

**FACULTY OF MEDICINE &  
MEDICAL SCIENCES**

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

## **FACULTY LIST**

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Bashour, Tali'	Vice President for Medical Studies
Karam, Nadim	Vice President for Health Affairs and Community Development
Nahas, George	Vice President for Planning and Educational Relations
Najjar, Michel	Vice President for Development and Public Affairs
Nassar, Camille	Dean
Moubayed, Walid	Dean of Admissions and Registration
Bashir, Sameera	Librarian

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Al-Amaar Monzer Grace	Secretary
Chaar Madi Micheline	Executive Secretary
Copti Razzouk Majd	Executive Secretary
Farah George	Administrative Assistant
Hakim Haddad Antoinette	Academic Assistant
Khoury Carmen	Secretary

### **FACULTY MEMBERS**

#### **DEPARTMENT OF BIOMEDICAL SCIENCES**

##### **Dr. KHACHAB Maha – A/Chairperson**

##### **Full Time**

Dr. AWAD CHAKASS Dania  
Dr. BAHR Georges  
Mr. DAHDOUH Elias  
Dr. ECHTAY Karim  
Mr. HAWI Jihad  
Dr. KHACHAB Maha  
Dr. NASSAR Camille  
Dr. ZAHED Laila  
Dr. ZEAITER Zaher

##### **Part Time**

Dr. HALABI Jamil  
Dr. IRANI Jihad  
Dr. JURAYJ Wafaa  
Dr. NABBOUT Ghassan  
Dr. NASR Rami  
Dr. NASSIF SALEH Doris  
Dr. (Al) Ojaimi Mode  
Dr. RAZZOUK Jibrayil

**DEPARTMENT OF MEDICINE**  
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**Allergology Unit**  
**Dr. DERIANE Jean - Chief of Unit**

**Full Time**

Dr. ASFAR Elias  
Dr. DERIANE Jea

**Part Time**

**Cardiology Service**  
**Dr. MAALOUF Assaad - Chief of Service**

**Full Time**

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Dr. ABOU JAOUDE Fadi  
Dr. CHARBEL Paul  
Dr. CHOUAIRI Salah  
Dr. HABIB Pierrette  
Dr. MAALOUF Assaad

**Part Time**

Dr. DIB Hicham  
Dr. EL SAYED Ali

**Hemodynamic & Interventional Cardiology Unit**  
**Dr. CHARBEL Paul - Chief of Unit**

**Full Time**

Dr. ABOU JAOUDE Fadi  
Dr. CHARBEL Paul  
Dr. CHOUAIRI Salah  
Dr. MAALOUF Assaad

**Part Time**

Dr. DIB Hicham  
Dr. EL SAYED Ali

**Coronary Care Unit**  
**Dr. ABOU JAOUDE Fadi - Chief of Unit**

**Dermatology Service**  
**Dr. EL SAAD DEBAHY Nada - Chief of Service**

**Full Time**

Dr. ABI RACHED MEGARBANE Hala  
Dr. AMMOURY Alfred  
Dr. EL-SAAD DEBAHY Nada

**Part Time**

Dr. KARAM EL-KEHDY Paula

**Endocrinology Service**  
**Dr. CHIDIAC WEHBE Rita Maria –Chief of Service**

**Full Time**

Dr. ATALLAH Paola  
Dr. CHIDIAC WEHBE Rita Maria

**Part Time**

Dr. HAJJAR Elias  
Dr. WAKIM Saria

**Family Medicine Service**  
**Dr. ABOU SALBI Michel - Chief of Service**

**Full Time**

Dr. ABOU SALBI Michel  
Dr. CHALLITA Antoine  
Dr. KARAM Nadim  
Dr. STEPHAN Elias

**Part Time**

Dr. GERGES Zeina

**Geriatric Unit**

**Full Time**

Dr. STEPHAN Elias

**Part Time**

**Gastroenterology Service**  
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**Full Time**

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Dr. BEDRAN Khalil  
Dr. EL-KHOURY Salem  
Dr. JABBOUR Gide  
Dr. RASSAM Paul

**Part Time**

Dr. HALLAK Mona

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**Full Time**

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Dr. KOBROSSY Bassam  
Dr. TUEINI Elias

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Dr. MAKDESSI Joseph

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**Full Time**

Dr. AFIF Claude  
Dr. AZAR Eid  
Dr. SAAD Antoine

**Part Time**

**Nephrology Service**  
**Dr. FARES JOUBRAN Najat - Chief of Service**

**Full Time**

Dr. FARES JOUBRAN Najat  
Dr. NASR Edgard

**Part Time**

Dr. ABOU JAOUDE Walid

**Neurology Service**  
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**Full Time**

Dr. AOUAD Antoine  
Dr. KHOURY Mounir  
Dr. MAJDALANI Atef

**Part Time**

Dr. EL-RAHI Sami

**Pneumology Service**  
**Dr. BAHOUS Joudy - Chief of Service**

**Full Time**

Dr. BAHOUS Joudy  
Dr. JUVELEKIAN Georges  
Dr. KHOURY Nabil  
Dr. WAKED Mirna

**Part Time**

Dr. SAROUFIM Kabalan  
Dr. SFEIR Mireille

**Rheumatology Unit**  
**Dr. CHAHROURI Joseph - Chief of Unit**

**Full Time**

Dr. CHAHROURI Joseph

**Part Time**

Dr. HITTI Michel

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**Full Time**

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Dr. KARAM Elie  
Dr. KARAM George

**Full Time**

**Psychology**

Mrs. CORDAHI TABET Caroline  
Dr. NASSER KARAM Aimée

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**Dr. ABOU KHALIL Bassam - Chief of Service**

**Full Time**

Dr. ABOU KHALIL Bassam  
Dr. ZANKOUL Fuad

**Part Time**

Dr. YOUSSEF Pierre

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**Full Time**

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Dr. DAHER Michel  
Dr. DAOU Robert  
Dr. EL-RASSI Ziad  
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**Part Time**

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Dr. AMMAR Georges  
Dr. ARAMOUNI Hassib  
Dr. HACHACHE Khalil  
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Dr. NASSAR Nicolas

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**Neuro Surgery Service**  
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**Full Time**

Dr. HAGE Paul  
Dr. NACHANAKIAN Antoine

**Part Time**

Dr. ALAYWAN Moussa

**Pediatric Surgery Service**  
**Dr. DIAB NABIL – Chief of Service**

**Full Time**

**Part Time**

Dr. DIAB Nabil  
Dr. KORKOMAZ Roger

**Plastic & Reconstructive Surgery Service**  
**Dr. HOJEILI Souheil - Chief of Service**

**Full Time**

Dr. ABDELHAK Elie  
Dr. HOJEILI Souheil

**Part Time**

Dr. ABI NAKHOUL Fadi  
Dr. AUDI Paul  
Dr. KARAM Bassem  
Dr. LAWAND DAOU Souhaïla  
Dr. SLEIMAN Ziad

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Dr. ASSAF Georges  
Dr. GHANTOUS Imad  
Dr. GHAZAL Georges  
Dr. JABBOUR Michel

**Part Time**

Dr. NOHRA Joe

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**Part Time**

**OPHTALMOLOGY PROGRAM**  
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Dr. KHOURY Ghassan  
Dr. NASR Youssef  
Dr. ZAKKA Kamal

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Dr. ROMANOS Bassam

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Dr. NASSIF Yolla  
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Dr. CHAMMAS Mary  
Dr. EL-KEHDY Georges  
Dr. GHANEM Joseph  
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**Part Time**

Dr. BOU HABIB ABI NAKHOUL Rania  
Dr. NOHRA Charles



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Dr. ADEM Carmen  
Dr. ASHOU Raja  
Dr. CHEMALI Rami

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Dr. ABI GHOSN Jean  
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Dr. HAJJ Viviane  
Dr. HOBEIKA Samia  
Dr. JALBOUT Nadim  
Dr. KARAVETIAN Boghos  
Dr. SFEIR Samia  
Dr. TABBAL Jean Elie  
Dr. TOHME Wissam

**Part Time**

Dr. KAFROUNI Hazem  
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**Cardiac Anesthesia Service**

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**Part Time**

Dr. KAWKABANI Nadine

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Dr. GHANDOUR HAJJ (EL) Fatima  
Dr. MANSOUR Amira  
Dr. MEGUERIAN BEDOYAN Zarouhie

**Part Time**

**DEPARTMENT OF LABORATORY MEDICINE**  
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**Laboratory Service**  
**Dr. IRANI HAKIME Noha - Chief of Service**

**Full Time**

Dr. IRANI HAKIME Noha  
Dr. SAMAHA Hanady

**Part Time**

**Blood Bank Service**  
**Dr. SAMAHA Hanady - Chief of Service**

**Full Time**

Dr. SAMAHA Hanady

**Part Time**

**EMERGENCY MEDICINE**  
**Dr. DAOU Ibrahim - Coordinator**

**Full Time**

Dr. ACHKAR (AL) Rony  
Dr. DAOU Ibrahim  
Dr. KHALIFE Pierre

**Part Time**

**COMMUNITY HEALTH CLINIC**  
**Dr. JUVELIKIAN Georges - Coordinator**

**Full Time**

**Part Time**

Dr. KLEIMEH Nelly  
Dr. SAHYOUN Francois

# **FACULTY OF MEDICINE & MEDICAL SCIENCES**

## **MEDICAL PROGRAM**

Medical education at the University of Balamand begins with the first two years at the main campus of the University located on the Hill of Balamand overlooking the coastal area of Al-Kurah, Northern Lebanon. The four-year MD program is completed with two years of clinical training at St. George Hospital

University Medical Center (founded 1878) in Achrafieh – Beirut; one of Lebanon’s leading tertiary care medical centers.

