MEDICAL DOCTOR (MD)

First Cycle of Medical Studies (FCMS)

Main Language of Instruction:
French ☑ English ○ Arabic ○

Campus Where the Program Is Offered: CSM

OBJECTIVES

This cycle of studies aims to train future health professionals with solid knowledge in anatomy, physiology, and behavior of the normal human being, as well as in semiology, pathophysiological processes, and public health system. The program is set within a rich and varied cultural and scientific context, preparing students to pursue clinical, medical, fundamental or applied studies in various fields of health.
During this cycle, students must master both French and English languages to continue their medical studies and consult scientific literature. Additionally, proficiency in Arabic is essential for communicating with Lebanese and Arab patients, health professionals, and public authorities.

PROGRAM LEARNING OUTCOMES (COMPETENCIES)

- Medical Expert: Provide patient-centered medical care within the limits of his/her competence.
- Communicator: Communicate effectively with patients, family and loved ones.
- Collaborator: Collaborate with institutional health care team and other stakeholders (national, NGO, etc.) for optimal patient care.
- Manager: Participate in the management of health care institutions and enhance the efficiency of the Lebanese health care system.
- Scholar: Engage in lifelong learning based on reflection, as well as the creation, dissemination and application of medical knowledge.
- Health Advocate: Promote the health and well-being of patients in Lebanon and the region.
- Professional: Commit to practicing the profession in accordance with Lebanese law, self-regulation, and the ethics of the profession.

PROGRAM REQUIREMENTS

180 credits: Required courses (117 credits.), Institution's elective courses (23 credits), Open elective courses (12 credits), USJ General Education Program (28 credits). To note that 2 Cr. [Ethics] are in SCMS and 2 Cr. [Communication Techniques] are in TCMS.

English (4 Cr.)
Specialized English: Health Studies Level A (4 Cr.)
Arabic (4 Cr.)
Arabic Speaking Techniques level A (2 Cr.)
The art of Expression and Communication in Medicine (2 Cr.)
Humanities (8 Cr.)
Civic and Citizen Engagement (2 Cr.)
Human Rights and Civic Education (2 Cr.)
Others (4 Cr.)
Introduction to General Philosophy (1 Cr.)
Fundamental Psychology (1 Cr.)
Art and Medicine (2 Cr.)
Social Sciences (6 Cr.)
Professional Integration and Entrepreneurship: 2 (Cr.)
Introduction to Health Systems Management (2 Cr.)

Others (4 Cr.)

Lebanese Society: Families, Political Parties and Religious Communities (2 Cr.)
Sociology and Heath. (2 Cr.)

Communication Techniques (4 Cr.)

Introduction to Professional Communication (2 Cr.)

Quantitative Techniques (6 Cr.)

Biomedical Statistics (3 Cr.)
Basics of Epidemiology (1.5 Cr.)
Evidence-Based Medicine (1.5 Cr.)

Fundamental Courses (152 Cr.)

Required Courses (117 Cr.)

Introduction to Systematic General Human Anatomy (I) (1.5 Cr.). General Physiology (3 Cr.). Introduction to Histology (2 Cr.). Cellular Biology (2 Cr.). Reproductive Biology (1 Cr.). Human Being and Its Environment (1 Cr.). General Biology Laboratory Work (1 Cr.). General Chemistry (3 Cr.). Biomedical Physics I (1 Cr.). Intensive Anatomy 1 (1.5 Cr.). Structural Biochemistry (4 Cr.). Introduction to Human Embryology (2 Cr.). Molecular Biology (3 Cr.). Biophysics (4 Cr.). Organic Chemistry (3 Cr.). General Chemistry Laboratory Works (0.5 Cr.). Biomedical Physics II (1 Cr.). Metabolic Biochemistry (2 Cr.). Hematopoietic System of The Healthy Human Being (2 Cr.). Endocrine System of The Healthy Human Being (2 Cr.). Nutrition and Metabolism of The Healthy Human Being (2 Cr.). Digestive System of The Healthy Human Being (2 Cr.). Mindfulness (1 Cr.). Nursing Internship for Medical Students (2 Cr.). Histology Laboratory Works (1 Cr.). Intensive Anatomy 2 (2 Cr.). Intensive Anatomy 3 (1 Cr.). Cardiovascular System of The Healthy Human Being (4 Cr.). Respiratory System of The Healthy Human Being (2 Cr.). Skin and Sensory Organs of The Healthy Human Being (2 Cr.). Nervous System of The Healthy Human Being (4 Cr.). Musculoskeletal System of The Healthy Human Being (4 Cr.); Image Formation in Radiology (1 Cr.). Urology and Nephrology System of the Healthy Human Being (2 Cr.). Genital and Reproductive System of the Healthy Human Being (2 Cr.). Fundamental Immunology (3 Cr.). Organic Chemistry Laboratory Works (0.5 Cr.). Introduction to Pharmacology (3 Cr.). Pathophysiology of The Infectious Process (1 Cr.). Pathophysiology of Inflammatory Process (1.5 Cr.). Pathophysiology of Neoplastic Process (2.5 Cr.). Pathophysiology of Nervous System (2 Cr.) Pathophysiology of Homeostasis Disorders (2 Cr.). Medical Bacteriology (3 Cr.). Medical Parasitology and Mycology (2 Cr.). Radiological Anatomy (2 Cr.). Environment and Morbidity (1 Cr.). Anatomy Laboratory Works (1 Cr.). Clinical Examination Internship of The Healthy Human Being (2 Cr.). Anatomo-Pathology Laboratory Works II (1 Cr.). Physiology of Aging (2 Cr.). Pathophysiology of Hemodynamic Disorders (1 Cr.). Introduction to Medical Law (1 Cr.). Artificial Intelligence (1 Cr.). Heredity in Disease Processes (2 Cr.). Medical Virology (2 Cr.). General Semiology (1 Cr.). Semiology of The Thorax (2 Cr.). Semiology of The Head and The Limb (2 Cr.). Semiology of The Abdomen and Pelvis (2 Cr.). Fundamental Immunopathology (1 Cr.). Pathophysiology of Metabolic and Endocrine Disorders (3 Cr.). Pathophysiology of Malformative Processes (1 Cr.). Mental Health (2 Cr.).

Institution's Elective Courses: 23 Cr. to choose from the following list, throughout the FCMS courses.

Clinical Biochemistry II (2 Cr.). Sexual Disorders of The Human Being (2 Cr.). Nutrition and Homeostasis and Metabolic Disorders (2 Cr.). Multithematic Approach to The Eye and Vision (1 Cr.). Botanical and Ecology Laboratory Works (1 Cr.). Carbohydrates in The Medical Field (1 Cr.). Introduction to Biomathematics (2 Cr.). Civilization and Heritage (1 Cr.); Introduction to The Phoenician Language (1 Cr.). Developmental Psychology: From Intrauterine Life to Preadolescence (2 Cr.). Medical Psychology I (2 Cr.). Basic Survival Gestures (1 Cr.). Better Learning in the 21st Century (2 Cr.). Introduction to Oncogenetics (1 Cr.). Formation of The Lesion in Radiology (1 Cr.). Theater and Communication I (2 Cr.). Theater and Communication II (2 Cr.). Normal Pregnancy (1 Cr.). Physiology of Sport and Exercise (2 Cr.). Elements of Neurobiology and Psychophysiology (1 Cr.). Nutrition According to The Different Life Cycles (2 Cr.). Introduction to The Biomechanics of Movement (1 Cr.). Elements of Botany: Application to Nutrition (1 Cr.). Physical Optics (1 Cr.). Medical Imaging Technology (1 Cr.). Biomedical Database Methodology (2 Cr.). Tobaccology (2 Cr.). Introduction to The Anthropology of Health (2 Cr.).

