor of Pathology
GHANDOUR HAJJ Fatima	Associate Professor of Pathology
MEGUERIAN BEDOYAN Zarouhie	Assistant Professor of Pathology
CHOUAIRY Camil	Assistant Professor of Pathology
SAWAN Bassem	Assistant Professor of Pathology
ARNAOUT Mihaela	Clinical Associate in Pathology

DEPARTMENT OF LABORATORY MEDICINE

Dr. Hanady SAMAHA - Interim Chairperson

IRANI-HAKIME Noha
SAMAHA Hanady
NAOUFAL Rania

Clinical Professor of Laboratory Medicine
Associate Professor of Clinical Laboratory Medicine
Assistant Professor of Clinical Laboratory Medicine

EMERGENCY MEDICINE

Dr. Pierre KHALIFE – Coordinator

KHALIFEH Pierre
ACHKAR (EL) Rony
ASMAR Rabih
FARES Sobhi
DAOU Ibrahim

Assistant Professor of Clinical Emergency Medicine
Instructor of Clinical Emergency Medicine
Instructor of Clinical Emergency Medicine
Instructor of Clinical Emergency Medicine
Instructor of Clinical Emergency Medicine

COMMUNITY HEALTH CLINIC

Dr. Antoine CHALLITA – Coordinator

KLEIMEH Nelly
SAHYOUN Francois

Clinical Associate
Clinical Associate

FACULTY OF MEDICINE & MEDICAL SCIENCES

MEDICAL PROGRAM

The Faculty of Medicine and Medical Sciences at the University of Balamand was established at the main campus in El-Kurah in Northern Lebanon. The four-year-MD program consists of two pre-clinical years spent on the main campus and two clinical years at Saint George University Medical Center in Beirut.

Saint George University Medical Center is a 305 hospital-bed, academic medical center that serves as a referral tertiary center locally and regionally. Most clinical faculty members are certified holders of American or European Board of Medicine.

The Faculty of Medicine is affiliated with several universities and medical centers in the United States of America to provide elective training for medical students and Faculty members.

The Faculty of Medicine has built a firm academic reputation based upon the performance of its medical students on the United States Medical Licensing Exam (USMLE) and the matching rate of its graduates into prestigious residency programs in the USA. On first attempt, the passing rates on STEP1/STEP2 CK/ and STEP 2 CS of its medical students are higher than the average of all international medical graduates.

CURRICULUM

The mission of the Faculty of Medicine and Medical Sciences is to provide excellence in medical education and patient care through a curriculum that integrates basic and clinical medical science.

The pre-clinical years are characterized by a system-based learning curriculum in which medical students are exposed within each organ system to the principles of histology, pathology, physiology, pathophysiology, pharmacology, physical examination, and major imaging findings and to clinical problem solving.

The Faculty of Medicine and Medical Sciences at the University of Balamand is among the first medical schools in Lebanon to incorporate the course of Clinical Skills within the regional community clinics. In the clinical years, medical students are trained by competent clinical faculty to acquire the fundamental skills needed to be a compassionate physician and a scientist effective and efficient at prevention, diagnosis, and management of diseases.

Medical students perform the international standardized National Board Medical Examination exams (NBME). NBME exams are intended to provide statistical student performance data that would allow the Faculty to analyze yearly individual examinee performance and prepare its students for the USMLE exams.

The Faculty of Medicine and Medical Sciences undertakes a periodic evaluation of the curriculum in the purpose of continuous improvement and alignment of the curriculum objectives with the international standards of Medical Education.

ADMISSIONS

Candidates are selected upon review of their academic record and evaluation of their personal attributes via an interview by an Admission Committee appointed and chaired by the Dean of the Faculty of Medicine.

1. Academic Record

A Bachelor's degree from a recognized institution with completion of premedical requirements

The official academic transcript

The MCAT scores

English Language Competency

Three letters of reference

Submission of a personal statement

2. Personal Attributes

Interpersonal and communication skills

Extracurricular interests and extent of involvement in community based activities

Achievements in research projects

Interest in medically related topics

3. Admissions process

The admissions process includes:

1. Evaluation of a completed application to the Faculty.

2. Evaluation of all required documentation including:

a. Official academic transcripts.

b. MCAT scores.

c. Three reference letters.

3. A personal interview

Applicants are ranked by the Admissions Committee in a transparent and structured manner and are advised in writing of the result of the process.

ACADEMIC REGULATIONS

A. GRADING SYSTEM

There will be six levels of grades given: Honors, Very Good, Good, High Pass, Pass and Fail.

H = Top 10% grades of the class

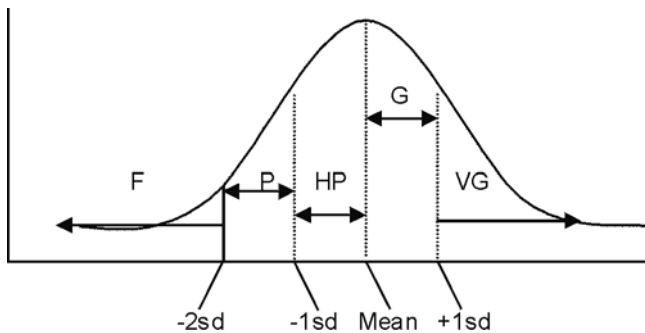
VG = Very Good ($VG > \text{Mean} + 1sd$)

G = Good ($\text{Mean} < G < \text{Mean} + 1sd$)

HP = High Pass ($\text{Mean} - 1sd < HP < \text{Mean}$)

P = Pass ($\text{Mean} - 2sd < P < \text{Mean} - 1sd$)

F = Fail ($F < \text{Mean} - 2sd$)



B. ATTENDANCE

Students are required to attend all classes, laboratories, clerkships, examinations and any other assigned work. Credit is not given for incomplete work or for work not performed. Students absent for illness or any other valid reason are required to make-up for the missed work. The Director of the course or the Department concerned assigns remedial work for work not performed. Make-up examinations are graded by Pass or Fail.