The four years of education and clinical patient-oriented training form an integrated modular continuum that emphasizes an analytical inquisitive process of learning based on active hands-on acquisition of knowledge and skills through closely supervised and tutored teamwork. This allows students to expand their knowledge in basic as well as applied medical sciences and build professional character, skills and problem solving abilities. All are essential as foundations for postgraduate training and leadership in providing quality health care.

Institutional affiliations with leading centers of excellence in Europe and North America facilitate transfer of knowledge and extensive academic and professional exposure of students and faculty. Moreover; such affiliations allow interested students – especially those with a dual nationality- to study in other facilities and medical centers.

## **CURRICULUM**

Academic goals and objectives are approached and achieved through a modular integrated curriculum that advocates:

1. Character building resulting in responsible behavior, professionalism, ethics, advanced internal accountability, perpetual lifelong learning, advocacy, commitment to human rights, and proactive community involvements.
2. Dynamic integration of basic and clinical medical and health sciences with actual clinical training and emphasis on the integral relationship between basic medical sciences and social sciences in building intellectual and professional capacity for problem solving skills.
3. Early exposure to the fields of medical practice.
4. A learning perspective and approach that emphasizes the importance of team dynamics and spirit and the value of distance learning and appropriate use of interactive electronic resources.
5. Emphasis on the value of sciences, research and excellence with particular concentration on the multidisciplinary perspective of medicine and health and the fundamental leadership role of the physician in team dynamics.
6. Providing students with the means to find value and reward in doing the same with peers, team members, patients, family members and the community at large.
7. Building problem solving and fact-finding capacity with particular emphasis on evidence as an integral and fundamental component of decision-making.
8. Taking advantage of the information revolution and learning successful innovative approaches to medical education.

# **ADMISSIONS**

Candidates are selected on the basis of academic record and personal characteristics as evaluated by the Admissions Committee chaired by the Dean. Attributes of importance include:

## **1. Academic Record**

- A. Bachelor's degree or the equivalence of 3 years of higher educational studies in a recognized institution.
- B. Completion of premedical requirements as follows:
  - 1. Biology/ Zoology/ Embryology/ Genetics with a laboratory component. 8 credits- minimum of 2 courses
  - 2. Chemistry (General- Organic- Inorganic) with laboratory components. 12 credits- minimum of 3 courses
  - 3. Physics/ Basic Electronics with laboratory components 8 credits- minimum of 2 courses
  - 4. Cultural Studies. At least 6 credits.
- C. Academic Performance
- D. Medical College Admission Test (MCAT) scores
- E. English Language Competency
- F. Computer Literacy

The Faculty is ready to offer in cooperation with the Faculty of Sciences, an intensive remedial program oriented towards preparing students from different majors. Within the same context, students of the pre-med program can major into either Biology or Chemistry if they wish to change after their Junior year.

## **2. Personal characteristics**

- A. Communication capabilities, ability and potential to function as a team player.
- B. Character, extracurricular interests, diversity of experience and extent of involvement in community based activities.
- C. Achievements in research projects and/or medically related topics.
- D. Understanding of the profession of medicine and interest in a career within the context of this profession.

## **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

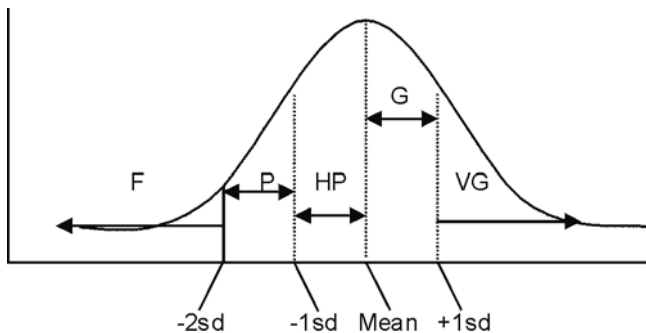
VG= Very Good ( $VG > \text{Mean} + 1sd$ )

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**

### **MED I Courses**

#### **HUMAN GROSS ANATOMY (HGAN 457) (67,90,7)**

This is a course in human gross anatomy designed to introduce medical students to anatomic and medical terminology, basic information on form, structure and function that is fundamental to consideration of physical diagnosis and disease in the ensuing curriculum. It consists primarily, but not exclusively, of a careful regional dissection and study of the entire human body. Emphasis is placed on integration of anatomical concepts in a clinical setting, and is punctuated by the use of clinical correlation lectures, actual case study exercises, cross-sectional and radiologic anatomy.

#### **BIOLOGY OF CELLS AND TISSUES/HISTOLOGY (BCTH 456) (45,44,6)**

The course seeks to lead medical students to understand the microanatomy of cells, tissues, and organs and to correlate structure with function. It provides students with the opportunity to examine and understand histologic slides in laboratory exercises. The course is divided into a series of basic lectures in the Fall Semester and another series of organ histology lectures that are integrated into the subject matter of the physiology course in the Spring Semester.

#### **MEDICAL BIOCHEMISTRY (BIOC 406) (81,30,6)**

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.

#### **GENERAL PHYSIOLOGY AND BIOPHYSICS (GPHY 402) (30,0,2)**

The course provides a basic understanding of the physiological functions of excitable membranes. It emphasizes the ionic mechanisms underlying the cell membrane potential at rest and during activity, structure and functional properties of ion channels, synaptic transmission, principles of neuromuscular transmission, and muscle physiology. This course serves as an introduction to the fundamental principles of physiology and is intended to direct students' attention to the integration of physiological mechanisms with medicine.

#### **MEDICAL GENETICS (MGEN 402) (30,0,2)**

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.

#### **HUMAN EMBRYOLOGY (HEMB 402) (30,0,2)**

The course describes the basic principles of human embryology. It integrates a brief review of the anatomy of the genital organs, gametogenesis, fertilization, bilaminar and trilaminar embryonic disc formation, and organ differentiation. Then, the course emphasizes the development of each body system and congenital diseases.

#### **IMMUNOLOGY (IMUN 402) (30,0,2)**

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.



**NEUROSCIENCE (NEUR 416) (75,44,6)**

The course seeks to lead medical students to understand the relationship between the structure and function of the nervous system. Although a basic neuroscience course, it emphasizes the functional consequences of damage or disconnection in the nervous system through small group-case discussions. The objective of the course is to promote student's knowledge to solve clinical problems in which the primary task is the localization of the lesion.

**HUMAN PHYSIOLOGY (HPHY 406) (100,14,6)**

The goal of this course is to introduce students to the mechanisms that underlie the normal function of human organs. It is designed to give students the knowledge of normal organ system function to acquire the skills of interpreting symptoms and course of human diseases in pathophysiology.

**MEDICAL ETHICS (METH 401) (15,0,1)**

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) (30,0,2)**

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.

**PREVENTIVE MEDICINE AND HEALTH ADMINISTRATION (PMHA 402) (30,15,3)**

The course aims at introducing the students to the concepts impacting the relationship of health, illness, and society, and to underscore the pivotal role of non-medical societal issues on health, at the individual and community levels. The course will also introduce the essential components of health care systems, the basic issues facing health care, the patterns of health care delivery worldwide, and the health care system of Lebanon.

**PRINCIPLES OF EPIDEMIOLOGY (MEEP 402) (28,0,2)**

This course aims at providing students with an understanding of epidemiological perspectives on health and disease. Specifically, 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 discussed. 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 epidemiologic literature, an essential skill to future success in clinical practice.

**CLINICAL SKILLS I AND PATIENT PHYSICIAN RELATION (CLSK 434) (35,60,4)**

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**

### **PATHOPHYSIOLOGY OF DISEASES (PPHY 549) (120,116,9)**

The course provides the student with an understanding of fundamental mechanisms of disease development and expression. It describes the implications of pathophysiologic abnormalities in a diagnostic approach with a therapeutic plan. The course covers a broad range of important and explanatory diseases with an emphasis on the common mechanisms rather than the individual characteristics. The course is presented in classical lectures, and case-based discussions with emphasis on self-learning.