Open Elective Courses: 12 Cr. to choose from outside the FM program

SUGGESTED STUDY PLAN

Semester 1

Code	Course Name	Credits
002BA01L8	Introduction to Systematic General Human Anatomy (I)	1.5
002FB02L1	Reproductive Biology	1
002BH01L1	Introduction to Histology	2
002BF01L7	General Physiology	3
002FB01L9	Cellular Biology	2
002FB03L1	Human beings and Their Environment	1
002FB09L2	General Biology Laboratory Work	1
002FC03L3	General Chemistry	3
002FP04L1	Biomedical Physics I	1
002HS01L1	Sociology and Health - ELEC.USJ.	2
002HY01L1	Fundamental Psychology	1
002HE01L7	English for Specific Purposes: Health Studies	4
	Institution's Elective Courses and from outside FM	7.5
	Total	**30**

Semester 2

Code	Course Name	Credits
002BC01L1	Structural Biochemistry	4
002BE01L1	Introduction to Human Embryology	2
002BM01L1	Molecular Biology	3
002BP04L2	Biophysics	4
002FC05L1	Organic Chemistry	3
002FC08L2	General Chemistry Laboratory Works	0.5
002FP04L2	Biomedical Physics II	1
002SS01L1	Biomedical Statistics	3
045TEEXL1	Arabic Speaking Techniques	2
	Institution's Elective Courses and from outside FM	7.5
	Total	**30**

Semester 3

Code	Course Name	Credits
002BC03L3	Metabolic Biochemistry	2
002ANI1L3	Intensive Anatomy I	1.5
002BI01L4	Hematopoietic System of the Healthy Human Being	2
002BI02L3	Endocrine System of the Healthy Human Being	2
002BI03L4	Nutrition and Metabolism of the Healthy Human Being	2
002BI05L4	Digestive System of the Healthy Human Being	2
002BI07L3	Urology and Nephrology System of the Healthy Human Being	2

002BU01L4	Fundamental Immunology	3
002BI08D4	Genital And Reproductive System of the Healthy Human Being	2
002FC09L3	Organic Chemistry Laboratory Works	0.5
002PC01L3	Introduction to Pharmacology	3
002HT12L4	Mindfulness	1
	Institution's Elective Courses and from outside FM	7
	Total	**30**

Semester 4

Code	Course Name	Credits
002BH09L5	Histology Laboratory Works	1
002ANI2L4	Intensive Anatomy II	2
002ANI3L4	Intensive Anatomy III	1
002BI04L5	Cardiovascular System of the Healthy Human Being	4
002BI06L3	Respiratory System of the Healthy Human Being	2
002BI09L4	Skin And Sensory Organs Of The Healthy Human Being	2
002bx01l5	Nervous System Of The Healthy Human Being	4
002bx02l4	Musculoskeletal System Of The Healthy Human Being	4
002ha02l4	Elec.USJ. The Art Of Expression And Communication In Medicine	2
002hl01l2	Human Rights And Civic Education-Elec.USJ	2
002pr01l4	Image Formation In Radiology	1
002bx08l3	Nursing Internship For Medical Students	2
002ai01l2ai	Artificial Intelligence	1
	Institution's Elective Courses And From Outside FM	2
	Total	**30**

Semester 5

Code	Course Name	Credits
002pf02l6	Pathophysiology Of The Infectious Process	1
002pf03l7	Pathophysiology Of Inflammatory Process	1.5
002pf04l7	Pathophysiology Of Neoplastic Process	2.5
002pf06l6	Pathophysiology Of Nervous System	2
002pf08l7	Pathophysiology Of Homeostasis Disorders	2
002pm01l6	Medical Bacteriology	3
002pm03l6	Medical Parasitology And Mycology	2
002pr02l5	Radiological Anatomy	2
002px05l5	Environment And Morbidity	1
002se01l6	Basics Of Epidemiology	1.5
002sr02l5	Evidence-Based Medicine	1.5
	Institution's Elective Courses And From Outside FM	10
	Total	**30**

Semestre 6

Code	Course Name	Credits
002ba09l4	Anatomy Laboratory Works	1
002bx09l5	Clinical Examination Internship Of The Healthy Human Being	2
002ha03l1	Art And Medicine-Elec.USJ	2
002pa02l6	Anatomo-Pathology Laboratory Works Ii	1
002pf05l7	Physiology Of Aging	2
002pf07l5	Pathophysiology Of Hemodynamic Disorders	1
002dml4l2	Introduction To Medical Law	1
002pg01l6	Heredity In Disease Processes	2
002pm02l6	Medical Virology	2
002ps01l6	General Semiology	1
002ps02l6	Semiology Of The Thorax	2
002ps03l6	Semiology Of The Head And The Limb	2
002ps04l6	Semiology Of The Abdomen And Pelvis	2
002pu01l5	Fundamental Immunopathology	1
002px01l6	Pathophysiology Of Metabolic And Endocrine Disorders	3
002px03l5	Pathophysiology Of Malformative Processes	1
002px08l6	Mental Health	2
002sg01l6	Introduction To Health Systems Management	1
	Institution's Elective Courses and from outside FM	1
	Total	**30**

COURSE DESCRIPTION

002BA01L8 Introduction to Systematic General Human Anatomy (I) 1.5 Cr.

002ANI1L3 Intensive Anatomy I 1.5 Cr.

This course is structured into 3 missions.

Missions I: Introduction to the study of Anatomy; Descriptive general anatomy of the Digestive system; Descriptive general anatomy of the Vascular system; Descriptive general anatomy of the Urinary system. Missions II: Descriptive general anatomy of the respiratory system; Descriptive general anatomy of the Endocrine system; Descriptive general anatomy of the musculoskeletal system: Bone and joint system.

Missions III: Descriptive general anatomy of the musculoskeletal system Continued: Muscular system; Descriptive general anatomy of the nervous system; Descriptive general anatomy of the Sensory apparatus.

002ANI2L4 Intensive Anatomy II 2 Cr.

This course covers the following topics: The abdominopelvic cavity: General organization of the abdominal cavity and the pelvic cavity; Embryogenesis of the peritoneum; The diaphragm, the posterior wall of the abdomen and the lateral walls of the pelvis: the Urinary system and the large prevertebral vessels; The anterolateral wall of the abdomen; Liver and portal system; The duodeno-pancreas; The stomach and spleen; The small intestine and the mesentery; The Colon; The rectum; The female genital system; The male genital system. Missions II: The thoracic cavity and the cervical region: General organization of the thoracic cavity and the cervical region; The mediastinum: topographical organization; Embryogenesis of the heart; External morphology of the heart and vascularity of the heart; Internal morphology of the heart and intrinsic innervation of the heart; The tracheobronchial tree and the pulmonary pedicle; Morphology of the lungs; The visceral region of the neck; The sternocleidomastoid region; The supraclavicular region. Missions III: The sense organs: General organization of the neurocranium and splanchnocranium; Anterior level of the base of the skull: the olfactory nerve and the nasal cavities; Middle

level of the base of the skull: the cavernous sinus, the motor nerves of the eye, V1 and the orbital cavity, V2, the pterygopalatine region and the upper jaw, V3, the pre-stylian region and the floor of the mouth. Posterior level of the base of the skull: The facial nerve and the facial muscles; The vestibulo-cochlear nerve and the inner ear; The glossopharyngeal nerve, the spinal nerve, the vagus nerve and the retrostylar region; The hypoglossal nerve.

002FB02L1 Reproductive Biology 1 Cr.

This course explores the diverse modes of reproduction in living organisms, focusing on both sexual and asexual reproduction. It aims to deepen understanding of these reproductive strategies across different species, with a particular emphasis on animals. Additionally, it introduces embryology, especially relevant to mammals.

002BH01L1 Introduction to Histology 2 Cr.

This course explains the techniques used to prepare tissue sections, virtual slide observation, and the basic elements of different tissues.

002BF01L7 General Physiology 3 Cr.

This required course in taught during the first semester of the first year of the FCMS. It plays a key role in integrating the major functions of the body and pharmacology. It aims to develop, on one hand, knowledge of the fundamental principles of maintaining the internal balance of the human body, and on the other hand, to use them in a logic of integrative thinking.

002FB01L9 Cell Biology 2 Cr.

By the end of this course, students will be able to recognize the characteristics of the cells, and understand cell division, cell differentiation, cell communication, and the organization of cells into organelles and compartments. Additionally, they will assess the functions of organelles and their interdependence to ensure cell and organism homeostasis.

002FB03L1 The Human Being and Its Environment 1 Cr.

This course familiarizes students pursuing medical or paramedical careers about pollution, degradation, and the exploitation of the planet's resources. It provides them with basic knowledge, means of combating, and the ethical responsibility to act throughout their professional careers to improve the quality of life for humanity.