C. PROMOTIONS

Students who pass all the courses or clerkships will be promoted to the next higher class. However, a student with a grade of Pass in all courses or clerkships but is deemed not ready for promotion may be asked by the Academic Committee to pass a make-up examination in a designated course or repeat the year.

D. DEFICIENCIES

A student in Medicine I or Medicine II classes who fails less than 12 credits may be asked to do remedial work and pass make-up examinations in the designated course(s) or repeat the year. A student who fails a make-up examination will be asked to repeat the year. A student in Medicine I or Medicine II classes who fails more than 12 credits may be asked either to repeat the year or to withdraw from the Faculty.

A student in Medicine III or Medicine IV classes who fails a clinical clerkship may be asked to do remedial work and pass a make-up exam or repeat the clerkship.

A student who fails more than one clerkship may be asked either to repeat the year or withdraw from the Faculty.

E. INCOMPLETE GRADES

Incomplete grade denotes that a grade has not been determined for a course or clerkship because the student has not completed the assigned work due to extenuating circumstances (e.g. illness, death in the family, accident, etc...). Before a student can be granted an incomplete grade the extenuating circumstances must be validated by the Dean's Office. The incomplete grade will be replaced with a grade upon completion of all course material. The Director of the course determines the deadline for completion of the course requirements provided that it will not exceed one month after the final examination of the course. If the material requested is not completed by the designated deadline, the incomplete grade will be converted to Fail.

F. DECELERATION PROGRAM

This curriculum program is designed for students who encounter serious academic difficulty as demonstrated by their performance in the assigned examinations at an early stage in Medicine I. Such students may request to join the decelerated program. If the request is approved they will be given the opportunity to spread out their first year load over two years. A decelerated first year curriculum is structured so that the student will complete it in no more than two years. Deficiencies in the decelerated program are treated according to the Faculty general rules, however students who are unable to complete the decelerated program will be asked to withdraw from the Faculty.

G. READMISSION

If a student is dropped from the program for academic reasons he/she may apply again after leaving the Faculty for a minimum period of one year. The student will be eligible to enroll in the program if he/she obtains another University degree from an institution of higher learning. The re-admitted student must repeat all the courses or clerkships of the year from which he/she was dropped.

H. DISCIPLINARY ACTION

Any student engaged in any ethical misconduct will be referred to the Dean and University Administrative Committee for action. A student may be dropped from the medical program for professional and/or ethical misconduct. If a student is dropped from the Faculty because of a disciplinary action he/she will not be eligible for re-admission.

I. GRADUATION

Any student who satisfactorily completes the curriculum of the four academic years will be eligible for a Doctor of Medicine degree. The degree will be granted with Honors if the student attains an Honors grade in 50% of the courses and clerkships and does not fail any course or clerkship, and is deemed qualified to carry the M.D. degree with Honors.

J. DEAN'S HONOR LIST

To be placed on the Dean's Honor List at the end of an academic year, a medical student must:

- . Rank in the top 10% of his/her class
- . Have no failing or incomplete grades
- . Have no disciplinary action against him/her
- . Be deemed worthy by the Dean to be placed on the Dean's Honor List

K. UNIVERSITY REGULATIONS

All other procedures and regulations follow the University general policy.

COURSE DESCRIPTIONS

INTRODUCTION TO CELL STRUCTURE AND FUNCTION (INTC412)

2 Credits

This course provides an introduction to the fundamental principles in cellular development, division and differentiation, and cellular function. This course is also intended to direct the attention of first year medical students to the importance of medical embryology in bridging microscopic anatomy, cellular physiology and clinical science.

BLOOD & CARDIOVASCULAR MEDICINE: STRUCTURE & FUNCTION (CARD413)

3 Credits

This course is designed to present an integrated knowledge of the normal cardiovascular system to first year medical students. The course discusses hematopoiesis, blood components, and the main mechanisms of hemostasis and directly correlates the gross anatomy of the heart with the cardiac function and the cardiac muscle excitation and contraction cycles. Histology of the heart and blood vessels and live ultrasonic imaging complement the didactic information given. The course describes as well the development of the heart and vessels during organogenesis and the remodeling of the fetal circulation into the adult pattern, and discusses the principles of hemodynamics in the macro and microcirculation leading to the integrated responses of the cardiovascular system that regulate organ flow, blood pressure, and cardiac output.

The course format includes lectures, laboratory sessions, and discussions and analysis of a series of clinical cases pertaining to selected clinical cardiovascular abnormalities to introduce students to basic pathophysiology and pathology.

ENDOCRINE AND REPRODUCTIVE MEDICINE: STRUCTURE & FUNCTION (ENDO413)

3 Credits

This course is designed for first year medical students to develop a thorough knowledge about hormone synthetic pathways and mechanisms of action in order to understand the multifaceted clinical conditions that may arise as a consequence of a developmental anomaly, an abnormal hormonal environment, or an inability to respond to hormonal stimuli. The course also emphasizes the hormonal regulation of the male and female reproductive cellular organization and functions in development and adulthood. The course format includes lectures, laboratory sessions, and a series of selected clinical applications.

GASTROINTESTINAL MEDICINE: STRUCTURE & FUNCTION (GAST413)

3 Credits

This course sets the framework for the understanding of the microscopic and gross organization as well as the principal functions of the GI system. The course focuses on the main regulatory mechanisms of GI function and discusses the processes of motility, secretion, digestion and absorption, elimination, and biliary secretion and excretion.

The course format includes lectures, laboratory sessions, and a series of selected clinical problems to emphasize to first year medical students the significance of basic science in the understanding of clinical applications.