### **PATHOLOGY (PATH 569) (120,50,9)**

It is the study of disease process that combines the cause of the disease, the mechanisms that lead to its development, the morphologic changes that are induced in cells and organs, and, the resulting functional consequences that are expressed in clinical signs and symptoms. It is a bridging discipline involving basic science and clinical practice.

### **MICROBIOLOGY & INFECTIOUS DISEASES (MBID 507) (90,15,7)**

The course aims at introducing students to the microbial world from a medical perspective. It emphasizes microbial structure, classification, and interaction with the human host. Topics include bacterial microbiology, virology, mycology, and parasitology.

### **MEDICAL STATISTICS (MEST 512) (20,8,2)**

The course provides an introduction to the basic principles and applications of statistics as they are applied to problems in clinical and public health settings. Topics include the description and presentation of data, normal and binomial distributions, descriptive statistics, estimation, elements of hypothesis testing, one-sample and two-sample, ANOVA and Chi-squared tests, and an introduction to linear and logistic regression. Lectures, problem sets, and computer output are used to develop these additional concepts. This course is designed to be closely interrelated with another required course ( Principles of Epidemiology) that is scheduled to precede this course.

### **PSYCHOPATHOLOGY (PSYP 503) (45,0,3)**

The course introduces students to Psychiatry. Psychoactive disorders across the lifespan will be highlighted with an emphasis on etiology, pathophysiology and phenomenology. Students will be introduced to an integrated multidisciplinary approach to diagnosis and management. Ethical and forensic issues of practical concern to psychiatry are addressed.

### **MEDICAL PHARMACOLOGY AND THERAPEUTICS (MPHT 529) (120,50,9)**

The course is a comprehensive presentation of medical pharmacology. The general principles of drug disposition including absorption, distribution, metabolism, elimination, pharmacokinetics, and pharmacodynamics of major drugs are covered. Emphasis is on the mechanisms of drug actions, uses, adverse effects, contraindications, and clinically important drug interactions. The course also comprises clinical cases integrating pharmacology and diseases.

### **CLINICAL SKILLS II & BASIC CARDIAC LIFE SUPPORT (CLSK 534) (30,120,4)**

The course is designed to expand the knowledge and understanding of Medicine II students about the hospital as a venue for medical care and related dynamics, basic clinical and patient care skills, and the importance of commitment to team spirit. This course designed as a summer rotation at Saint George Hospital University Medical Center.

## **MED III Courses**

### **CLINICAL CLERKSHIP IN INTERNAL MEDICINE (CCIM 603)**

During the three months 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 603)**

During the three months of clinical clerkship in the hospital, the students will be introduced to the basic principles of surgery; 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 post-operative 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 602)**

During the two months 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 (CCPE602)**

During the two months 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 601)**

During the one - month 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.

### **TOTAL QUALITY MANAGEMENT IN HEALTH CARE (TQHM 604)**

The course should provide the medical students with the basic knowledge of total quality management approaches and tools. During the course, students shall develop the fundamental managerial skills of leadership, planning, organization and communication. The course will explain the customer approach and focus, and

will concentrate on the national and international orientation standards. Students will also be introduced to Evidence Based-Medicine, Clinical Guidelines and Pathways, and Clinical Indicators.

## **MED IV Courses**

### **CLINICAL CLERKSHIP IN INTERNAL MEDICINE (CCIM 704)**

The Med IV clerkship in Internal Medicine consists of four rotations of one month each in ICU, CCU, ER, and Ward. 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 PEDIATRICS (CCPE 702)**

In the Med IV clerkship in Pediatrics the students work under the supervision of the residents and the attending physicians. They have to acquire independence in the diagnosis and management of the most common pediatric problems, obtain the history of the patient, perform the physical examination in a limited period of time, be able to establish a differential diagnosis, as well as a diagnostic and therapeutic plan. They follow up on patients, present topics related to their patients and make case discussions that conform to the problem – based learning. The clerkship duration is two months.

### **CLINICAL CLERKSHIP IN SURGERY (CCSU 701)**

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 patient 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, two weeks in Anesthesia and two weeks in Otorhinolaryngology – Head and Neck surgery.

### **CLINICAL CLERKSHIP IN ANESTHESIOLOGY(CCAN 701)**

In this clerkship, 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. The clerkship duration is two weeks.

### **CLINICAL CLERKSHIP IN ENT(CCEN 701)**

This two weeks fourth year 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.

# **MASTER OF SCIENCE PROGRAM IN BIOMEDICAL SCIENCES**

The Faculty of Medicine and Medical Sciences has started a new graduate program leading to the degree of Master of Science. 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:

- 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 78 (from a 100 point scale). Admission under probation can be given to students with a minimum major average of 75.
- Pass a graduate record examination (GRE)
- Pass the Test of English as a Foreign Language (TOEFL), if the student is a graduate of a non-English language University, with a minimum score of 230 on the computer based testing which is equivalent to 570 on the paper based testing.

## **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)****(All orientations)**

<b><u>Code</u></b>	<b><u>Course Title</u></b>	<b><u>Credit</u></b>
BIOM 300	Medical Biochemistry (R)	6
BIOM 301	Quantitative Analysis and Biostatistics (R)	2
BIOM 302	Techniques of Scientific Communications (R)	2

**(Orientation Physiology)**

<b><u>Code</u></b>	<b><u>Course Title</u></b>	<b><u>Credit</u></b>
BIOM 310	Biophysics (R)	2
BIOM 311	Neuroscience (R) or BIOM 314 General Histology (R)	3
BIOM 312	General Human Physiology (R)	6

**(Orientation Immunology and Medical Microbiology)**

<b><u>Code</u></b>	<b><u>Course Title</u></b>	<b><u>Credit</u></b>
BIOM 330	Advanced Molecular Biology (R)	3
BIOM 320	Medical Immunology (R)	2
BIOM 331	Medical Genetics (R)	2
BIOM 321	Medical Microbiology (E)	4

**(Orientation Biochemistry and Genetics)**

<b><u>Code</u></b>	<b><u>Course Title</u></b>	<b><u>Credit</u></b>
BIOM 330	Advanced Molecular Biology (R)	3
BIOM 320	Medical Immunology (R)	2
BIOM 331	Medical Genetics (R)	2
BIOM 332	Advanced Topics in Biochemistry (E)	3
BIOM 333	Techniques in Biochemistry (E)	1

**YEAR II (9 cr)****(Orientation Physiology)**

<b><u>Code</u></b>	<b><u>Course Title</u></b>	<b><u>Credit</u></b>
BIOM 313	Research Tutorials in Physiology (R)	3
BIOM 399	Thesis (R)	6

**(Orientation Immunology and Medical Microbiology)**

<b><u>Code</u></b>	<b><u>Course Title</u></b>	<b><u>Credit</u></b>
BIOM 322	Research Tutorials in Immunology (E)	3
BIOM 323	Research Tutorials in Microbiology (E)	3
BIOM 399	Thesis (R)	6

**(Orientation Biochemistry and Genetics)**

<b><u>Code</u></b>	<b><u>Course Title</u></b>	<b><u>Credit</u></b>
BIOM 334	Research Tutorials in Biochemistry (E)	3
BIOM 335	Research Tutorials in Genetics (E)	3
BIOM 399	Thesis (R)	6

**Depending on the student's background, the following additional elective courses can be used to replace or to complement one or more of the above indicated electives:**

<b><u>Code</u></b>	<b><u>Course Title</u></b>	<b><u>Credit</u></b>
BIOM 324	Advanced Topics in Infection and Immunity	3
BIOM 336	Advanced Topics in Genetics	3
BIOM 325	Techniques in Immunology	1
BIOM 337	Techniques in Genetics	1

Alternatively, up to 6 credits of elective courses may be chosen from outside the Faculty, with the consent of the supervisor and of the Graduate Committee, to complement the knowledge within a related field of research or to replace one or more of the above indicated elective courses.

## **COURSE DESCRIPTIONS**

### **BIOM 300 MEDICAL BIOCHEMISTRY**

**6 cr**

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.

### **BIOM 301 QUANTITATIVE ANALYSIS AND BIostatISTICS**

**2 cr**

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 cr**

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 310 BIOPHYSICS**

**2 cr**

The course aims to provide a basic understanding of the physiological function of excitable membranes and emphasizes on the ionic mechanisms underlying the cell membrane potential at rest and during activation, the functional properties of ion channels, synaptic transmission, principles of neuromuscular transmission, and muscle physiology. The course is intended to provide the basic principles of fundamental physiology and to direct the attention to the integration of physiological mechanisms with medicine. Selected topics will be discussed at length including: Ion channels, Ion-transporting ATPases, calcium transport, sodium-calcium exchangers in muscle types, and metabolism of neurotransmitters and neuromodulators.

### **BIOM 311 NEUROSCIENCE**

**3 cr**

The course directs students to understand the relationship between the structure and function of the nervous system. It emphasizes the functional consequences of damage or disconnection in the nervous system, and promotes students' knowledge in identifying and localizing lesions of medical relevance.