002FB09L2 General Biology Laboratory Work 1 Cr.

This course aims to familiarize students with work in the biology laboratory, covers the structure of animal and plant cells, observes cellular exchanges with the external environment, and includes dissections of invertebrate and vertebrate animals.

002FC03L3 General Chemistry 3 Cr.

This course aims to understand the structure of atoms and their architecture, and to deduce the structure and spatial orientation of simple molecules to understand how molecules can react with each other. Additionally, it covers chemical reactions from a kinetic and thermodynamic point of view, applied to the medical field. Finally, this course addresses chemical equilibria through two types: acid-base equilibria and redox equilibria, while considering their applications in the medical field.

002FP04L1 Biomedical Physics I 1 Cr.

This course is fundamental for understanding and continuing the Biophysics course, which is a fundamental subject for medical studies. Medical applications and practical exercises illustrate the different parts covered: Electricity, Mechanics, and Geometrical Optics. By the end of this course, students will be able to: Understand the electrical, mechanical, and optical phenomena encountered in their subsequent studies and research. Interpret membrane potential, compression, bending, shearing, and torsion phenomena, and measure the significance of their orders of magnitude. Acquire basic notions of astigmatism, accommodation of the eye, means of correcting these disorders, and effectively use the optical microscope.

002HS01L1 Sociology and Health - ELEC.USJ. 2 Cr.

This required course is offered to first-year students at the Faculty of Medicine. It aims to complement the training of students destined to become doctors by grounding medical practice in its socio-cultural environment.

002HY01L1 Fundamental Psychology 1 Cr.

This course introduces psychology, its practical applications, especially in the health field, and its main theories and approaches to optimize medical practice by emphasizing the human dimension of the doctor-patient relationship. By the end of this course, students will become familiar with concepts of normality and pathology, stress reactions, different personality types, and main approaches in clinical psychology in order to consider the human being as a whole within the doctor-patient relationship, and adopt a more humane approach to the patient and their illness.

002BC01L1 Structural Biochemistry 4 Cr.

This course covers the structure and chemical functions of the monomeric units that form biological macromolecules such as proteins, carbohydrates, lipids, and nucleotides. Additionally, students will learn about enzymatic structure, kinetics, inhibition, thermodynamics, and mode of action.

002BE01L1 Introduction to Human Embryology 2 Cr.

This course contributes to developing the ability to integrate the various mechanisms of embryonic development. It explores the successive transformations of the egg, from the fertilization of the ovum by the spermatozoon and progressing through the stages of the embryo and fetus to childbirth. Students will learn about embryo formation with all the clinical implications; Explain the etiology of congenital malformations; and discuss possible preventions.

002BM01L1 Molecular Biology 3 Cr.

This course provides students with dual expertise in molecular biology and knowledge of genetic manipulation techniques. It covers the basic concepts of the central dogma of molecular biology in prokaryotes and eukaryotes: from DNA to protein. It emphasizes that elaborating on cutting-edge data requires an understanding of nucleic acids: DNA and RNA, covering their structure, genetic code, function, and regulation.

002BP04L2 Biophysics 4 Cr.

This course primarily helps students to understand how biomedical radiation interacts within the human body. It also enables them to understand how various types of radiological images (X-rays, CT scans, MRI, ultrasound, scintigraphy) are formed and what the principle of radiotherapy is.

002FC05L1 Organic Chemistry 3 Cr.

This course introduces the fundamental concepts of structure, nomenclature, stereochemistry, and reaction mechanisms, and provides students with sufficient mastery of the corresponding language (terminology). It also aims to integrate these concepts into the explanation of reaction mechanisms in organic chemistry for their application in the biomedical and pharmaceutical fields. It familiarizes students with correct molecules names to have a common language with other practitioners (chemists, pharmacists, ...). By the end of this course, students will master: the rules of stereochemistry and the impact of stereochemistry on the biological properties of molecules; the reactivity of molecules and deduce a reaction mechanism; methodologies application; and the application of acquired knowledge in concrete situations.

002FC08L2 General Chemistry Laboratory Work 0.5 Cr.

This course introduces students to work in a chemistry laboratory. It involves determining the heat of chemical reactions and studying chemical equilibria, specifically acid-base and redox equilibria, to perform titrations of solutions. The last part focuses on studying dosages using the spectrophotometry method.

002FP04L2 Biomedical Physics II 1 Cr.

This course is fundamental for understanding and continuing the Biophysics course. Medical applications and practical exercises illustrate the different parts covered: Fluid mechanics, Acoustics, and Radiation. By the end of this course, medical students should be able to: Understand the phenomena of fluid mechanics, acoustics, and radiation that they will encounter in their future studies and research; Justify the measurement of blood pressure, blood flow in vessels, and surface tension; Acquire the basic concepts of acoustics and ultrasound and understand the Doppler effect and its medical applications; Know the origin of electromagnetic waves, particularly X-rays and lasers, and their applications in Medicine.

002SS01L1 Biomedical Statistics 3 Cr.

This course covers the fundamental principles in biostatistics, focusing on mastering bivariate statistics with parallel learning on Excel ®. Multivariate analysis will also be addressed. This course covers the concepts of descriptive statistics, probability, discrete and continuous probability distributions, statistical estimation, hypothesis testing for one sample and two samples, non-parametric methods, hypothesis testing for categorical data, regression and correlation methods, multi-sample inference, as well as hypothesis testing for time-person data.

045TEEXL1 Expression Techniques (Arabic) 2 Cr.

This required course is taught during the first semester of the first year. It aims to introduce students to the foundations of effective expression, both orally and in writing. The course focuses on a range of stylistic techniques, beginning with linking tools and semantic elements (their meanings and usage), progressing through punctuation marks, and culminating in writing techniques for reports, minutes, letters, and articles..

002BC03L3 Metabolic Biochemistry 2 Cr.

Understanding the major metabolic pathways responsible for synthesizing energy molecules like ATP. Knowing the metabolic pathways responsible for the degradation and synthesis of biological macromolecules such as carbohydrates, lipids, proteins, and nucleic acids.

002BI01L4 Hematopoietic System of the Healthy Human 2 Cr.

This course aims to provide students with a foundational understanding of the morphology and normal functioning of the hematopoietic system. Students should be able to describe, explain, and present: the histology of the hematopoietic system; hematological cytology; hematopoiesis; the natural history of a red blood cell; the structure of a red blood cell; the structure, ontogenesis, and functioning of hemoglobin; iron metabolism; red blood cell metabolism; the role of a white blood cell with its characteristics; primary hemostasis with all its components; secondary hemostasis with the interaction of coagulation factors; formulating research questions; inhibiting and limiting factors of coagulation; the physiological role of the spleen; blood groupings and their immunological impact.

002BI02L3 Endocrine System of the Healthy Human 2 Cr.

This course describes the hormones, the endocrine glands of the body, and their importance in maintaining homeostasis. By the end of this course, students will be able to describe and explain: 1. The concept of ligand-receptor and feedback loops; 2. The thyroid gland; 3. The testes; 4. The ovaries; 5. The catecholamines; 6. Steroidogenesis; 7. Glucocorticoids; 8. Mineralocorticoids; 9. The anterior pituitary gland.

002BI03L4 Nutrition and Metabolism of The Healthy Human 2 Cr.

This course explains the main mechanisms regulating metabolic processes. By the end of this course, students will be able to understand: The relationships of the endocrine pancreas and energy processes; The factors regulating calcium homeostasis and the role of different effector tissues; The mechanisms of amino acid degradation and how the body gets rid of the toxic products of this oxidation; The mode of synthesis and transport of lipids and their metabolism; The regulation of water metabolism; The basic elements of energy control of the body and the nervous and endocrine factors controlling weight.

002BI05L4 Digestive System of the Healthy Human 2 Cr.

This course introduces normal morphology and the digestive system functioning. It covers: The embryology of the different organs of the digestive tract; The anatomy of the digestive tract; The histology of the different organs of the digestive tract; The physiology of the digestive tract.

002BI07L3 Uro-Nephrology System of the Healthy Human 2 Cr.