THE MUSCULOSKELETAL SYSTEM: STRUCTURE & FUNCTION (MUSK424)

4 Credits

This course provides first year medical students with a detailed knowledge of the development, form, and function of the normal musculoskeletal system. The course describes the microscopic, gross, and functional anatomy of the back and upper and lower limbs as well as the blood, lymphatic, and nerve supply. This course also focuses on skeletal muscle physiology and the mechanisms of neural control of skeletal muscle function. The course format includes lectures, laboratory sessions, and a series of clinical correlations in order for students to develop a functional understanding of bones, tendons, joints, and muscles and their innervation and mechanisms of action in health, injuries, and disease.

RENAL MEDICINE: STRUCTURE & FUNCTION (RENL412)

2 Credits

This course provides first year medical students with an integrated knowledge of the basic structure and function of the renal system. The microscopic and gross anatomy is directly correlated with the excretory and

homeostatic functions of the urinary system. The mechanisms of urine formation along with the concept of renal clearance and its clinical applications, as well as the role of the kidney in regulating plasma osmolarity, ECF volume, blood pressure, sodium, potassium, and calcium concentrations, and acid/base balance are discussed at length. The sequential embryonic stages of development of the kidney, ureters, and bladder are also presented. This detailed theoretical information is complemented by gross dissection of the pelvis, histologic slides of the urinary system, and live ultrasound imaging. Clinical correlations are incorporated throughout the lectures, including micturition disorders, congenital diseases, acid base and ionic disorders, glomerular diseases, stones, renal failure, as well as a brief of overview of dialysis.

PULMONARY MEDICINE: STRUCTURE & FUNCTION (PULM412)

2 Credits

This course emphasizes the anatomy and the homeostatic function of the respiratory system. Microscopic and gross organization of the respiratory system set the background for the discussion of the main structures involved in breathing and their interactions in the initiation of inspiration and expiration, the three primary processes of ventilation, diffusion, and perfusion, and the assessment of lung function. This course also focuses on the mechanisms involved in the transport of gases between the lungs and tissue capillaries as well as on the neural and chemical control systems. The course format includes lectures, laboratory sessions, and a series of selected clinical problems to emphasize to first year medical students the significance of the acid-base balance and the clinical problems that may arise in conditions of hypoxia or hyperoxia.

HEAD & NECK AND BASIC NEUROSCIENCE (HBNB426)

6 Credits

This course enables first year medical students to acquire an integrated knowledge foundation in the development, microscopic structure, gross anatomy, physiology, and radiology of the head and neck and the human nervous system. This interdisciplinary course also sets the structural framework for the understanding of gross anatomy principles and anatomic relationships, basic mechanisms in neurophysiology, organization and function of sensory and motor systems, and clinical applications of this information.

The course format includes lectures, laboratory sessions, and a series of small group discussions of case-based problems that reinforce the concepts of gross anatomy and basic neuroscience in order for students to develop analytical thinking skills in clinical problem solving.

MEDICAL BIOCHEMISTRY & NUTRITION (BIOC 406)

6 Credits

The course is designed to incorporate the fundamental aspects of biochemistry in a series of lectures and clinical correlations. The objective of the course is to provide the student with an integrated view of biochemistry. Topics include structures and functions of biomolecules, mechanism of enzyme action, bioenergetics, major pathways and control mechanisms in human metabolism. Additionally, the course introduces principles of nutrition and a brief description of prevention and management of selected diseases with diet.

MEDICAL GENETICS (MGEN 402)

2 Credits

The course is designed to introduce the students to the fundamental concepts in human genetics at 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.

IMMUNOLOGY (IMUN 402)

2 CREDITS

The course allows medical students to examine the cellular and molecular functions of the immune system. It details the events taking place during the immune response, immune recognition, and immune effector function.

MEDICAL ETHICS (METH 401)

1 Credit

The course is designed to introduce the medical student to the ethical principles governing the medical profession such as duties of physicians, patients' rights, informed consent and refusal of treatment, confidentiality, good clinical practice, medical research, organ transplantation, mental disorders and disabilities, and life and death.

NORMAL HUMAN BEHAVIOR (NPSY 402)

2 Credits

The course seeks to introduce medical students to the normal and abnormal human development and behaviors.

It focuses on the major influences of human behavior, psychological, biological, and cultural factors, to stress their roles in the development and presentation of diseases. It is also designed to introduce students to the roles of neural systems serving human behaviors such as emotions, memory, intellect, perception, addictions, motivation, and reward.

BIostatistics and EPIDEMIOLOGY (EPST 402)

2 Credits

This course provides an introduction to the basic principles and applications of biostatistics and epidemiology, as they are applied to problems in clinical and public health settings. Topics cover a wide range from simple descriptive statistics and presentation of data, to principles of hypothesis testing, and an introduction to linear and logistic regression and non-parametrical tests. Lectures, problem sets, and computer output are used to develop these and additional concepts. The epidemiology part of this course will introduce students to the principles, methods and research designs used to describe and evaluate the patterns of illness in communities. Furthermore, important epidemiological concepts in evaluation of epidemiological findings such as confounding, effect measure modification, and measures of attribution of disease burden to specific exposures are also presented. Medical students will also have the opportunity to learn techniques to critically evaluate and interpret current medical literature, an essential skill to future success in clinical practice.

FAMILY MEDICINE/CLINICAL SKILLS I AND PATIENT PHYSICIAN RELATION (CLSK 434)

4 Credits

The course is designed to allow medical students to begin to understand the concept of a patient, developing effective communication with the patient, physical examination, and humane care of people. This course designed as a summer rotation at Saint George Hospital University Medical Center.

MED II Courses

FOUNDATION OF MEDICINE (FMED504)

4 Credits

This module explores the basic principles of medical pharmacology and pathology.

The pathology section builds upon understanding the four aspects of the major disease processes: etiology, pathogenesis, clinical significance of the histopathological and molecular findings, and application of the clinically supportive sciences. Current understanding of the pathogenesis and epidemiology of important common and uncommon diseases will be discussed.

Detailed description of significant cell and tissue alterations in disease processes and how they contribute to organ dysfunction and clinical manifestations are emphasized.