### **BIOM 312 GENERAL HUMAN PHYSIOLOGY**

**6 cr**

The course is aimed to highlight the mechanisms underlying the normal functions of human organs. It is designed to give students the knowledge of normal organ system function in order to acquire the skills of interpreting the consequences of organ dysfunction.



**BIOM 313 RESEARCH TUTORIALS IN PHYSIOLOGY****3 cr**

The course focuses on the areas pertinent to research conducted by faculty members in the field of Physiology. Topics include: development and maturation of sensory systems, development of embryonic and neonatal projections as well as the establishment of adult projections, regulation of nutrient absorption, and parameters controlling kidney function.

**BIOM 320 MEDICAL IMMUNOLOGY****2 cr**

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 cr**

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 322 RESEARCH TUTORIALS IN IMMUNOLOGY****3 cr**

The course focuses on the areas pertinent to research conducted by faculty members in the field of Immunology. Topics include: immunopathogenesis of chronic viral infections, immunomodulation, and immunotherapy.

**BIOM 323 RESEARCH TUTORIALS IN MICROBIOLOGY****3 cr**

The course focuses on the areas pertinent to the research conducted by faculty members in the field of Microbiology. Topics include: the pathogenesis of HIV infection, Mycobacterial vaccines, and pathogenetic mechanisms in hepatitis virus infections.

**BIOM 324 ADVANCED TOPICS IN INFECTION AND IMMUNITY****3 cr**

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, 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.

**BIOM 325 TECHNIQUES IN IMMUNOLOGY****1 cr**

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 330 ADVANCED MOLECULAR BIOLOGY****3 cr**

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.

**BIOM 331 MEDICAL GENETICS****2 cr**

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 cr**

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.

**BIOM 333 TECHNIQUES IN BIOCHEMISTRY****1 cr**

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

**BIOM 334 RESEARCH TUTORIALS IN BIOCHEMISTRY****3 cr**

The course focuses on the areas pertinent to the research conducted by faculty members in the field of Biochemistry and which include mitochondrial function and uncoupling proteins.

**BIOM 335 RESEARCH TUTORIALS IN GENETICS****3 cr**

The course focuses on the areas pertinent to the research conducted by faculty members in the field of Genetics. Topics include: chromosomal abnormalities and genotoxic effects in response to chemotherapeutic agents in human lymphocytes; DNA microarray applications in identifying target genes which confer chemotherapeutic drug resistance; and investigation of global DNA damage and repair.

**BIOM 336 ADVANCED TOPICS IN GENETICS****3 cr**

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.

**BIOM 337 TECHNIQUES IN GENETICS****1 cr**

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 399 THESIS****6 cr**

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

Fax: 06-930238

Email: [admissions@balamand.edu.lb](mailto: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:06-930279

Email: [medicalfaculty@balamand.edu.lb](mailto: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 Ext: 3912/3

Fax: 01-566780

Email: [pme@balamand.edu.lb](mailto:pme@balamand.edu.lb)

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

The Faculty of Postgraduate Medical Education is committed to provide high standard postgraduate medical education. Its objective is to provide excellence in patient care, clinical research, and medical education.

The Faculty provides a scholarly environment in which both teaching staff and residents can participate in a well-structured postgraduate curriculum, in research activities, and in on-going medical education. The residency-training program promotes interaction among all involved: healthcare providers, patients, and families.

Its medical staff is comprised of qualified and competent individuals who provide inpatient hospital care, and contribute to the instruction of house staff, interns, and residents.

The training program offers residents the opportunity for personal, clinical, and professional growth under the supervision and guidance of the teaching faculty and administration. The program ensures that house staff provides safe, effective, and high quality patient care with increased responsibility at each postgraduate level. The following programs of specialty are available:

## **PROGRAMS OF POSTGRADUATE MEDICAL EDUCATION**

<b>RESIDENCY PROGRAM</b>	<b>FELLOWSHIP PROGRAM</b>
<ul style="list-style-type: none"> <li>• Anesthesiology</li> <li>• Internal Medicine</li> <li>• Pediatrics</li> <li>• Psychiatry</li> <li>• General Surgery</li> <li>• Cardio-Thoracic Surgery</li> <li>• Neurosurgery</li> <li>• Orthopedic Surgery</li> <li>• Otholaryngology- Head &amp; Neck Surgery</li> <li>• Urology</li> <li>• Vascular Surgery</li> <li>• Obstetrics &amp; Gynecology</li> <li>• Diagnostic Radiology</li> <li>• Anatomical Pathology</li> </ul>	<ul style="list-style-type: none"> <li>• Cardiology</li> <li>• Endocrinology &amp; Metabolism</li> <li>• Hematology&amp; Medical Oncology</li> <li>• Gastroenterology</li> <li>• Pulmonary Diseases &amp; Intensive Care Medicine</li> <li>• Nephrology</li> </ul> <p><i>Applicants for the fellowship program must have completed three years of Internal Medicine</i></p>

Based on community needs and the spectrum of national and regional pathology encountered, this program is expected to expand and diversify in the near future.

## **1. ADMISSION REQUIREMENTS**

The Admissions Committee compiles a dossier of documents that constitute an application to the Faculty of Postgraduate Medical Education. To complete the dossier, applicants must submit the following to the Faculty Office at St. George Health complex, Beirut, or to the Office of Admissions and Registration at the University of Balamand (Koura).

- 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/her internship year(s)
- A certified copy of the Baccalaureate II Certificate or its equivalent
- Three (3) recent passports – size photographs
- A photocopy of the Identity Card or Passport
- A personal statement (See application)

All Applicants have to sit for a Qualifying Graduate Examination and an interview

Applications are accepted as of March. When the required documents listed above are submitted, the Faculty Office will inform applicants of the date and venue of the qualifying graduate examination and required interview (end of May).

Applications are valid only for the academic year and the residency program to which they are being made. Applicants are informed of the Admission Committee's decision on the date announced by the Faculty Office.

### **About The Examination:**

The exam also covers the specialties of Internal Medicine, Obstetrics and Gynecology, Pediatrics, Psychiatry, Surgery, and other areas relevant to provision of care under supervision. Some of the test questions describe basic clinical situations and require that you provide the underlying mechanism of the disease and its diagnosis. It also covers the Basic Sciences (Anatomy, Microbiology, Pathology, etc...). Questions commonly require examinees to apply basic science knowledge to clinical problems.

Applicants who pass the written examination will be interviewed by a special committee.

## **2. RULES AND REGULATIONS**

See The Junior Doctor's Handbook

### **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.

# **THE JUNIOR DOCTOR'S HANDBOOK**

## **St. George Hospital University Medical Center**

## **I. INTRODUCTION**

You are warmly welcomed as a valued member of the Saint George Hospital (S.G.H.) medical staff. We hope that you will find this booklet a useful introduction to some of the issues you may come across during your training.

In the interest of brevity, and to maintain consensus across units, the scope of this booklet does not extend to the discussion of specific management protocols. You should inquire as to the protocols and guidelines available relating to your specialty at the time you commence work.

## **II. ETHICS**

Please remember as a guiding principle that this hospital exists for the relief of suffering and the treatment of the sick.

Patients must be able to trust doctors with their lives and well-being. As a doctor you must:

- Make the care of your patient your first concern
- Treat every patient politely and considerately
- Respect patients' dignity and privacy
- Listen to patients and respect their views
- Give patients information in a way they can understand
- Respect the rights of patients to be fully involved in decisions about their care
- Keep your professional knowledge and skills up to date
- Recognize the limits of your professional competence
- Be honest and trustworthy
- Respect and protect confidential information
- Make sure that your personal beliefs do not prejudice your patient's care
- Act quickly to protect patients from risk if you have good reason to believe that you or a colleague may not be fit to practice
- Avoid abusing your position as a doctor
- Work with colleagues in the ways that best serve patients' interests

**Confidentiality** is a vitally important concept to grasp early in your career. It is easy to pass on confidential information unwittingly to others through conversation in public places, or by leaving hospital notes unattended. In discussion with relatives, please be careful not to disclose matters without the patient's consent.

### **III. RULES AND REGULATIONS**

The object of the hospital is to provide excellent care to patients. To achieve this end, the value of conscientious, close and co-operative working relationships between medical, nursing, and paramedical staff cannot be over emphasized.

#### **A. Duty Hours**

There may be defined duty hours for each hospital rotation, but, as this is your learning experience, it is in your best interest to make maximum use of patients, clinicians and resources. When adhering to specific duty hours of daily roster, you must be available at all times or make arrangements for temporary replacement.

#### **B. Duties**

While on duty, you should devote your whole time to the duties assigned to you. If you are being asked to perform non-urgent duties by staff outside your 'team' within working hours, you should inform your senior colleagues.