This course contributes to understanding, applying and analyzing the architecture and functioning of the kidneys and urinary tract in a normal human being. It enables students to: Understand functional anatomy; Explain the physiological mechanisms of urine formation and its elimination; Analyze the importance of this device in the homeostatic control of the entire organism. By the end of this course, students will be able to: Describe the renal vascularization; Describe renal histology; Describe renal embryology; Explain the mechanisms of glomerular filtration and the means of regulation; Explain renal clearance; Explain the tubular mechanisms and the means of regulation: Sodium, potassium, calcium, Water, Phosphates, Magnesium, bicarbonates, glucose, citrates, etc. ; Explain kidney function in pH regulation; Explain renal hormonal function: erythropoietin, renin, etc. ; Explain the hormonal regulation of kidney function: sympathetic system, aldosterone, renin angiotensin system, etc. ; Explain urination: physiology and regulation by the nervous system.

002BU01L4 Fundamental Immunology 3 Cr.

This course covers the different elements that constitute the immune system (cells and organs). It aims to provide an understanding of the basic notions of the humoral and cellular immune responses including clonal selection in the bone marrow and thymus (tolerance). Students will learn about the final immune response in secondary lymphoid organs via Ag presentation, the HLA system, the cytokine network and cellular cooperation (with the corresponding molecular signals).

002BI08D4 Genital and Reproductive System of the Healthy Human 2 Cr.

This course uses knowledge of the normal human reproductive system to help students develop essential skills for a Master in Gynecology and Obstetrics. Students will learn to: Describe the anatomical elements of the human reproductive system; Identify the principles of anatomy, embryology and histology of the organs of the male and female genital system; Know the main physiological functions of the male and female reproductive system during the sexual act; Explain the physiological changes observed during pregnancy.

002FC09L3 Laboratory Work of Organic Chemistry 0.5 Cr.

This course equips students with the following skills: Prepare, purify and analyze medicines and health products; Analyze and identify toxic molecules; Develop, within a team, a bioactive molecule.

002PC01L3 Introduction to Pharmacology 3 Cr.

This required course is offered during the first semester of the second year. It plays a key role in providing future practitioners with the rational pharmacological bases of drug therapy. This course aims to facilitate the acquisition of essential knowledge about the main classes of medicine, while developing pharmacological reasoning to understand medicine, including pharmacodynamics, pharmacokinetics and pharmacovigilance.

002BH09L5 Laboratory Work of Histology 1 Cr.

This course verifies and completes the knowledge of the theoretical course. Students will develop the skills to recognize simple and contextualized images of human tissue, as well as to reflect and analyze images and photos based on the theoretical knowledge acquired from histology lectures.

002BI04L5 Cardiovascular System of the Healthy Human 4 Cr.

This course contributes to understanding, applying and analyzing the architecture and functioning of the heart and vessels in a normal human being. It aims to: Understand functional anatomy; Explain the physiological mechanisms of the heart; Explain the physiology of blood vessels; Analyze the importance of this device in the homeostatic control of the entire organism.

002BI06L3 Respiratory System of the Healthy Human 2 Cr.

This course contributes to understanding, applying and analyzing the architecture and functioning of the physiological respiratory system in a normal human being. It aims to: Understand functional anatomy; Analyze the physiological conditions of ventilation, perfusion and gas exchange; Apply and analyze paraclinical examinations of the respiratory system.

002BI09L4 Skin and Sensory Organs of the Healthy Human 2 Cr.

By the end of this course, students should be able to: Recognize the different compartments of the ear (external ear, middle ear, inner ear); Recognize the contribution of each compartment of the ear to the hearing mechanism.

002BX01L5 Nervous System of the Healthy Human 4 Cr.

This course covers the essential concepts of embryology, anatomy, histology, physiology and biochemistry of the central nervous system (the anatomy of the spine and the peripheral nervous system are studied with osteology and the musculoskeletal system including teaching is delivered in parallel during the same period).

002BX02L4 Musculoskeletal Muscle System of the Healthy Human 4 Cr.

This course covers the basics of the organization and normal functioning of the osteoarticular system. It prepares students to better understand the pathophysiology of rheumatological, orthopedic and traumatological pathologies and subsequently the treatment of these conditions.

002HL01L2 Human Rights and Civic Education - ELEC.USJ 2 Cr.

This course aims to familiarize non-lawyer students with the institutional and normative frameworks organizing societal life and guarantee freedoms and human rights. Rather than instilling moral or behavioral education, it serves as an introduction to law which essentially aims to offer students a general knowledge of structures, institutions, procedures, principles and legal rules enabling them to take part in the civic life, to contribute to its development and to fully assume their civic responsibilities while acting to protect their rights and freedoms.

002PR01L4 Image Reconstitution in Radiology 1 Cr.

This course builds on the prerequisites of biophysics to explain how radiological images are formed in the different modalities, and subsequently to understand the normal radiological anatomy, the presentation of the different pathological processes and to understand the different pathologies.

002BX08L3 Nursing Internship for Physicians 2 Cr.

This internship familiarizes students with the principles of hygiene within the hospital, and the techniques of care and monitoring of hospitalized patients. It explains the role of a nurse in patient care through care documentation, and enables students to provide a variety of care to hospitalized patients.

002PF02L6 Pathophysiology of the Infectious Process 1 Cr.

This required course is provided during the first semester of the third year. It plays a key role in developing knowledge on the fundamental principles of anti-infectious defenses, sepsis and septic shock, antibacterial, antiviral and antiparasitic immunity, innate and adaptive immunity, , the pathophysiological mechanisms of infection, manifestations with the relationship between the host and pathogens, and types of infections.

002PF03L7 Pathophysiology of the Inflammatory Process 1.5 Cr.

This course aims to provide students with an understanding of the definition, etiologies and general course of the inflammatory reaction. It defines specific inflammations and recognizes the evolution of inflammatory processes.

002PF06L6 Pathophysiology of Neoplastic Process 2 Cr.

This course describes the neoplastic process which leads to the appearance of benign and malignant tumors. The description of the process includes carcinogenesis, tumor proliferation and growth, dissemination, biological and

clinical manifestations, and principles of diagnostic and therapeutic medical intervention. The relationships of the neoplastic process to other disease processes and its impact on the health of the human community are also described.

002PF06L6 Pathophysiology of the Nervous System 2 Cr.

This course enables students to identify the different clinical manifestations of a nervous system disorder and correlate them with the dysfunction of an anatomical-functional system. By the end of this course, students will be able to: Recognize and define a nervous system disorder; Analyze one disorder of the nervous system and differentiate it from another; Establish correlations between nervous disorders and dysfunction of anatomical-functional systems.

002PF08L7 Pathophysiology of Homeostasis Disorders 2 Cr.

This required course us provided during the second semester of the third year. It plays a key role in the integration of clinical sciences in particular nephrology, anesthesia and intensive care. It also aims to develop knowledge on fluid compartment disorders and encourages the use of this knowledge in an integrative manner in the management of various pathologies.

002PM01L6 Medical Bacteriology 3 Cr.

This teaching unit serves as a foundational component of medical training. It contributes to the development of the following two skills: Acquire knowledge relating to bacteria of medical interest; Adopt an approach for the diagnosis and treatment of the bacterial infections most commonly encountered in medical pathology.

002PM03L6 Medical parasitology and mycology 2 Cr.

By the end of this course, students will be able, based on epidemiological, clinical and paraclinical elements, to implement a strategy for the diagnosis of a parasitic or fungal disease. They will also have the opportunity to differentiate a cosmopolitan disease from a tropical disease, and prepare for international exams and competitions (USLME, etc.).

002PR02L5 Radiological Anatomy 2 Cr.

This course covers the normal anatomy in radiography, ultrasound and Doppler, CT, MRI and scintigraphy.

002PX05L5 Environment and Morbidity 1 Cr.

This required course is provided during the first semester of the third year. It plays a key role in highlighting the effects of pollution on health.

002SE01L6 Principles of Epidemiology 1.5 Cr.

This course covers the fundamental principles of epidemiology. It includes the concept of causality, measures of disease frequency, risk estimation, measures of effect and association, the concept of interaction, the conduct of epidemiological studies (cohort studies, case-control studies, cross-sectional studies, validity, precision), evaluation of screening programs, and the role of biases and confounding factors in epidemiological studies.

002SR02L5 Evidence-based Medicine 1.5 Cr.