In the pharmacology section, clinically applied principles of pharmacodynamics and pharmacokinetics are amply described. The pharmacology of the autonomic nervous system and its clinical applications are also detailed.

BASIC NEUROLOGY: DISEASES AND TREATMENT (NEUR503)

3 Credits

This module describes the neurological diseases of the central and peripheral nervous system. Emphasis is given on the symptoms and signs, pathology, pathophysiology, and treatment of these diseases.

Glossary of the different signs and symptoms in neurological disorders together with the correlation between the neurologic clinical manifestations and neuroanatomical location of the lesions will be presented. Pathology of the different neurological disorders will be also introduced. All pathophysiological disorders in neurology with their corresponding treatments will be discussed in addition to the strategies needed for the best therapeutic options in clinical practice.

PULMONARY MEDICINE: DISEASES & MANAGEMENT STRATEGIES (PULM503)

3 Credits

This module addresses the pathologic and pathophysiologic principles that underlie diseases of the upper and lower respiratory tracts along with their pharmacologic treatments. Pulmonary function tests and other diagnostic tools for pulmonary disease are explained.

RENAL MEDICINE: PATHOGENESIS AND PHARMACOTHERAPY (NEPH503)

3 Credits

In this module students will become familiar with renal and bladder disorders along with their pharmacologic treatments. Hypertension and metabolic derangements are addressed with their management. An approach to the patient with renal failure is outlined. Renal dialysis and transplantation are also introduced.

CARDIOVASCULAR MEDICINE: DISORDERS AND MANAGEMENT MODALITIES (CARD504)

4 Credits

This module describes the major diseases affecting the cardiovascular system, their etiologies and their clinical manifestations. Cardiac emergencies are highlighted and a clinical approach to their management protocols is outlined. Pharmacotherapies along with behavioral and preventive therapies are widely explored.

INFECTIOUS DISEASES: PATHOPHYSIOLOGY AND TREATMENT STRATEGIES (INFE502)

2 Credits

This module deals with complicated, widespread and opportunistic infections. Nosocomial and Head & Neck infections are addressed. The modes of transmission of bacterial, viral and mycobacterial infections along with their clinical syndromes are detailed. Cases about HIV, fever with rash and fever of unknown origin are presented. The pharmacology of antimicrobials is given. Bacterial resistance to antimicrobial agents and strategies to control it are widely discussed. Infection control measures are highly stressed.

ENDOCRINE AND REPRODUCTIVE MEDICINE: DISORDERS AND THERAPY PROTOCOLS. (ENDO504)

4 Credits

This module describes the main endocrine and metabolic disorders, emphasizes the strategies to treat them and handles endocrine emergencies. It also describes the pathology of the male and female reproductive systems, the main infections affecting them and the behavioral and pharmacologic treatments.

GASTROINTESTINAL TRACT DISORDERS AND MANAGEMENT (GAST504) 4 Credits
In this module, students will learn about all gastrointestinal and adnexal diseases and their treatment strategies. Abdominal emergencies are highlighted and their management protocols outlined. The clinical skills for taking a good history and performing a complete physical exam for this system will be explored. The role of radiology in diagnosing gastrointestinal disorders is detailed.

HEMATOPOIETIC AND LYMPHORETICULAR DISORDERS & TREATMENT (HEMA503) 3 Credits
In this module blood system disorders, transfusion medicine and oncologic diseases are detailed. The complications of neutropenia along with lymphadenopathy are widely discussed. Oncologic emergencies and the approach to their management are presented. Strategies for the diagnosis of blood and lymphatic disorders are highlighted. The pharmacotherapy of anemia, chemotherapy, anti-platelets and anti-coagulants are stressed upon.

SKIN DISORDERS AND TREATMENT (SKIN502) 2 Credits
This module addresses major skin and soft tissue diseases along with their clinical presentation. Approach to diagnosis and management, and the correlation between skin disorders and internal diseases are detailed.

MENTAL DISORDERS AND THEIR PHARMACOTHERAPY (PSYD503) 3 Credits
In this module mental disorders and their management modalities are explained. Ethical and forensic psychiatric issues are emphasized.

DISEASES OF IMMUNITY AND MUSCULOSKELETAL SYSTEM (IMUS504) 4 Credits
This module presents the relationship between the connective tissues of the body and the associated immune and inflammatory states. The effects of the immune system in responding to pathogens and injury will be elucidated. The generation of autoimmunity states will be detailed. Bone tumors along with tumor and transplant immunology will be emphasized. The pharmacology section will detail the most important treatments for the common rheumatologic diseases, immunotherapy and immunoprophylaxis. A brief session on the imaging of the musculoskeletal system will be also presented. The clinical skills for taking a good history and performing a complete physical exam for both systems will be explored.

CLINICAL MICROBIOLOGY (CMIC 504) 4 Credits
This module aims at introducing the students to the microbial world from a medical perspective. It provides special emphasis on microbial structure, classification and interaction with the human host. General concepts of bacterial microbiology, virology, mycology and parasitology are presented. Mechanisms of infections and antimicrobial therapy characteristic of each type are also covered.

FAMILY MEDICINE-CLINICAL SKILLS II (CLSK 524) 4 Credits
Clinical Skills II emphasizes the importance of integrating medical knowledge, clinical skills and professional attitude as a prerequisite for appropriate, effective and efficient patient care. In this perspective, the course expands on what was done within the framework of the “Clinical Skills I” course.
In this module, MEDII students will learn how to approach patients in different specialty clinics, maintain professional attitude in patient - physician relationship, apply the ethical standards in clinical care, identify key elements in taking patient history within each specialty, review physical examination skills learned in Clinical skills I and identify abnormal findings on physical examination.