You are responsible for ensuring that you may be contacted at all times when on duty. You should ensure that regular checks on your beeper battery are carried out, and fresh batteries obtained without delay.

You should keep the telephone operator informed of your whereabouts when on duty if you are not carrying a beeper, or if you leave the hospital main building.

As far as your clinical work is concerned, you will be responsible directly to the chief resident and the consultant(s) to whom you are assigned. If you think you have made an error in the management of a patient, it is your duty to inform the consultant in charge of the patient or your chief resident without delay. Even when off duty you have a continuing responsibility for the patient under your care. You must, therefore, ensure that your colleagues on duty are fully briefed regarding all seriously ill patients in the Ward.

The Resident must be on duty by 7:00 a.m., and remain on duty until the afternoon round is finished. Interns and Residents will not leave the hospital when on duty without permission of the consultant concerned.

### **IV. RELATIONSHIP WITH OTHER STAFF**

#### **A. Medical**

In general, as a junior member of medical staff you are a vital link in a clearly defined chain of responsibility. Part of the responsibility for your actions will ultimately rest on your supervising consultant

(or the consultant responsible for the patient involved), and designed to allow access to your seniors for consultation at any time of the day, and you will be expected to ask for help and advice when in doubt. You should not wait for something to go wrong before you ask. You must not undertake activities or responsibilities beyond those you have been trained for, and must be supervised at all times when training in a procedure with which you have limited experience. In general the resident should not undertake major management decisions without reference to his senior resident or chief resident.

If you have a **complaint**, you should make it direct to one of the following:

- The Chief Resident



- The Head of Division
- The Head of the Department

You should report to the personnel office, and to your division head when you first started work.

If you fall ill, you must report immediately to the consultant to whom you are attached, and to the Medical Administration Office. You should also inform the above when you resume duty.

If you sustain an accident on duty this should be reported to the Division / Department Head. A special form is filled at the personnel department in case of illness and investigations are needed. It is your responsibility to inform your colleagues on duty when a patient in your care is ill and requires attention.

## **B. Representatives for Both Interns and Residents**

At the beginning of every academic year, Interns and Residents gather to elect a representative who will act on their behalf in matters related to their educational, recreational and housing facilities. He/she is considered as the link between the Intern/Resident body and the Faculty / Administration in case any conflict arises.

He/she is supposed to be in contact with his/her colleagues through repeated periodical meetings.

The representative's role should not overlap with the role of the Chief Resident who is responsible to lead his colleagues in his medical specialty, making sure patients are well looked after, and the academic training curriculum set by each department is being followed (Rotas, attendance, leaves, scientific meetings, etc).

## **C. Nursing and Paramedical**

An important part of training of junior medical staff lies in developing good working relationships with nursing staff. Whilst the nursing staff do not have managerial seniority over you, it is important to respect their advice and learn from their experience.

The roles of nursing staff are changing, with some nurses able to carry out procedures formerly regarded as medical duties (such as the administration of intravenous drugs and changing of dressings). It is important to show appreciation when this service is offered, but not to show antipathy toward those nurses who do not seek to extend their role.

Communication with the nursing staff is essential to the efficient running of the ward, and you must make sure that any changes in management you recommend are verbally passed on to the nurses in addition to documenting them in the notes. Similarly, any discussion with patients or relatives should be mentioned to the nursing staff and recorded in the notes.

Developing good working relationships with the paramedical staff, including physiotherapists, occupational therapists, porters, radiology and laboratory staff will improve the efficiency with which you look after your patients.

## **D. Press**

Direct contact and communication with the Press by junior medical staff should be avoided when possible, and the responsibility passed on to the relevant Consultant. ***Under no circumstances should information regarding a patient be given to anyone without the patient's full knowledge and consent. The patient is entitled to professional confidence.*** A doctor can be sued for damages for breaches of professional

confidence. All solicitors, their agents or other parties requesting information regarding a patient should be referred to the consultant concerned.

## **E. Complaints Procedures**

Complaints against doctors and other hospital staff are an increasing fact of life. Sometimes there are reasonable grounds for complaint, sometimes not. Bear in mind the psychological stress and/or guilt the patient / relative may be going through. As junior doctors in the 'front line' of care, you may be the subject of a complaint.

### **How to avoid complaints**

The best defense against complaints is good communication with patients and relatives. If you treat them with respect and understanding you will usually not face this problem. When talking with patients or relatives about complaints or sensitive issues, have one of the nurses to accompany you and record the content of your discussion in the case notes. If you are not comfortable and confident in carrying out such a discussion, it is best to refer them to the attending physician.

### **How to deal with complaints**

You should contact the consultant in charge of the patient as soon as possible. If the consultant is not available, seek help from other senior members of the team. In general, you will not be asked to deal directly with formal complaints, although you may have to deal with minor and informal complaints on the ward. Please remember not to implicate other members of the hospital staff.

## **V. IN HOSPITAL-ON CALL**

1. Call is both learning and service; neither is to compromise the other.
2. Residents/Interns will be in hospital when on call.

The emergency care work of the hospital is the most dynamic setting for the resident. Resident's benefit from **early contact** with patients:

- Assessing critical from non-critical
- Instituting assessment and care of critical problems
- Participating in decision making, i.e. patient management, i.e. surgery
- Participating in early in-hospital management e.g. surgery, ICU, delivery, psychiatric problems. Residents will usually share equal numbers of on-call days.

If you are taking holidays or if you have special events or an educational leave during the up-coming month, let that be known to those organizing the call schedule. Subsequent changes in the schedule are the responsibility of the designated resident. Switchboard and the emergency room must be notified.

The general scheme is to be flexible, again recognizing your need to have clinical exposure, assume clinical responsibility, to learn and be of service.

Provide a healing environment and care for all those who enter our doors.

- Provide a healing environment and care for all those who enter our doors.
- Treat people with dignity, compassion, empathy and cultural sensitivity.
- Integrity and accountability.
- Honest, trustworthy and forthright.
- Work with each other, the community, and the hospital in the provision of services.
- Promote choice and control by the patient/resident within a healing, caring environment.
- Provide the right services to the right person at the right time, every time.
- Support and encourage innovation, creativity and anticipation of the future.
- Fun and humor are important.

## **VI. RESPONSIBILITIES AND SUPERVISION**

All patients are admitted under the care of their attending physician, who is a member of the medical staff of S.G.H. residents will participate in the care of patients under the supervision of the clinician in charge of the case.

All residents are expected to behave in a proper professional manner when dealing with each other, with members of the medical staff of the Hospital, nurses, other members of the Hospital staff, patients and visitors. As part of patient care, morning and evening management rounds shall be conducted routinely on all patients in every division. Timing of such rounds is left to every division taking into consideration the rest of the medical activities and services being carried out. These rounds should be led by the Chief Resident and are not scheduled according to Faculty Staff conveniences. Although, the person directly responsible for patient care is his attending physician, treating doctors should encourage residents to share in the decision of treatment plans under their supervision and guidance.

### **A. Operating Room**

The Chief Resident / Senior Resident in coordination with the attending surgeons should secure the proper distribution of Residents/Interns for all daily operations; taking into consideration the numbers of Interns/Residents available, type of operation and other patient; services needed (E.R., floor, ICU, etc). All junior doctors are required to arrive at the operating room and be ready before the attending surgeon.

(7:30 am for the first case). It is preferable that they are aware of the case and the operative technique before scrubbing.

### **B. Ambulatory Patient Care and Out Patient Department O.P.D.**

S.G.H. out patient department is temporarily located at the E.R. premises. It has its own nursing staff and serves a good number of patients. Residents are required to rotate through the O.P.D according to a set schedule by their departments. All this is done under the supervision of an attending physician.

Attending physicians are encouraged to involve their residents in their private clinics as part of their training requirements. (Ambulatory patient care).

### **C. Training Curriculum and Residents Evaluation**

Residency is a post-graduate level of medical education. It depends on personal initiatives for knowledge acquisition.

In fact, the faculty has developed (with the help of Department/Division Heads) an established detailed

curriculum for each specialty at S.G.H. These curriculums specify what each Resident in each year of training (PGY1, PGY2, etc) should acquire. It also specifies the exact scientific activities each department/division should carry out during each academic year.

Resident/Intern evaluation depends on several factors or criteria:

- Medical knowledge and ability. Ethical behavior and patient or staff doctor relationship.
- His/Her basic and specialized medical knowledge is evaluated through his/her daily work and by performing regular (6 monthly, yearly) self-assessment exams.
- Appraisals and / or comments by the Chief Resident, Faculty Staff, Head of Division / Department. There will be specified overseas training programs to our Faculty Residents who show a high level of achievement in their work. These programs could be part of the required training period or as a specialized training program.

Residents will receive 2 “diplomas” from both the U.O.B and S.G.H once they complete their required training. These will state that they successfully fulfilled their specialty training.

“Certificates of Training” will be given to those spending a defined period of training but not attaining full curriculum specialization requirements.