This course focuses on Evidence-Based Medicine (EBM), an approach that assists in making clinical decision by integrating the best scientific evidence, clinical experience, and patient consultation to select the best applicable option for the patient.

002BA09L4 Anatomy Laboratory Work 1 Cr.

Practical work on cadaveric specimens.

002BX09L5 Clinical Training of the Healthy Human 2 Cr.

This training improves medical clinical skills (knowledge and practices): Acquire knowledge related to the clinical examination of the healthy human, including all organs; Participate in and apply the practical modalities of the clinical examination of the healthy human; Become aware of the importance of the clinical approach and attitudes towards patients.

002HA03L1 Art and Medicine - ELEC.USJ. 2 Cr.

This required course is provided during the second semester of the third year. Throughout history, many artists have been interested in medicine, whether to investigate human anatomy or to celebrate science as a vector of social progress. Instead of an exhaustive and chronological study of the image of medicine and doctors throughout history and cultures, this course examines the functioning and ideological implications, at various levels, of representations of medicine. The course covers much more than painting, as medicine in art is present in drawing, sculpture, installations, and the human body itself. From portraits of notable doctors in Greek and Roman bas-reliefs, Da Vinci's anatomical studies, the treatment of AIDS, fears of the consequences of genetic research, to the enthusiasm for the hunt for microbes: all subjects that art has taken up to document, but above all to comment on, decipher, and interpret. Students will study the functions of these works at a descriptive and analytical level, but also moral, even magical. They will also evaluate their impact on the viewer and society, and address the theoretical and philosophical issues of the representation of medicine, its use, and its social significance.

002PA02L6 Laboratory Work in Anatomo-pathology II 1 Cr.

These practical works illustrate, through virtual slides of pathological anatomy, each placed in its clinical context, the tissue alterations observed during hemodynamic disorders, endocrine and metabolic disorders, biomechanical disorders, and nutritional and hemostasis disorders.

002PF05L7 Physiology of Aging 2 Cr.

This course involves studying, on one hand, general concepts on the aging process, including developmental, morphological, and physiological aspects, as well as specific courses on frailty and successful aging, and on the other hand, studying the impact of aging on different organs or systems.

002PF07L5 Pathophysiology of Hemodynamic Disorders 1 Cr.

This course contributes to understanding, applying, and analyzing the state of shock with its evaluation methods and determining its origins: Understanding the state of shock; Applying and analyzing paraclinical examinations of the state of shock; Knowing how to determine the different etiologies of the state of shock.

002AI01L2AI Artificial Intelligence 1 Cr.

This course, taught to 2nd-year medical students, explores the fundamentals of AI, covering key concepts, practical tools, ethical use, and medical applications. Students will participate in practical exercises, AI tool applications, technology monitoring projects, and ethical debates. The final sessions, led by medical experts, offer an in-depth overview of clinical applications and professional implications of AI.

002DML4L2 Introduction to Medical Law 1 Cr.

This theoretical and practical course introduces medical law and basic legal, medical, social, and cultural awareness that doctors must know and apply in their medical profession.

002PG01L6 Heredity in Morbid Processes 2 Cr.

This course in medical and clinical genetics presents an overview of medical genetics, from genetic counseling to multifactorial diseases, from prenatal medicine to oncology. It includes the identification of genetic disorders, their molecular causes as well as the pathophysiological mechanisms, potential treatments (preventive, curative, and/or palliative), the study of their transmission, and the associated family genetic counseling, including recurrence risks and the measures implemented to avoid them. Topics include examples of congenital malformations and prenatal diagnosis, monogenic disorders, oncogenetics, and cancer predisposition syndromes. In this course, fundamental

concepts are illustrated by examples from the perspective of genetic counseling activities and associated ethical considerations. It also enables students to differentiate between cytogenetics and molecular biology, between genetic and chromosomal anomalies, and between germline and acquired anomalies. This course also helps students understand the specifics of genetic counseling.

002PM02L6 Medical Virology 2 Cr.

This required course is provided during the first semester of the third year. It plays a key role in integrating immunology and infectious processes. It also aims to develop knowledge on the fundamental principles of virology (virus structure and pathophysiology) and on the diagnostic aspect of viral infections, with minimal information on antiviral treatments. The objective of teaching virology is to facilitate future practitioners' understanding of viral infections so that they can clearly manage situations where their patients face a viral risk or viral infection.

002PS01L6 General Semiology 1 Cr.

By the end of the course, students should be able to describe: Fatigue; Weight loss; Lymphadenopathy; Sweating; Fever; Clinical manifestations of cancer; Basic dermatological lesions.

002PS02L6 Semiology of the Thorax 2 Cr.

By the end of the course, students should be able to describe: Clinical examination of cardiac patients; Normal ECG; Principles of echocardiography; Normal coronary angiography. It covers: An introduction to respiratory semiology; Study of symptoms and physical signs related to pulmonary and respiratory problems; Study of paraclinical signs (imaging) related to pulmonary and respiratory problems; Study of paraclinical signs (respiratory function) related to pulmonary and respiratory problems; Grouping of symptoms and signs into syndromes; Shock state.

002PS03L6 Semiology of the Head and Limbs 2 Cr.

By the end of the course, students should be able to describe: Semiology of the eye; Severity signs in psychoses; Suicide risk; Syncope; Vertigo and pseudo-vertigo; Consciousness disorders; Medullary and radicular compressions; Intracranial hypertension; Mechanical and inflammatory joint pain; Non-articular teno-muscular pain; Lower back pain - Cervical pain; Lower limb edema; Trophic disorders of the lower limbs; Semiology of fractures.

002PS04L6 Semiology of the Abdomen and Pelvis 2 Cr.

By the end of the course, students should be able to describe: GE and hepatology explorations; Ascites; Hepato-GE syndromes; Portal hypertension and hepato-cellular failure; Jaundice; Nausea and vomiting; Abdominal pain; Renal colic (ID+ Ortho); Urinary disorders; Hematuria (ID+ Nephrologist); Scrotal pain; Pelvic pain; Monitoring a normal pregnancy; Menometrorrhagia.

002PU01L5 Fundamental Immunopathology 1 Cr.

This course involves understanding certain aspects of the immune response during an: Excessive (hypersensitivity and inflammation); Deficient (immune deficiencies); Or against oneself (autoimmunity).

002PX01L6 Pathophysiology of Endocrine and Metabolic Disorders 3 Cr.

This course involves studying the pathophysiology of endocrine disorders (weight regulation disorders, disorders of endocrine glands (pituitary, thyroid, adrenal, gonads) and metabolic disorders (glucose, lipid, phosphocalcium and uric acid). Lectures will be supported by clinical case studies. This course thus serves as the link between physiology and pathology.

002PX03L5 Pathophysiology of Malformative Processes 1 Cr.

By the end of the course, students should be able to: Define the embryological bases of malformations; Know the classifications of malformative processes; Distinguish environmental etiologies of malformations; Differentiate genetic causes of malformations; Determine prevention possibilities for malformations; Know congenital anomalies occurring during childbirth.

002PX08L6 Mental Health 2 Cr.

By the end of the course, students should be able to recognize severe symptoms of mental pathology from childhood to adulthood and outline recommended interventions.

002SG01L6 Introduction to Health Systems Management 1 Cr.

This required course is provided during the first semester of the third year. It plays a key role in understanding the Lebanese health system compared to other international systems and recognize activity sectors in community medicine and public health. Additionally, it aims to familiarize them with quality audit procedures and crisis management.

002HE01L7 English for Specific Purposes: Health Studies 4 Cr.

The course introduces students to some of the most important aspects of medical English terminology (cardiovascular system, gastrointestinal system, immune system). It provides them with the English medical terminology needed to perform in today's health care settings. Areas and skills covered include taking medical history, interacting with patients and families, and dealing with urgent cases. Students will define the major manifestations of different diseases and analyze the disease terminology in several case studies. The course uses factsheets, case reports, and vignettes drawn from real-life scenarios. In addition to that, students will be able to write different types of business documents and argue their opinion.

002HA02L4 Art of Expression and Communication in Medicine 2 Cr.

This course includes: Concept of scientific research - Steps to prepare a scientific research - Selecting the topic - Identifying problems - Collecting scientific material - Organizing and analyzing data - Identifying results - Editing research - Writing research - Formatting research - Characteristics of scientific research - Importance of scientific research.