MED III Courses

CLINICAL CLERKSHIP IN INTERNAL MEDICINE (CCIM 612) (12 Weeks)

During the 12 weeks of clinical clerkship in the hospital, the students acquire the adequate skills for taking a comprehensive history of the patient, perform a complete physical examination, elaborate an adequate differential diagnosis of the medical problems, follow and analyze pertinent laboratory and radiological results, and write a supervised comprehensive progress that will reflect the actual patient status. Throughout their rotations students are required to attend clinical conferences and to prepare and participate in clinical discussions.

CLINICAL CLERKSHIP IN SURGERY (CCSU 612) (12 Weeks)

During the twelve weeks of clinical clerkship in the hospital, the students will be introduced to the basic principles of surgery and rotate in general surgery, in orthopedics, in urology, in cardio thoracic and vascular surgery. They build up their basic knowledge of the common surgical diseases in order to formulate a differential diagnosis, be familiar with the management of surgery patients including surgical emergencies, learn to communicate with patients, acquire the adequate skills for taking a comprehensive history of the patient, participate in the patient workup, learn under supervision the principles of pre-operative preparation, operative management and postoperative care. Throughout their rotations students are required to attend clinical conferences and to prepare and participate in clinical discussions.

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

During the eight weeks of clinical clerkship in the hospital, the students will be introduced to the basic principles of obstetrics and gynecology, acquire the adequate skills for taking a comprehensive history of the patient, perform pelvic examination, diagnosis and management of OBS-GYN problems and follow-up on patients, attend daily seminars, weekly grand rounds and monthly pathology conference. Students meet daily their attending staff, discuss cases and review charts.

CLINICAL CLERKSHIP IN PEDIATRICS (CCPE 608) (8 Weeks)

During the eight weeks of clinical clerkship in the hospital, the students will be introduced to the basic principles of pediatrics, the care of children including the management of the healthy and sick child, peculiarities of disease in infancy, childhood and adolescence. The nutrition, growth and development are stressed, as well as the importance of combining preventive with curative medicine. Throughout their rotation students are required to attend clinical conferences and to prepare and participate in clinical discussions.

CLINICAL CLERKSHIP IN PSYCHIATRY (CCPS 604) (4 Weeks)

During the four weeks of clinical clerkship, the medical students workup psychiatric patients where they are supervised by an attending psychiatrist, learn how to conduct and document a psychiatric interview including chief complaints, psychiatric history, social history, developmental history and medical history. The student will be able to perform a complete mental status examination of a patient with mental illness, discuss and document differential diagnosis, assess and document whether or not the patient is at risk of injury to himself or others. The rotation includes daily seminars dealing with psychopathology, case presentation and discussions, interview techniques and basic psychotherapy as well as psychopharmacology.

PREVENTIVE MEDICINE AND HEALTH ADMINISTRATION (PMHA 602) (30 Hours)

This module is intended to expand student understanding of the complexities of the context of clinical practice and orient them towards preventive medicine. It focuses on health promotion and the tools required to assess and improve public health. It also stresses on human rights in Medicine and how to reduce inequalities in health. Topics covered include health systems and administration, planning and policy making in Lebanon; healthcare and public health services; health as a social and human right; the social and cultural determinants of health and the role of physicians in society.

MEDICAL ETHICS (ADVANCED) (CETH601)**(15 Hours)**

The course is designed to present to the medical students opinions regarding the ethical principles governing the medical profession such as patients' rights, informed consent, refusal of treatment, confidentiality, and good clinical practice. The areas addressed are medical research, organ transplantation, genetic testing, palliative care and end-of-life issues, ethical dilemmas in the intensive care setting and in the elderly.

MED IV Courses**CLINICAL CLERKSHIP IN INTERNAL MEDICINE (CCIM 704)****4 Months**

The Med IV clerkship in Internal Medicine consists of four rotations of one month each in ICU, CCU, ER, Family Medicine and Wards. In this clerkship students improve on their interviewing, communication, and diagnosis skills. They are exposed to intensive care settings and learn manage ICU/CCU patients. Moreover, they learn rapid assessment and management of life threatening conditions, and they carry the responsibilities of house interns.

CLINICAL CLERKSHIP IN SURGERY (CCSU 701)**1 Month**

In the Med IV clerkship in Surgery the students acquire an understanding of fundamental skills of diagnosis and management of patients with surgical illnesses, develop the ability to analyze patients' clinical problems, prioritize patients' investigations and management needs. They develop the ability to collect, synthesize and communicate the details of a patient's history, physical examination, differential diagnosis, progress in the hospital and assume primary responsibility for a set of inpatients which include writing orders, developing management and diagnostic plans and presenting these plans to upper level residents or faculty. Attendance at departmental/divisional grand rounds, morbidity, mortality and other conferences is expected from students. The students spend a month on the surgical ward.

CLINICAL CLERKSHIP IN ANESTHESIOLOGY (CCAN 712)**2 Weeks**

In this clerkship of two weeks duration, the MED IV student is expected to acquire the necessary knowledge and skills to perform a pre-operative and post-operative assessment of surgical patients, develop a plan for safe airway and anesthetic management of routine surgical patients, be able to perform direct laryngoscopy and intubation, manage pre-operative fluid prescriptions, be familiar with peripheral and central intravenous catheter placement, and to function appropriately in an operating room setting.

CLINICAL CLERKSHIP IN OTOLARYNGOLOGY (CCEN 712)**2 Weeks**

This two weeks clerkship is designed to provide the medical student with a clinical experience in ENT diseases and reinforce surgical skills acquired in the MED III surgery clerkship. The student will acquire knowledge and skills in the clinical evaluation of patients presenting with symptoms and/ or diseases of the ENT areas, and in the elaboration of a management plan, whether medical or surgical. Several aspects of the specialty will be covered, including pediatric and cosmetic otolaryngology. In addition, the student will be exposed to the most delicate and technically demanding microsurgeries.