## **D. Disciplinary Measures**

Interns/Residents who violate the rules and regulations will be apprehended.

A decision about what disciplinary action to take will be decided by all those concerned (Head of Division, Department, Dean, Medical Director, Hospital Director). These measures shall vary according to the seriousness and gravity of the violation:

- Oral Warning
- Written Warning
- Temporary Suspension
- Dismissal

**You may not refuse to see a patient.** Under the supervision of a member of the medical staff of S.G.H, residents are responsible for maintenance of a high standard of medical service in the area to which they are assigned. The specific duties on respective services are included in the handbook and may be further refined by the coordinating physician on that service.

**Residents may not admit a patient without the consent of the attending physician.** It is the resident’s responsibility to arrange that consent. Residents will provide full histories and physicals on all patients that they admit, at the time of admission. All entries to medical charts shall be clear, legible and have an identifiable signature.

Residents doing hospital work shall be responsible to their Chief Residents and to the physician supervising their current rotation. Each department head advise and direct you through your program of education in that department. The Dean will deal with matters of discipline after consultation with the Head of Department.

## **VII. ORDERING POLICY**

### **A. Requesting Investigations**

With regard to any investigation or procedure ask yourself the following questions:

- Do I need it?
- Do I need it NOW?
- Has it been done already?
- Have I explained the clinical problem? (Extremely Important for Pathology and Radiology requests)
- Have I asked for the best study?

## **B. General Principles**

1. The resident is encouraged to contact the attending doctor in an emergency situation to review a specific case and then, with permission, write the order. If a reasonable effort is made to contact an attending staff member and that fails, the resident may write orders and discuss the actions with his senior resident or the next available on call attending staff. The later scenario definitely applies only in an emergency situation.
2. On some occasions the attending staff may authorize orders by the resident without prior consultation. This is a personal decision between the attending staff concerned and the resident.
3. Nursing staff should respond to a resident's order as they would to any attending medical staff. It is not the nurses' responsibility to ensure that communication with the attending medical staff member has taken place-that responsibility lies with the resident. Concerns about the appropriateness of any order should be handled by involving the patient's attending physician.
4. Residents may not sign birth or death certificates, although they may carry out the clinical task of declaring death.
5. A Physician may not wish a patient to be seen by a resident. This decision is to be indicated by a written order on the chart.
6. Attending physicians are encouraged to inform their patients about the role of a resident and to encourage patient acceptance.
7. Attending physicians are also encouraged to speak to the resident about orders on a particular patient, which the resident is following. If this is not possible, guidance may be written in the history and progress notes, so the resident may write the orders. This permits the resident to maintain an active sharing role in patient management.
8. Each clinical rotation may have rules that are unique to that service. The resident is expected to learn and abide by them.

## **C. Treatment Orders**

All treatment orders must be written in the Doctor's order sheet. All notations are to be accurate, legible, signed and dated.

## **D. Discharge Orders**

Residents may not discharge a patient from any service without the consent of the attending physician. It is the resident's responsibility to arrange that consent. The resident may write the discharge orders.

## **E. Verbal Orders**

All orders must be hand written. In an extreme emergency a nurse may accept verbal orders for treatment, but the responsible physician must countersign the phoned order at the earliest opportunity.

## **F. Signature**

All signatures must be legible and identifiable.

***Physicians Signature Specimen*** – a sample of your signature is requested, to be used for reference by the hospital departments.

## **G. Abbreviations**

Only abbreviation approved by S.G.H may be used in charting. Refer to Appendix for a list of approved abbreviations.

## **H. Hospital Formulary**

The hospital is preparing a list of drugs stocked in pharmacy. Once in effect, non-formulary drugs should not be used in the normal course of events.

Drugs are expensive and constitute a large portion of the hospital's budget. When selecting a drug, consider its cost and its efficacy. All prescriptions must be legibly signed. All medication orders should specify the drug name (generic), dosage, route of administration, time interval, orders and should specify the condition or symptom for which the drug is to be used.

# **VIII. GENERAL GUIDELINES**

## **A. Physical Examination**

Residents will use discretion when doing examinations on patients of the opposite sex. If indicated, a chaperone will be requested to be in attendance.

## **B. Gifts and Gratuities:**

Residents may not accept money for fees from hospital patients, family or friends of patients. It is not in the interests of the Hospital or the program for residents to undertake work outside the jurisdiction of the Residency Program except when officially on vacation. You may not use the Hospital's facilities to earn private income.

## **C. Unusual Occurrences:**

Please report all unusual occurrences concerning a patient to the attending physician. Report sudden and adverse changes in patients under your care to the attending physician. All deaths that occur within 24 hours of admission to the hospital, unexpected deaths and those following violence, all deaths after surgery, after childbirth and still births, require notification to be discussed in the Mortality/Morbidity meetings.

## **D. Appearance**

Resident staff should adopt a professional appearance while on duty. The Dean of the Faculty, specifically request that residents dress in clean shirt, tie and clean white medical coats (men) and sensible clothing (women).

## **E. Consent to Examination and Treatment**

No examination procedure or operation may be conducted on any patient, except in an emergency, unless the patient or his guardian or next of kin has a signed consent from (attached).

## **F. Disaster Plan**

You should familiarize yourself with the Hospital's Disaster Plan found at the General Services Department.

## **G. Medical Treatment for Hospital Staff:**

Physicians in the residency program should not undertake to treat or prescribe for nurses or other employees except in an emergency while working in hospital.

## **H. Subscribing to Parking Facilities**

If the resident/intern wants to use the Hospital parking he/she should go to the General Service Department Office (GSD). The monthly parking subscription fee is 40,000 L.L.

## **I. Accommodation of Residents**

The interns/residents representative and GSD distribute the residents among designated rooms so that every resident gets a bed. Residents are usually distributed according to sex and specialties. Separate rooms are also provided to interns on-call.

The GSD also provides all residents with numeric pagers. Pagers should be given back to the GSD when the resident leaves the hospital (i.e. at the end of his/her residency program).

## **J. Photocopy Documents:**

All personal photocopying can be done with the use of disposable cards available at the GSD. The prices for these cards depend on the number of copies that can be done per card. All photocopying of Medical books for educational purposes must be ordered through the hospital library otherwise it is considered personal and will be charged.

## **K. Washing White Gowns**

For washing the gowns, residents should go to the Laundry Department. The gowns normally will be ready in 4 days.

## **L. Contracts and Monthly Payments**

Each intern/resident will be given monthly payment, which will be considered as a stipend and not a salary (refer to Taxation requirements). This will be subject to change according to the Faculty decision. Medical insurance is mandatory and if interns/residents elect to take the plan offered by the S.G.H. the monthly premium will be deducted directly from their monthly payments.

A contract detailing the above amount will be signed by each intern/resident. This contract will be a general guideline to the responsibilities and rights of each party.

## **M. Working Declaration Form and Taxation**

Residents are responsible towards the government to declare their work and income status. Once a doctor registers in the Lebanese Order of Physicians by law he should declare that he/she has started working and earning income (a special form should be filled).

We advise all residents that have registered with the Lebanese Order of Physicians to contact the National Taxation Office for clearance of this issue.

## **IX. LEAVES**

### **A. Vacation**

You are entitled to 4 calendar weeks of annual vacation time. Residents who take a block of vacation starting on a Monday and ending on a Friday if possible shall not be scheduled for a call the weekend immediately preceding or immediately following the Monday-Friday block. Effectively this means that the resident will be off work from Saturday prior to the Monday start of vacation until the Monday following the Friday end of vacation. If desired a minimum of two consecutive weeks vacation shall be granted.

Vacation must be taken during the appointment year in which it is earned and as scheduled. Two weeks will be taken in the first half of the year before Christmas and two weeks after. No holidays will be taken two weeks prior to the end of June and two weeks after the beginning of July. Five consecutive days at either Christmas or new years is also offered. If possible no vacation time may be taken during your ICU or ER rotations.

A request form for vacation leave (this also includes Conference or elective leaves) must be approved/signed by the Chief Resident, Administrator, Chief of service and then approved by the Head of Department. Check your dates with the division head before requesting approval so that there are no conflicts, i.e. other residents on vacation, required attendance at special events, adequate coverage for hospital call, meeting pre-license requirements, etc.

Notice for vacation must be made 3 – 4 weeks in advance of the hospital call schedule being drawn up. It will be your responsibility if changes need to be made once the call schedule is approved.

### **B. Sick Leave:**

Sickness is a natural occurrence and residents are encouraged to respect their needs, i.e. when ill look after yourself and not work if it puts you or patients/peers at risk. When off for sick leave, let your service and the Department know. Supports each other when on sick leave, i.e. filling in on call.

#### **1. Short-Term Illness**

In the case of someone having a short-term illness, for instance an upper respiratory infection that necessitates a person having few days off work, this is considered illness of a minor nature. Let your service and Department Head know you will be away. A form is filled at the personnel department in case you require any investigation.