Second Cycle of Medical Studies (SCMS)

Main Language of Instruction:
French ☑ English ○ Arabic ○

Campus Where the Program Is Offered: CSM

OBJECTIVES

This cycle aims to provide future doctors and health professionals with comprehensive theoretical and clinical training in the physiopathology, causality, and distribution of human diseases. It enables them to accurately diagnose and prevent prevalent, urgent, serious, exemplary, preventable, or treatable diseases. This program covers the principles of treatment, while incorporating disciplines of the normal physiology, research methodology, ethical rules, and a rich and varied human, scientific, and medical culture.

PROGRAM LEARNING OUTCOMES (COMPETENCIES)

- Medical Expert: Provide patient-centered medical care within the limits of his/her competence.
- Communicator: Communicate effectively with patients, family and loved ones.
- Collaborator: Collaborate with institutional health care team and other stakeholders (national, NGO, etc.) for optimal patient care.
- Manager: Participate in the management of health care institutions and enhance the efficiency of the Lebanese health care system.
- Scholar: Engage in lifelong learning based on reflection, as well as the creation, dissemination and application of medical knowledge.
- Health Advocate: Promote the health and well-being of patients in Lebanon and the region.
- Professional: Commit to practicing the profession in accordance with Lebanese law, self-regulation, and the ethics of the profession.

ADMISSION REQUIREMENTS

Achieving a "program average" of grades ≥ 70/100 for the 180 FCMS credits in a maximum of eight semesters (four academic years) enables admission to the SCMS.
Regardless of nationality or faculty of origin, students are eligible for admission to the SCMS if they meet the requirements for transferring from the FCMS to the SCMS (validation by equivalence of all courses and the entire program), provided they are ranked within the eligible list from the Faculty of Medicine - USJ entrance exam.

PROGRAM REQUIREMENTS

Required courses (120 credits)
Fundamental Courses (118 Cr.)
Clinical Pathology courses
USJ General Education Program (2 Cr.)
Medical Deontology (1 Cr.)
Medical Ethics and Bioethics (1 Cr.)
Clinical Pathology courses (118 Cr.)
Urology (5 Cr.), Obstetrics and Gynecology (5 Cr.), Gastroenterology (4 Cr.), Gastrointestinal Surgery (3 Cr.), Metabolic and Endocrine Pathologies (6 Cr.), Dermatology (6 Cr.), Nephrology (6 Cr.), Anesthesia-Reanimation (4 Cr.), Pulmonary Medicine (6 Cr.), Cardiovascular Pathology (6 Cr.), Cardiovascular and Thoracic Surgery (4 Cr.), Public Health (2 Cr.), Occupational Medicine (2 Cr.), Radiology Pathology 2.1 (1 Cr.), Otorhinolaryngology (ENT) (4 Cr.), Ophtalmology (3 Cr.), Orthopedics (5 Cr.), Rheumatology(3 Cr.), Neurology (5 Cr.), Neurosurgery (2 Cr.), Psychiatry (4 Cr.), Plastic Surgery (1 Cr.), Radiology Pathology 2 (1 Cr.), Hematology (4 Cr.), Medical Oncology (4 Cr.), Geriatrics (3 Cr.), Pediatrics (6 Cr.), Infectious Diseases (4 Cr.); Internal Medicine and Clinical Immunology (5 Cr.), Forensic Medicine (1 Cr.), Internship (2 Cr.), Radiology Pathology II (1 Cr.)

SUGGESTED STUDY PLAN

Semester 1

Code	Course Name	Credits
002UROLM1	Urology	5
002OBGYM1	Obstetrics and Gynecology	5
002GASTM1	Gastroenterology	4
002CHVCM1	Gastrointestinal Surgery	3
002ENDOM1	Metabolic and Endocrine Pathologies	6
002DERMM1	Dermatology	6
	Total	**29**

Semester 2

Code	Course Name	Credits
002NEPHM2	Nephrology	6
002ANESM2	Anesthesia- reanimation	4
002PNEUM2	Pulmonary Medicine	6
002CDARM2	Cardiovascular Pathology	6
002CHTHM2	Cardiovascular and Thoracic Surgery	4
002GRDMO3	Public Health	2
002MDTRM2	Occupational Medicine	2
002PAR4M2	Radiology Pathology 2.1	1
	Total	**31**

Semester 3

Code	Course Name	Credits
002OTRLM1	(Otorhinolaryngology (ENT	4
002OPHTM1	Ophtalmology	3
002ORTHM1	Orthopedics	5
002RHUMM1	Rheumatology	3
002NEU0M1	Neurology	5
002NECHM1	Neurosurgery	2
002PSYCM1	Psychiatry	4
002CHPLM3	Plastic surgery	1
002PATHM3	Radiology Pathology II	1
	Total	**28**

Semester 4

Code	Course Name	Credits
002HEMAM2	Hematology	4
002OCNOM2	Medical Oncology	4
002SYGEM2	Geriatrics	3

002PEDIM4	Pediatrics	6
002MAINM4	Infectious Diseases	4
002MEINM4	Internal Medicine and Clinical immunology	5
002ETHIM3	Medical ethics and Bioethics	1
002DENOM2	Medical Deontology	1
002MELEM2	Forensic Medicine	1
002PARAM2	Radiology Pathology II	1
002STGEM1	Internship	2
	Total	**32**

COURSE DESCRIPTION

002UROLM1 Urology 5 Cr.

This course aims to:
- Recognize various urological pathologies.
- Detect and prevent complications of different urological pathologies.
- Develop a treatment plan for various urological pathologies.

002OBGYM1 Obstetrics and Gynecology 5 Cr.

By the end of this course, students will be able to monitor a normal pregnancy and become familiar with the most common obstetric and gynecological pathologies, as well as the principles of their management. It also covers infertility issues.

002GASTM1 Gastroenterology 4 Cr.

This course equips students with diagnostic skills to ensure effective management of patients with gastrointestinal, hepatobiliary, or pancreatic pathologies, as well as to apply relevant information to the clinical practice of hepatogastroenterology for the most appropriate patient management.

002CHVCM Gastrointestinal Surgery 3 Cr.

- Pediatric surgery: This course covers visceral, thoracic, urological pediatric surgery, mbryology, anatomy, physiopathology, semiology, and diagnostic tools of common pathologies in pediatric surgery.
- Adult surgery: This course covers pathologies of the digestive tract, pancreas, liver, biliary ducts and anal diseases.

002ENDOM1 Metabolic and Endocrine Pathologies 6 Cr.

This course covers the clinical presentations of endocrine diseases (thyroid, adrenal glands, gonads, pituitary, growth disorders) and metabolic diseases (diabetes, obesity, lipid metabolism disorders, phosphocalcic metabolism disorders, osteoporosis). Students will be able to diagnose these pathologies, and understand the main therapeutic approaches. The lectures will be supported by practical exercises with clinical cases. This course serves as a bridge between physiology/pathophysiology and pathology.

002DERMM1 Dermatology 6 Cr.

By the end of the course, students will be able to recognize, analyze, and manage the various dermatological signs and symptoms encountered during their clinical internships in the doctoral program.

002PARAM1 Radiology Pathology 2.1 1 Cr.

This course covers the appearance of diseases of the nervous system, urinary system, musculoskeletal system, and the thorax in various medical imaging modalities. Lectures will take place in the computer lab.

002NEPHM2 Nephrology 6 Cr.

This course aims to:
- Recognize and analyze manifestations compatible with nephropathy.
- Identify renal involvement secondary to other pathologies.
- Understand the consequences of nephropathies on various systems.
- Know how to assess urgent situations in nephrology.

002ANESM2 Anesthesia-Reanimation 4 Cr.

This course covers:
- The pathway of every operated patient.
- The various stages of pre-, peri-, and post-operative care.
- The techniques and risks of anesthesia. Students will be able to discuss them with the patient and know the main perioperative complications and their management principles.

002PNEUM2 Pulmonary Medicine 6 Cr.

This course enables students to establish a differential diagnosis, decide on the appropriate diagnostic approach, and be aware of the principles of treatment to be instituted for a patient complaining of a pulmonary and/or respiratory symptom.

002CDARM2 Cardiovascular Pathology 6 Cr.