CLINICAL CLERKSHIP IN OPHTHALMOLOGY (CCOP 712)**2 Weeks**

This two weeks rotation includes the following:

1. Clinical Introduction to eye pathology.
2. Exposure to surgical procedures.
3. End of rotation seminar-part of resident grand round

Teaching activities will be assigned to different subspecialties of the department as well as comprehensive ophthalmologists.

CLINICAL CLERKSHIP IN MEDICAL IMAGING (CCR701)

2 weeks

This fourth year clerkship is designed to provide the medical student with a clinical exposure to General radiology concepts including Ultrasonography, CT and MRI.

Medical Students attend the daily conferences of the department.

SELECTIVE CLERKSHIP

It is the offering of various selective rotations from the different departments from which the student can select One month of selective clerkship to be chosen from one of the following medical subspecialties: Neurology, Infectious Diseases, Dermatology, Endocrinology, Pediatric Surgery, and Laboratory Medicine. In the selective rotation, they are exposed to patients from a subspecialty of their choice and face more focused clinical scenarios.

THE SELECTIVE ROTATIONS ARE:

CLINICAL CLERKSHIP IN INFECTIOUS DISEASES (CCIN701)

1 Month

This rotation is a one month clinical selective clerkship in Infectious Diseases that is intended to provide the fourth year medical student with direct and intense exposure to a wide range of infectious diseases.

Objectives:

- Approach to a patient with fever and understanding how specific risk factors (exposure, travel, previous hospitalization...) will help building a differential diagnosis and affect the management plan.
- Understand diagnostic methods in infectious diseases i.e. cultures, serology and molecular (PCR) techniques.
- Exposure to common infections (community and nosocomial) e.g. UTI, respiratory infections, bloodstream infections...
- Be familiar with different antibiotic classes, eliciting differences in spectrum and mode of action, and understanding the risk of emerging resistance.
- Understand the basics of infection control (hand hygiene, isolation precautions).

CLINICAL CLERKSHIP IN NEUROLOGY (CNEU701)

1 Month

This rotation is a selective clerkship in Neurology that is intended to provide the fourth year medical student with a clinical experience in Neurological diseases and acquire medical knowledge and skills in this field. In addition, the student will be exposed to different paraclinical procedures including brain imaging, neurophysiological tests and lumbar puncture. At the end of the one month rotation, the student should be able on elaborating diagnostic strategies and providing management plans needed for the most frequent neurological disorders.

CLINICAL CLERKSHIP IN ENDOCRINOLOGY (CEND701)

1 Month

The purpose of this one month selective experience is to provide the student with a thorough exposure to commonly encountered endocrine disorders both in the outpatient and inpatient settings. Students will rotate on wards and will attend clinics.

During the Endocrinology selective, students will see patients presenting with different endocrine problems such as thyroid disease, diabetes, hypocalcemia and hypercalcemia, pituitary tumors, steroid hormone abnormalities, etc.

Students are also required to attend departmental activities such as bi-monthly journal clubs and Endocrine noon conferences.

Objectives:

At the end of this rotation the student will:

- Recognize the common endocrine, metabolic and hormonal disorders of patients.
- Learn the basic principles related to the pathogenesis, clinical manifestations, laboratory evaluation and management of commonly encountered endocrine disorders.
- Develop the ability to thoroughly interrogate patients presenting with endocrine problems, analyze data and generate differential diagnoses and treatment plans.

CLINICAL CLERKSHIP IN DERMATOLOGY (CDER701)

1 Month

The duration of the selective in Dermatology is one month. It introduces the students to the signs and symptoms of common dermatologic diseases and its relation to systemic disease.

Objectives:

The student should be able to:

- Understand the signs, symptoms and management of common dermatologic diseases.
- Understand and interpret laboratory tests and diagnostic studies employed in the assessment of dermatologic diseases.

Key Responsibilities of the student:

1. Attend weekly dermatology conferences.
2. Attend daily consult rounds.
3. Do consults under the supervision and guidance of the rotating resident and be present during attending rounds.
4. Attend dermatology clinic.

CLINICAL CLERKSHIP IN PEDIATRIC SURGERY (CPSU701)

1 Month

The duration of the selective in Pediatric Surgery is one month. The goal is to apply the most up-to-date procedures in an appropriate context using solid medical and scientific information. The students will be exposed to complex congenital malformations, advanced surgical conditions, and the most complicated cases in a multidisciplinary fashion using the skills and knowledge of the medical and nursing colleagues.

Objectives:

At the end of the pediatric surgery clerkship, each student should be able to:

- Gather and interpret essential and accurate information about the pediatric patient's health status and learning to obtain clinical information from children and parents.
- Obtaining relevant information from nurses and hospital departments (e.g., radiology, laboratory, and hospital information systems)
- To learn the principles of preoperative and postoperative management

Key Responsibilities of the student:

1. To present clinical information on work rounds clearly and concisely.
2. To work effectively with attending staff, house staff colleagues in surgery and pediatric services, residents, nurses, ancillary personnel, pre-hospital personnel.
3. Attend weekly conferences and attending rounds.
4. Attend clinic sessions

CLINICAL CLERKSHIP IN CLINICAL LABORATORY (CCCL701)

1 Month

The objective of the clinical laboratory selective/elective is to introduce students to the organization of a clinical laboratory with its different sections and to provide an exposure to laboratory operations. Students are expected to acquire a general understanding on how laboratory requests are processed from sample collection to results reporting and interpretation. They will get an overview of the three phases of laboratory testing: pre-analytical, analytical and post-analytical. They will get acquainted with the different technologies used in the laboratory. They will rotate in the following sections: clinical chemistry, clinical microbiology, clinical hematology, and blood bank unit. In each section, they will focus on the methodology, principles, and interpretation of routine clinical laboratory tests. Students are highly encouraged to follow up on the patients in the medical wards, in order to correlate laboratory results to clinical findings and thus constitute a whole clinical picture. They will also be asked to perform literature reviews and participate in case discussion.