#### **2. Long-Term Illness**

In the case of long term injury or illness, for instance two months off work required as a result of a major illness, the Chief of Service, Head of Department, Medical Director, Dean's Office, should be informed. The Dean's Office must receive a note from a physician attesting to the problem and the length of time



required off work.

If the resident is required to make up for the missed time at the end of the program, and work additional time as a resident, it is very important that the Dean's Office be informed as well as the Medical Director. The exact length of extra time required for the resident to work must also be noted, as well as what rotation they will be doing. Otherwise, residents will be taken off the payroll and their benefits stopped inadvertently.

### **C. Conference Leave:**

Conference leave in excess of three days and/or to attend educational programs must be discussed and approved by Head of division. A leave form must be completed and signed by head of division. Conference leave will only be available to residents in their second year.

First year residents may take conference leave, with prior approval from head division, only if they are going with their attending. A leave form must be completed and signed by the attending preceptor and Head of Division.

## **X. GUIDELINES FOR COMPLETION OF PATIENT FILE**

The attending physician must countersign dictated or written discharge summaries. Emergency and O.P.D. records should also be signed.

It is advised that you **visit the Medical Record Department at least once a week** to complete your records and bring all records up to date before leaving the program. Incomplete records are viewed every week and failure to complete records will be reported to both yourself and your supervising physician. If you have overdue incomplete charts the division will be notified and in turn they will notify the residents. You must have these records complete within seven days.

The medical record is a confidential document, which is the property of the hospital, only pertinent information, related to the patient and his care should be recorded.

- 1- Each patient shall have a complete medical record. This record shall include:
  - a. Identification data.
  - b. Chief complaint.
  - c. History of present illness.
  - d. Past history.
  - e. Personal history.
  - f. Family history.
  - g. Physical examination.
  - h. Provisional diagnosis.
  - i. Problem list.
  - j. Medical or surgical treatment.
  - k. Progress note.
  - l. Final diagnosis.
  - m. Discharge or decease summary.

When and as applicable:

- n. Special reports such as consultations, clinical laboratory, radiology, and others.
- o. Operative record (+ pre and post- operative notes).
- p. Anesthesia record (+ pre and post anesthesia notes).
- q. Pathological findings.

- r. Autopsy record (when applicable).
2. All requests (consultations, radiology, cardiac laboratory, vascular laboratory, neurophysiology, and laboratory) should include concise yet pertinent information related to the patient and should clearly state the reason for the request.
3. All entries in the medical record should be written clearly and legibly in blue or black ink only. Invasive procedures and/or operations should be flagged in red.
4. When an entry is recorded, no statement may be erased, cancelled, corrected, or tampered with by crossing out, overwriting "error" or any other method; to effect any of the above changes in the medical record (cancellation, correction, etc), the statement is to be refuted by another (the correct) statement and the new entry made should be signed by the original recorder or by a more senior physician.
5. The name of the physician making the entry should be clearly written in addition to his signature and rank.
6. The date and time should be recorded for all entries made in the medical record.
7. The patient's name and medical record number should be recorded on every single document included in the medical record.

## **A. Orders**

1. Orders must be written clearly and legibly in black or blue ink.
2. Orders should not include abbreviations other than those approved by the Medical Board.
3. Orders may be written by:
  - a. Physicians licensed in Lebanon holding an S.G.H. staff appointment.
  - b. Residents, interns.
4. Consultant physicians are not to write orders; whatever recommendations they may have should be stated in their consultation notes, to be decided upon by the patient's attending physician, unless the attending physician as "consultation and treatment" and in emergency conditions specifies it.
5. Orders should be written on the order sheet only.
6. The date and time the order is written should be recorded.
7. The name and not only the signature of the physician writing the order(s) should be recorded.
8. Verbal orders should not be carried out except in emergency situations; such orders are to be written immediately after the critical situation is resolved.
9. The registered nurse (RN) must be notified verbally for stat orders only, otherwise the red indicator on the chart is to be used.
10. Orders such as "resume pre-operative orders" or "resume previous orders" are not allowed. A new set of orders should be written.
11. All orders are automatically discontinued and new orders should be written following:
  - a. Surgery or examination under general anesthesia.
  - b. Transfer of patient from one service to another or from one nursing unit to another. N.B.: Take into consideration the orders written by consultants.
12. To cancel or correct an already written order, an order of Cancel above order(s) should be written followed by the new order(s). Crossing out or overwriting "error" is not allowed.
13. The intern or resident should revise orders with the Head Nurse (HN) or Charge Nurse (CN) every week. All previous orders should be cancelled and new orders should be written.

14. Medication orders should clearly specify the medication, the dosage, the route and the frequency of administration: Orders for PRN medications should also specify the reason for administering the drug (ex. for pain, for fever, etc.)
15. When writing an order, the nurse's routine timing for administering medications should be taken into consideration. To prevent delays in administering medication to patients, it should be specified, in writing on the order sheet, whether the first dose is to be started "immediately" or at a specified time: the first dose will be administered in accordance with the routine timing for administering medications (contact nursing office for timing list).
16. Patients should not retain preadmission medications at their bedside. Upon admission, the physician should review preadmission medications that the patient may be receiving, should record the medications in the medical record and, if to be retranscribed, should request those in written orders to be administered by the registered nurses.
17. Orders for intravenous (IV) solutions should clearly specify the composition, the concentration, the volume, the time interval during which the IV solution is to be infused and the nature of the additives to be added.
18. Orders for intravenous solutions will be automatically be discontinued, unless specified as " daily " or for... days; " otherwise, orders should be revised every 24 hours. Any additive or medication ordered as an additive to IV solutions should be renewed (if still required) when the IV orders is changed or renewed.
19. Orders for oxygen supply to patient should clearly specify the mode of supply (intranasal face mask) and the concentration. Any change in the above should be incorporated in a new written order.
20. Orders for oxygen supply should be reviewed every 48 hours.
21. The setup of mechanical ventilation should be specified in a written order. Any change in the setup should be reflected in the orders.
22. Restraints of patients should be documented by a written order. It is the responsibility of the physician writing the order to inform the patient's family of the necessity of the procedure.
23. A discharge order should include the following:
  1. Disposition.
  2. Diet and Activity.
  3. Treatments and Medications.
  4. Follow-up care.
  5. Patient education.
24. Medical reasons for canceling a written discharge order should be clearly documented in the medical record.

## **B. History and Physical Examination**

1. A complete history and physical examination shall in all cases be written upon admission of the patient.
2. Designated forms by clinical departments when available should be completed and all items should be checked indicating whether physical examination findings are normal, abnormal, or inapplicable, and any abnormal findings should be described.
3. The date and time should be recorded.
4. The name, rank and signature of the person obtaining the history and conducting the physical

examination should be recorded.

### **C. Admission Note**

- 1- The admission note should be written within 24 hours of admission and must include the:
  1. Statements of the problem (history and physical examination).
  2. Diagnosis.
  3. Proposed plan of management.
- 2- The admission note is the responsibility of the attending physician it is either written or counter signed by him.
- 3- Countersignature of an admission note does not exempt the attending or resident physician from writing his/ her own note as required by rules and regulations.

### **D. Progress Note**

It is highly recommended that progress notes be written at least once daily for every patient. In some cases, depending on the developments arising, several notes may be required.

1. Progress note should be timely written, including weekends and holidays, according to departmental policies, and as long as the patient is hospitalized.
2. Progress note should include:
  1. The subjective and objective data, the assessment and the plan of management.
  2. Interpretation of abnormal results (laboratory, radiology) and not copying of results.
  3. Documentation for continued hospitalization.
  4. The date and time the note was written.
  5. The name of the physician writing the note, his/her rank and signature.
3. A progress note should reflect the actual course of the patient's illness and should relate his/ her medical problem.

### **E. Discharge Note**

It is highly recommended that a discharge note (part of the progress note and day of discharge) be written before the patient leaves the hospital.

### **F. Pre-operative and Post-operative notes**

1. A pre-operative note should:
  - a. State the type, reason and justification for the operation.
  - b. Be written by the operative surgeon or senior resident.
  - c. Be documented in the medical record within 48 hours prior to the surgery.
2. Consultation notes are considered as pre-operative if items a, b, c (above) are met. A note in the medical record reading "refer to consultation note" is required.
3. Post-operative notes should be recorded following surgery as required by departmental policies.

## **G. Operative Note**

The flagging of an operation should include the following:

1. The date and time.
2. The anesthesia technique used.
3. The infectious status of the operation.
4. The procedure (operation).
5. Wound drains and wound catheters.
6. The name and signature of the surgeon and the assistant who performed the operation.
7. If a tissue is sent for pathology.

## **H. Infectious Status of Operations**

(Refer to operative request).

The infectious status of operated cases is divided into 3 categories:

- 1- Clean.
- 2- Contaminated.
- 3- Dirty.