This course aims to:
- Train a competent general practitioner capable of diagnosing cardiac disease.
- Train a physician who knows how to refer the patient, if necessary, to the cardiologist.

002CHTHM2 Cardiovascular and Thoracic Surgery 4 Cr.

This course enables students to:
- Become familiar with the main cardiovascular pathologies, most of which are very common.
- Detect and prevent complications of these various pathologies
- Know how to adopt the right diagnostic and therapeutic approach

002GRDMO3 Public Health 2 Cr.

This course aims to complement students' information in specialized epidemiology, health organization and management, demography, and social and preventive health. Some public health issues will also be discussed.

002MDTRM2 Occupational Medicine 2 Cr.

This course introduces students to the Lebanese legislation regarding occupational medicine and the categories of common occupational diseases.

002OTRLM1 Otorhinolaryngology (ENT) 4 Cr.

This course enables students to:
- Acquire fundamental knowledge about the most common ENT pathologies, including presentation, diagnosis, and therapeutic options.
- Develop diagnostic algorithms based on the clinical presentation.

002OPHTM1 Ophtalmology 3 Cr.

This course aims to familiarize students with the clinical presentation of various ocular diseases, including refractive errors, corneal diseases, cataracts, glaucoma, strabismus, lacrimal system disorders, optic neuropathies, red eye, retinal detachment, diabetic retinopathy, age-related macular degeneration, ocular manifestations of systemic diseases, and retinal vascular diseases. Students will learn how to diagnose these pathologies and gain an understanding of the main therapeutic approaches.

002ORTHM1 Orthopedics 5 Cr.

This course enables students to:
- Recognize the different traumatic and non-traumatic highly prevalent pathologies of the musculoskeletal system.
- Detect and prevent complications associated with the different traumatic and non-traumatic pathologies of the musculoskeletal system.
- Develop a therapeutic plan for the different traumatic and non-traumatic pathologies of the musculoskeletal system.

002RHUMM1 Rheumatology 3 Cr.

This course enables students to acquire information and learning tools for common medical conditions of the musculoskeletal system.

002NEU0M1 Neurology 5 Cr.

This course enables studentsto understand neuromuscular system pathologies, their manifestations, and the diagnostic principles.

002NECHM1 Neurosurgery 2 Cr.

This course enables students to:
- Understand physiopathology, diagnose, and know the principles of treatment for spinal cord compression.
- Recognize subarachnoid hemorrhage and understand its treatment principles.
- Recognize and diagnose malformative pathologies.
- Understand the physiopathology, diagnose, and know the principles of treatment for radicular pain and cauda equina syndrome.
- Understand the physiopathology, diagnose, and know the principles of treatment for head trauma.
- Understand the physiopathology, diagnose, and know the principles of treatment for intracranial hypertension.
- Recognize and diagnose the main cranial tumors in adults and children.

002PSYCM1 Psychiatry 4 Cr.

This course enables students to understand the main mental illness in adults, children, adolescents, and the elderly.

002CHPLM3 Plastic Surgery 1 Cr.

This course enables students to understand certain skin pathologies, certain pathologies of the oral cavity, and certain pathologies of the face, as well as their treatment modalities.

002STGEM1 Internship 2 Cr.

Observational internship at *Hôtel-Dieu de France* University Medical Center.

002PATHM3 Radiology pathology (2) 1 Cr.

002HEMAM2 Hematology 4 Cr.

This course enables students to understand malignant hemopathies and benign hematological disorders.

002OCNOM2 Medical Oncology 4 Cr.

This course enables students to understand the diagnostic management of cancer in general and particularly the most common neoplasms.

002SYGEM2 Geriatrics 3 Cr.

All physicians treating adult patients, whether they are general practitioners or specialists, physicians or surgeons, will be confronted with geriatric pathologies. A medical student must understand the characteristics of pathological human aging and the specific aspects of diseases in the elderly. They must analyze poly-pathology and prioritize their actions. They should be able to discuss the benefit/risk ratio of medical decisions, considering the elderly person as a whole, their environment, and their expectations.

002PEDIM4 Pediatrics 6 Cr.

This course equips students with essential elements that a general practitioner needs to incorporate regarding the health and management of both healthy and sick children.

002MAINM4 Infectious Diseases 4 Cr.

This course enables students to understand the pathologies of viral, bacterial, and parasitic infections, their manifestations, and their diagnostic methods.

002MEINM4 Internal Medicine and Clinical Immunology 5 Cr.

This course enables students to understand the main systemic diseases, their manifestations, and their diagnostic modalities.

002ETHIM3 Medical ethics and bioethics 1 Cr.

The course enhances students' ability to reflect on medical decision-making and the practice of medicine.

002DENOM2 Medical Deontology 1 Cr.

This course enables students to:
- Realize that the practice of Medicine is a civic act within the legal framework of the Rule of Law.
- Integrate essential legal concepts that aid in responsible clinical decision-making.

002MELEM2 Forensic medicine 1 Cr.

This course enables students to:
- Establish a death certificate and a medicolegal certificate,
- Classify a death and determine its cause,

It familiarizes them with:
- The removal of a corpse
- Conducting an autopsy,
- Completing a requisition,
- Making a request for expertise, testimony in court

Additionally, students will learn to recognize injuries and their causes, understand the principles of forensic expertise, and manage pathologies within a medicolegal framework.

002PARAM2 Radiology pathology (II) 1 Cr.

This course covers diseases affecting the cardiovascular, ENT (Ear, Nose, and Throat), and digestive systems, as well as diseases specific to women and children.
Lectures will be conducted in a computer laboratory setting.

Third Cycle of Medical Studies (TCMS)

Main Language of Instruction:
French ☑ English ○ Arabic ○

Campus Where the Program Is Offered: *Hôtel-Dieu de France* (HDF) University Medical Center

OBJECTIVES

This cycle aims to provide future doctors with comprehensive theoretical and clinical training, enabling them to diagnose prevalent, urgent, serious, exemplary, preventable, or treatable illnesses based on common reasons for consultation. Students will learn to treat conditions outside their specialty and effectively manage referrals to specialists. Future doctors will also be trained to join community medicine teams, suggest effective preventive actions, educate the public, intervene from a health and economic perspective, and collaborate closely with other health professionals, managing their practice effectively and contributing positively to the smooth running of the health structure in which they work. Medical graduates will also be encouraged to pursue lifelong learning and research. During this cycle, students will learn to write scientific medical texts and deliver oral presentations in French, English, and Arabic.

PROGRAM LEARNING OUTCOMES (COMPETENCIES)

- Medical Expert: Provide patient-centered medical care within the limits of his/her competence.
- Communicator: Communicate effectively with patients, family and loved ones.
- Collaborator: Collaborate with institutional health care team and other stakeholders (national, NGO, etc.) for optimal patient care.
- Manager: Participate in the management of health care institutions and enhance the efficiency of the Lebanese health care system.
- Scholar: Engage in lifelong learning based on reflection, as well as the creation, dissemination and application of medical knowledge.
- Health Advocate: Promote the health and well-being of patients in Lebanon and the region.
- Professional: Commit to practicing the profession in accordance with Lebanese law, self-regulation, and the ethics of the profession.

ADMISSION REQUIREMENTS

Achieving a "program average" of grades ≥ 70/100 for the 180 SCMS credits in a maximum of eight semesters (four academic years) enables admission to the TCMS.
Regardless of nationality or faculty of origin, students are eligible for admission to the TCMS if they meet the requirements for transferring from the SCMS to the TCMS (validation by equivalence of all courses and the entire program), provided they are ranked within the eligible list from the Faculty of Medicine - USJ entrance exam.

Conditions for successful completion
Completion of all TCMS subjects
TCMS1: Internship, OSCE, Certificate in Clinical Therapeutic Synthesis -CCTS
TCMS2: Internship, OSCE, Written exam, End-of-Study thesis)

PROGRAM REQUIREMENTS

Required courses (119 credits), USJ General Education Program (1 credit)

USJ General Education Program (1 Cr.):
Communication Skills Seminar (1 Cr.)