Elective Clerkship (CCCE 703)

3 Months

It is the offering of various elective rotations from the different departments from which the student can select one, two or three clerkships of one month duration each. The students are allowed to participate in electives abroad as well provided these electives meet our rules and standards, and provided they bring proof of attendance and evaluations of the respective off-site rotations.

THE ELECTIVE ROTATIONS MAY INCLUDE IN THE DEPARTEMENT OF INTERNAL MEDICINE THE FOLLOWING:

Nephrology

The Nephrology elective introduces students to the diagnosis and management of patients with fluid and electrolyte disorders, acute renal failure, and chronic renal failure. The duration of this elective is four weeks.

Objectives:

The student should be able to:

- Understand the signs, symptoms and management of common renal syndromes including acute kidney injury and chronic renal failure, glomerulonephritis, and nephrotic syndrome.
- Understand and interpret laboratory tests, medical imaging and diagnostic studies employed in the assessment of renal function.
- Understand the diagnosis and management of fluid, electrolyte and acid-base disorders.
- Understand the diagnosis and management of primary and secondary hypertension.

Key Responsibilities of the student:

1. Attend weekly nephrology conferences.
2. Attend daily nephrology consult rounds.
3. Do nephrology consults under the supervision and guidance of the nephrology fellow and be present during attending rounds.
4. Attend nephrology clinic.

Cardiology

The Cardiology elective introduces students to the diagnosis and management of patients with cardiac diseases. The duration of this elective is four weeks.

Objectives:

The student should be able to:

- Understand the signs, symptoms and management of common cardiac diseases.
- Understand and interpret laboratory tests, medical imaging and diagnostic studies employed in the assessment of cardiac disease.

Key responsibilities of the student:

1. Attend weekly conferences.
2. Attend staff meeting.
3. Rotate under the supervision and guidance of the cardiology fellow and be present on attending rounds.
4. Prepare assignments under the supervision of the fellow and attending physician.

Hematology & Medical Oncology

The Hematology & Medical Oncology elective introduces students to the diagnosis and management of patients with hematological and cancerous diseases. The duration of this elective is four weeks.

Objectives:

The student should be able to:

- Understand the signs, symptoms and management of common hematologic diseases.
- Understand and interpret laboratory tests and diagnostic studies employed in the assessment of hematologic disease.
- Understand the management of patients with different types of cancers and the approach to chemotherapy and its complications.

Key responsibilities of the student:

1. Attend weekly conferences.
2. Attend staff meeting.
3. Rotate under the supervision and guidance of the fellow and be present on attending rounds.
4. Prepare assignments under the supervision of the fellow and attending physician.

Pulmonary Medicine

This rotation is a one month elective clinical clerkship in Pulmonary Medicine that is intended to provide the fourth year medical student with direct and intense exposure to a wide range of pulmonary diseases.

The rotation includes the following:

1. Thorough evaluation and proper management of patients admitted to the medical ward.
2. Active participation in academic activities such as didactic lectures, conferences, case presentations and discussions and attending rounds.
3. Hands-on training for procedures done in the division including pulmonary function tests and arterial blood gas interpretation, thoracentesis and bronchoscopies.

Family Medicine

The MED IV Family Medicine Clerkship is a clinical elective rotation tailored for MED IV students with the goal to give students the opportunity to expand their clinical skills learnt earlier, developing further their clinical management abilities. This four-week rotation exposes MED IV students to the comprehensive and longitudinal care of patients with a special emphasis on care of individuals in the context of families and communities in an outpatient setting.

Objectives:

- To advance the skills of Medical Students in taking a comprehensive history and performing a complete physical exam.
- To develop Medical Students' knowledge of the approach to diagnosis and management of medical problems in an outpatient setting.
- To engage Medical Students in a rational and scientific approach to preventive medicine and clinical decision making.
- To involve Medical Students in the management of a patient medical record in an outpatient setting.
- To demonstrate compassionate behavior, professionalism, and practice a patient-centered care.
- To promote self-education and active learning.

Gastroenterology

This rotation is a one month elective clinical clerkship in Gastroenterology that is intended to provide the fourth year medical student with direct and intense exposure to a wide range of gastric diseases.

Objectives:

- Introduction to intra hospital GI pathology
- Exposure to endoscopy technics with discussion of indication, complication and difficulties of different procedures
- Discussion of different topics during the rounds with physician and the senior residents.
- Every student will have several assignments (topics, procedures, etc.) to complete.

Rheumatology

It is a one month elective rotation that includes spending time in the clinic as an observer and participating in performing Rheumatology consultations on the medical/surgical wards.

Objectives:

- Familiarize the student with the comprehensive rheumatologic approach to the various musculoskeletal and systemic disorders.
- Differentiate systemic inflammatory from non-inflammatory musculoskeletal disorders and become familiar with the diagnostic approach to the various Connective Tissue and Vasculitic disorders.
- Learn the joint examination, from small to large joints; examination of the spine (cervical, lumbar, sacroiliac), and examination of tendons and bursae.
- Become familiar with the procedures performed in rheumatology:arthrocentesis of various joints, intraarticular injections, injections of tendons and bursae.

MASTER OF SCIENCE PROGRAM IN BIOMEDICAL SCIENCES

The Faculty of Medicine and Medical Sciences at the University of Balamand offers a two-year-graduate program in Biomedical Sciences to enhance the ability of students to conduct scientific research and prepare them for the pursuit of a Ph.D. or M.D. degree or a career in research laboratories or health-oriented fields. The graduate program enables graduate students to develop cognitive and subject-specific skills, acquire technical skills essential for conducting independent scientific research, improve interpersonal and communication skills, and demonstrate professionalism in conducting biomedical research.

The program offers graduate students course and research tracks in Biochemistry, Immunology, Microbiology, Molecular Biology, and Physiology. Upon defining a research project and with the supervision of Faculty members, students are expected to present and communicate their research findings in a thesis and periodic seminars.