## **I. Transfer Note**

- 1- A transfer note should be documented upon transfer of a patient from
  - a. Service to service.
  - b. Unit to unit.
  - c. Attending physician to attending physician.
- 2- In any transfer (a, b, c) orders should be discontinued and a new set of orders should be written.
- 3- A special transfer form is available for the transfer from one attending to another.

## **J. Decease Note**

A decease note should be written in the medical record immediately after death occurs and should include the following:

1. Documentation of the date and time of death.
2. Detailed description of the events that culminated in the death of the patient.
3. Resuscitative measures taken.

## **K. Postmortem Examination**

A postmortem examination should not be sought prior to medical certification of death and shall not be carried out without a written permission from the deceased family or legal guardian.

## **L. Consultation**

1. Consultations should be requested by written orders.
2. Consultations should be recorded on the appropriate form.
3. The treating team should complete the consultation record and all entries should be filed as requested.
4. Regular consultations should be responded to within 24 hours regardless of weekends and holidays. Urgent consultations should be responded to immediately.
5. It is the responsibility of the treating team to pursue a consultation if delayed.
6. Unless authorized by the attending physician, in writing, consultant physicians are not to write orders; whatever recommendations they have should be stated in their consultation notes to be decided upon by the patient's attending physician, unless it is specified on the request as "consultation and treatment" and in emergency cases.

## **M. Discharge Against Advice**

When a mentally competent patient insists on being discharged against the professional advice of the medical staff or when the family, (if the patient is a minor or otherwise unable), a legal guardian or representative, insist on taking the patient from the hospital against such advice, the attending team, caring for the patient must observe the following procedure:

1. Attempt to dissuade the patient from such a course, pointing out the risk(s) of leaving the hospital against advice.
2. If the patient insists on leaving the hospital, have him/her sign the "Release Against Medical Advice" form.
3. Note the circumstances of the incident in the medical record.
4. A discharge order specifying "against advice" should be written.

## **N. Discharge Summary**

- 1- A discharge summary should be completed upon discharge of the patient. If this is not possible, then it should be completed in the Medical Records Department within maximum of 10 days following the patient's discharge.
- 2- A discharge summary should not include abbreviations.
- 3- A discharge summary should be brief and should include the following:
  1. Brief history.
  2. Pertinent findings on examination.
  3. Significant laboratory findings.
  4. Operations/procedures, when applicable.
  5. Pathology, when applicable.
  6. Course in hospital, including consultations.
  7. Final diagnosis, written legibly and in full without the use of any abbreviations.
  8. Condition upon discharge (good, complication, death, etc).
  9. Advice upon discharge including medications, diet physical activity and follow-up care.
- 4- A discharge summary should be completed by a member of the treating team, signed by the resident physician and countersigned by the attending physician. Emergency and OPD records should also be signed.

## **O. Specimen**

- 1- All specimens should be labeled starting with the:
  1. Patient's name.
  2. Medical record number (case #).
  3. Bed number.
  4. Date.
- 2- Specimens should be collected in appropriate designated test tubes (refer to the Department of Pathology and Laboratory Medicine for further information).
- 3- A specimen should be sufficient in volume depending on the test requested.
- 4- A specimen should be sent immediately to the laboratory after being collected from patient.

## **P. Pathology**

1. All specimens, removed in the various operating rooms of the Hospital, including minor surgery, and those removed by biopsy from in-patients or out-patients, should be sent for pathological examination. (Refer to Ministry of Health required list of specimens).
2. Specimens should be properly labeled and accompanied by a pathology request form that should include pertinent clinical information and the pre and post-operative diagnosis.
3. Specimens should be delivered to the pathology laboratory immediately: Any delay may lead to distortion of the tissues and difficulty in interpretation.
4. Any questions regarding handling of specimens of diagnostic importance, i.e. need for fixation, type of the fixative etc, must be addressed to the attending pathologist on-call.
5. The request form should be written clearly and legibly; all entries requested in the form should be completed, to avoid undue waste of time calling for information.
6. In general, specimens obtained after working hours and during holidays must immediately be fixed in formalin.
7. No patient may be operated or treated as S.G.H. on the basis of pathology examination done elsewhere; that material must be reviewed and reported by the Department of Pathology prior to surgery or to initiation of any form of treatment, such as Chemotherapy.

## **O. Electrocardiogram (ECG/EKG)**

1. ECG tracings should be technically adequate.
2. All ECG tracings not interpreted by resident /physician should be sent to the ECG laboratory for official interpretation, accompanied with a request form.
3. A physician from the treating team should complete the request form and all entries requested in the form should be completed.
4. In case of repeated ECG, only a strip i.e. one lead ECG should be retained in the medical record to document arrhythmias or effects of drugs, provided previous ECG(s) has/have been officially interpreted.
5. ECG tracings done in the Emergency Room (E.R.) should be interpreted by the (E.R.) treating team or attending physician/resident except if the patient is admitted to the hospital; in such cases, the treating team of the receiving service is responsible for insuring that the tracings be sent to the ECG laboratory.

## **R. Radiology**

- 1- All radiological examinations should be requested by a written order.
- 2- A radiology examination request form should be completed and signed by the requesting physician.
- 3- All entries in the form should be completed, as follows:
  1. Patient's name, age and medical record number.
  2. Bed number.
  3. Previous x-ray number (if available).
  4. Type of examination required
  5. Clinical diagnosis.
  6. A short history of the complaint.
  7. Mode of transportation: "walking", "stretcher", "wheelchair" or "portable" and
  8. When applicable: "urgent", "very sick", "precaution" or "legal case".
  9. Any important information, which is lacking (Clinical information, name, etc) will cause delay in examination processing.
- 4- The patient should be adequately prepared as per requirements of each examination.
- 5- Portable film studies should be requested when it is impossible, or medically contra-indicated to transport the patient to the Department of Radiology.
- 6- Radiology films are the property of the hospital. Copies of films are available for a certain fee.
- 7- Only attending physicians are allowed to sign out X-ray file. These should be returned within 48 hours to the Department of Radiology.
- 8- Unless urgently needed, the house staff is requested not to collect radiology official reports from the department. All radiological examinations and procedures are reported the same day and distributed by the X-ray clerks to the respective floors.
- 9- Checking of specific examinations and findings is done with the radiology team after 12 p.m. unless urgently needed.
- 10- It is recommended that costly tests be requested only if truly needed and after the approval of the attending radiologist and the third party payer. The medical staff and house staff are encouraged to communicate with the radiology staff to discuss patient's problems and to assure optimal utilization of the radiology resources.

## **S. Emergency Room**

S.G.H. has a busy emergency service. At the emergency Room, the interns/residents are expected to see a spectrum of routine, urgent and emergency cases. Each of these cases should have an emergency room form filled (available in E.R.), no matter how simple or trivial the treatment or the complaint patients present with.

UNDER NO CIRCUMSTANCES, shall an intern treat a patient in an E.R. without referring to the resident or specialist on call? Interns are not allowed to discharge or admit patients. They are not allowed to write an official prescription. These are functions of the resident after the approval of the attending physician. The role of the intern in the E.R. is a supportive role and should not extend to a decision maker.

The resident is responsible to contact the specialty service or attending physician if there is a need. Please note that the nursing staff in the E.R. play a major role in patient care, and are an excellent support to all junior and senior doctors. (Refer to E.R. manual).



- 1- Every patient presenting to the E.R. should have an “Emergency Room Admission Sheet”.
- 2- The “Emergency Room Admission Sheet” should be clearly and legibly written and all requested entries completed. If needed, additional medical record forms may be used to document the course of treatment in the E.R.
- 3- Instructions for follow-up care should include:
  1. Date of follow-up.
  2. Service (OPD / Private clinic ).
  - 4- The discharging physician should record the time of “Disposition”.
  - 5- Laboratory results/ECG should be clearly recorded.
  - 6- Radiology tests / procedures should be flagged and the name of the radiologist recorded.
  - 7- Documentation in dead-on-arrival cases should include pertinent information confirming death, namely a brief history, description of the patient’s gross general appearance, the heart rate, respiratory rate, papillary reaction and a flat ECG tracing.
  - 8- The name, rank and signature of the resident / physician completing the record should be written.
  - 9- Consultant’s note should be recorded on the medical record forms.
- 10- The “Emergency Room Admission Sheet”
  1. Should be completed in the ER.
  2. Should be kept in the ER files until transferred to the Medical Records Department.
  3. Is not to be taken out of the ER or Kept with any of the medical staff or personnel.
- 11- To retrieve an “Emergency Room Admission Sheet” or a patient’s assessment during previous ER visits, Medical Records Department should be contacted.
- 12- The patient’s, or nearest relative, authorization for medical / surgical treatment should be obtained. The resident physician assigned to the patient is responsible for securing the consent / checking that it is correctly obtained.
- 13- Patients who are designated, as “nontransferable” should have the “nontransferable admission form” completed, indicating the justification for the designation. This is sent to the Medical Director for control.