Required courses (119 Cr.)
Clinical Reasoning Course ARC (T1) (3 Cr.); Initiation to Clinical Internship Seminars (5 Cr.); Internship (T1) (9 Cr.); Certificate in Clinical and Therapeutic Synthesis (1) (12 Cr.); Medical Professional Competencies (1)

(9 Cr.); Internship (T2) (9 Cr.); Certificate in Clinical and Therapeutic Synthesis (2) (12 Cr.); Clinical Reasoning Course ARC (T3) (2 Cr.); Clinical Case Conferences (2 Cr.) ; Geriatrics Seminar (1 Cr.) ; Palliative Care Seminar (1 Cr.) ; Anesthesia-Intensive Care Seminar (1 Cr.) ; Legal liabilities of Physicians (1 Cr.); Medical Professional Competencies (2) (6 Cr.) ; Internship (T3) (16 Cr.); Clinical Research Thesis (6 Cr.) ; Medical Professional Competencies (3) (6 Cr.); Internship (T4) (9 Cr.); Certificate in Clinical and Therapeutic Synthesis (3) (9 Cr.).

SUGGESTED STUDY PLAN

Semester 1

Code	Course Name	Credits
TCMARC1	Clinical Reasoning Course ARC (T1)	3
TCMSMSC	Initiation to Clinical Internship Seminars	5
TCMSMTC	Communication Skills Seminar	1
TCMSTI1	Internship (T1)	9
TCMCSC1	Certificate in Clinical and Therapeutic Synthesis (1)	12
	Total	**30**

Semester 2

Code	Course Name	Credits
TCMCPM1	Medical Professional Competencies (1)	9
TCMSTI2	Internship (T2)	9
TCMCSC2	Certificate in Clinical and Therapeutic Synthesis (2)	12
	Total	**30**

Semester 3

Code	Course Name	Credits
TCMARC2	Clinical Reasoning Course ARC (T2)	2
TCMCCCS	Clinical Case Conferences	2
TCMSMGR	Geriatrics Seminar	1
TCMSMSP	Palliative Care Seminar	1
TCMSMAR	Anesthesia-Intensive Care Seminar	1
TCMSMRJ	Legal liabilities of physicians	1
TCMCPM2	Medical Professional Competencies (2)	6
TCMSTI3	Internship (T3)	16
	Total	**30**

Semester 4

Code	Course Name	Credits
TCMTDRC	Clinical Research Thesis	6
TCMCPM3	Medical Professional Competencies (3)	6
TCMSTI4	Internship (T4)	9
TCMCSC3	Certificate in Clinical and Therapeutic Synthesis (3)	9
	Total	**30**

COURSE DESCRIPTION

TCMARC1 Clinical Reasoning Course ARC (T1) 3 Cr.

This program focuses on developing clinical reasoning, enhancing students' abilities to devise solutions to problems develop diagnostic and therapeutic approaches. This course aims to master the major principles and mechanisms underlying medical practice, including the relevant acts, attitudes, and behaviors. It also aims to recognize different medical and surgical pathologies and master the therapeutic management of medical and surgical pathologies.

TCMSMSC Initiation to Clinical Internship Seminars 5 Cr.

This course enables students to:

- Master the critical assessment of literature.
- Be familiar with the basics of communication.
- Master common technical procedures: arterial blood gas, nasogastric tube insertion, urinary catheterization, etc.
- Recognize the most common reasons for emergency calls.
- Conduct the urgent interventions of cardiorespiratory arrest.
- Know the general principles of hospital hygiene and improve the quality of care.

TCMSMTC Communication Skills seminar 1 Cr.

This course enables students to:

- Discuss common strategies for communication skills.
- Describe the importance of communication effectively in medical practice.
- Apply the principles of effective communication and integrate new approaches to patient interactions.
- Identify patient needs and complaints, create rapport, and demonstrate empathy.

TCMSTI1 Internship T1 9 Cr.

This internship exposes students to a range of medical specialties, helping them make informed decisions about their future career paths.

TCMCTSC Certificate in Clinical and Therapeutic Synthesis (1) 12 Cr.

The courses in this certificate program aim to help students understand the physio pathological mechanisms of various medical and surgical pathologies. Additionally, they equip students with skills for differential diagnosis and comprehensive therapeutic management for each pathology.

TCMCMP1 Medical Professional Competencies (1) 9 Cr.

This course trains future doctors to communicate effectively with patients, families, and care providers, intervene from a health and economic perspective, and collaborate closely with other health professionals, managing their practice effectively and contributing positively to the smooth running of the health structure in which they work. It also trains medical graduates to promote health, commit to society, and practice their profession by Lebanese law, self-regulation, and the ethics of the profession.

TCMSTI1 Internship T2 6 Cr.

This internship exposes students to a range of medical specialties, helping them make informed decisions about their future career paths.

TCMCTSC Certificate in Clinical and Therapeutic Synthesis (2) 12 Cr.

The courses in this certificate program aim to help students understand the physio pathological mechanisms of various medical and surgical pathologies. Additionally, they equip students with skills for differential diagnosis and comprehensive therapeutic management for each pathology.

TCMARC1	**Clinical Reasoning Course ARC (T3)**	**2 Cr.**

This program focuses on developing clinical reasoning, enhancing students' abilities to devise solutions to problems develop diagnostic and therapeutic approaches. This course aims to master the major principles and mechanisms underlying medical practice, including the relevant acts, attitudes, and behaviors. It also aims to recognize different medical and surgical pathologies and master the therapeutic management of medical and surgical pathologies.

TCMCCCS	**Clinical Case Conferences**	**2 Cr.**

Preparation for qualifying exams: CEPD and USMLE.

TCMSMGR	**Geriatrics Seminar**	**1 Cr.**

This seminar focuses on applying standardized gerontological assessments in clinical practice. Participants will learn to detect swallowing disorders, delirium, and malnutrition in elderly individuals, recognizing their causes and complications while providing appropriate management. Additionally, the seminar will cover the principles of rehabilitation for patients with swallowing disorders.

TCMSMSP	**Palliative Care Seminar**	**1 Cr.**

This seminar focuses on detecting, evaluating, and managing physical and psychological pain in patients receiving palliative care. It encourages ethical reflections on the challenges posed by incurable diseases and helps participants recognize the indications for end-of-life sedation.

TCMSMAR	**Anesthesia-Intensive Care Seminar**	**1 Cr.**

This seminar enables students to:
- Recognize a patient in shock.
- Learn the pharmacology of vasopressors.
- Learn the pharmacology of filling products.

TCMSMRJ	**Legal liabilities of physicians**	**1 Cr.**

This seminar enables students:
- To define legal terms.
- To determine and explain the different constituent elements of medical liability: mistakes, damages or injuries, and links.
- To analyze different categories of liability based on examples.
- To be aware of medical liability.
- To propose practical solutions to resolve legal problems.

TCMCMP1	**Medical Professional Competencies (2)**	**6 Cr.**

This course trains future doctors to communicate effectively with patients, families, and care providers, intervene from a health and economic perspective, and collaborate closely with other health professionals, managing their practice effectively and contributing positively to the smooth running of the health structure in which they work. It also trains medical graduates to promote health, commit to society, and practice their profession by Lebanese law, self-regulation, and the ethics of the profession.

TCMSTI2	**Internship T3**	**16 Cr.**

This internship exposes students to a range of medical specialties, helping them make informed decisions about their future career paths.

TCMTDRC	**Clinical Research Thesis**	**6 Cr.**

Students will learn how to conduct a literature review, write a research protocol, collect, and analyze data, and interpret and discuss the results considering the literature data.

TCMCMP1	**Medical Professional Competencies (3)**	**6 Cr.**

This course trains future doctors to communicate effectively with patients, families, and care providers, intervene from a health and economic perspective, and collaborate closely with other health professionals, managing their practice effectively and contributing positively to the smooth running of the health structure in which they work. It also trains medical graduates to promote health, commit to society, and practice their profession by Lebanese law, self-regulation, and the ethics of the profession.

TCMSTI2	**Internship T4**	**9 Cr.**

This internship exposes students to a range of medical specialties, helping them make informed decisions about their future career paths.

TCMCTSC	**Certificate in Clinical and Therapeutic Synthesis (3)**	**9 Cr.**

The courses in this certificate program aim to help students understand the physio pathological mechanisms of various medical and surgical pathologies. Additionally, they equip students with skills for differential diagnosis and comprehensive therapeutic management for each pathology.