ADMISSION REQUIREMENTS

A candidate must:

- Fulfill the regulation of the University and the Faculty concerning postgraduate studies
- 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

Accepted students will choose any of the following orientations based on the number of students and the approval of the supervisor.

Required (R) and Elective (E) courses

YEAR I (21 cr)

BIOM 300 Medical Biochemistry	6 cr
BIOM 301 Quantitative Analysis and Biostatistics	2 cr
BIOM 302 Techniques of Scientific Communications	2 cr
BIOM 303 Antimicrobial Chemotherapy and Resistance	3 cr
BIOM 306 Advanced Biochemistry (Enzymology/Metabolism)	3 cr
BIOM 320 Advanced Medical Immunology	3 cr
BIOM 321 Medical Microbiology	3 cr
BIOM 324 Advanced Topics in Infection and Immunity	3 cr
BIOM 325 Techniques in Immunology	1 cr
BIOM 326 Clinical Microbiology and Infection	6 cr

BIOM 327 Infectious Diseases	2 cr
BIOM 330 Advanced Molecular Biology	3 cr
BIOM 331 Medical Genetics	2 cr
BIOM 332 Advanced Topics in Biochemistry	3 cr
BIOM 333 Techniques in Biochemistry	1 cr
BIOM 336 Advanced topic in Genetics	3 cr
BIOM 337 Techniques in Genetics	1 cr
BIOM 338 Advanced Topics in Cell Biology	3 cr

Any course from MEDI/MEDII curriculum is equivalent to a graduate course.

YEAR II (9 cr)

BIOM 335 Research Tutorials in Biomedical Sciences	3 cr
BIOM 399 Thesis	6 cr

COURSE DESCRIPTIONS

BIOM 300 MEDICAL BIOCHEMISTRY

6 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

2 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 306 ADVANCED BIOCHEMISTRY (ENZYMOLGY/METABOLISM)

3 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. Prerequisites: 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.

BIOM 321 MEDICAL MICROBIOLOGY

4 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, Chlamydia and Legionella. The selected protozoa are Leishmania, Plasmodium, Toxoplasma and Trypanosoma whereas retroviruses, hepatoviruses, 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 2 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 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 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 credits

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 399 THESIS

6credits

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

University of Balamand

Office of Admissions & Registration

P.O. BOX 100 Tripoli – Lebanon

Tel: 06-930250 / 03-338679 / 03-335683

Email: admissions@balamand.edu.lb

FOR ADDITIONAL INFORMATION

University of Balamand

Faculty of Medicine & Medical Sciences

P.O. BOX 100 Tripoli – Lebanon

Tel: 06-930250 / 03-338679 / 03-335683 ext: 3802 /3811

Fax:06-931956/7

EXT:3818

Email: medicalfaculty@balamand.edu.lb

Faculty of Medicine & Medical Sciences

St. George Health Complex

P.O.BOX 166378

Achrafieh – Beirut 1100 2807 Lebanon

Tel: 01-566781

Fax: 01-566780

Email: pme@balamand.edu.lb

ST. GEORGE FACULTY OF POSTGRADUATE MEDICAL EDUCATION

The Faculty of Postgraduate Medical Education is committed to train residents and fellows to achieve their goal of independent medical and academic practice and to produce physicians that can provide outstanding and compassionate patient care with commitment to uphold the ethical principles of their profession and contribute to the healthcare needs of society.

RESIDENCY PROGRAMS

- Anatomical Pathology
- Anesthesiology
- Dermatology
- Family Medicine
- Internal Medicine
- Laboratory Medicine
- Medical Imaging
- Neurology
- Obstetrics and Gynecology
- Ophthalmology
- Orthopedic Surgery
- Otorhinolaryngology Head & Neck Surgery
- Pediatrics
- Psychiatry
- Surgery
 - oCardiothoracic Surgery
 - oGeneral Surgery
 - oNeurosurgery
 - oPediatric Surgery
 - oPlastic and Reconstructive Surgery
 - oUrology
 - oVascular Surgery

FELLOWSHIP PROGRAMS

The fellowship programs at Saint George Faculty of Postgraduate Medical Education aim to provide comprehensive training for specialists in the science and practice of Cardiology, Endocrinology, Gastroenterology, Hematology and Medical Oncology, Infectious Diseases, Nephrology, Pulmonary Diseases and Intensive Care Medicine and to promote scholarship and research activities. Curricula of fellowship programs are set in accordance with the Accreditation Council for Graduate Medical Education (ACGME) guidelines.

1. ADMISSION REQUIREMENTS

Applicants are requested by the month of March to submit to the Dean's Office at Saint George Faculty of Postgraduate Medical Education or the Office of Admission and Registration at the University of Balamand the following documents:

- Three (3) recent passport – size photographs
- A photocopy of the Identity Card or Passport
- A certified copy of the Baccalaureate II Certificate or its equivalent
- A certified copy of the Medical Diploma and transcript of records
- A copy of the Medical School Training Program and its description (for graduates of Foreign Medical

schools)

- Three letters of recommendation from three different Faculty members who worked with the applicant during his Internship year(s)
- A Personal Statement (See application)
- Evidence of English Language proficiencies e.g. TOEFL/IELTS
- Evidence of passing the colloquium exam

Upon the receipt of the requested documents, the Dean's Office informs applicants about the date and venue of the Qualifying Graduate Examination (By the end of May).

Submitted applications are valid only for the academic year and the residency program to which they are being made.

All applicants have to perform the Qualifying Graduate Examination and those who successfully complete the written examination are interviewed by a special committee. Applicants are informed about the Committee's decision on the date announced by the Dean's Office.

2. RULES AND REGULATIONS

A. Academic Performance

See University Rules and Regulations

B. Grievance Procedure

Students may appeal against a decision regarding them taken by the Faculty. The appeal must be submitted in writing. A Grievance Committee structured according to the rules and regulations of the University will evaluate the situation.

- Written Warning
- Temporary Suspension
- Dismissal