



كلية الطب البشري
Faculty of Medicine

Hashemite University
Faculty of Medicine MD Degree
Study Plan



Hashemite University - Faculty of Medicine
Study Plan of the Doctor of Medicine
Degree

Name of Degree **Doctor of Medicine**
 (M.D.)

This plan is to be applied on students admitted to the Faculty of Medicine as of the academic year 2011/2012, including: Student's Name:
Dr. Anas Ali Hasan Otom
Years of Enrollment & Graduation **2011-2017**

Components of the Plan

The study plan of the Bachelor Degree in Medicine and Surgery is composed of (257) credit hours distributed as shown below:-

<u>First</u>	University Requirements	27 Credit hours
<u>Second</u>	Requirements in Basic Sciences	20 Credit hours
<u>Third</u>	Medical Requirements	210 Credit hours
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	Total	257 Credit hours

The Hashemite University

Faculty of Medicine

Study Plan 2011/2012

**Name of Degree: Doctor of Medicine
(M.D)**

Components of the Plan

The study plan of Doctor of Medicine is composed of (257) credit hours distributed as shown below:-

First: University requirements: 27 Credit hours

A- Obligatory requirements: (12) credit hours
B- Elective requirements: (15) credit hours

Second: Faculty requirements: 20 Credit hours
A- Basic sciences (20) credit hours

Third: specialty requirements: 210
A- Basic medical sciences (87) credit hours
B- Clinical sciences
1- Obligatory (114) credit hours
2- Elective (9) credit hours

Total 257 Credit hours

Coding System

Year	Faculty No.		Department No.		Level	Serial No.	
11	1	5	0	4	2	0	1

Department Codes

No.	Department
00	Combined (more than one department)
01	Basic Medical Sciences
02	General & Special Surgery
03	Internal Medicine and Family Medicine
04	Pediatrics
05	Obstetrics and Gynecology

First: -**University requirements: 27** credit hours distributed as shown below:-

A- Obligatory requirements (12) credit hours

B- Elective requirements (15) credit hours

A- Obligatory requirements: - (12) credit hours consisting of :-

<i>Course No.</i>	<i>Course Name</i>	<i>Credit hours</i>
111404117	Military Sciences	3
111404118	National Education	3
111405101	Communication skills (Arabic language)	3
111405110	Communication skills (English Language)	3

B- Elective requirements: - (15) credit hours to be chosen from the following courses:-

Course No.	Course Name	Credit Hours
111404110	Islam and Contemporary Issues	3
111404111	Islamic Thought	3
111404112	Jerusalem History & civilization	3
111404113	Fundamentals of Art and Literature Aestheticism	3
111404114	Jordan History and Civilization	3
111404101	University and Student	3
111404102	Introduction to Psychology	3
111404103	Life Skills	3
111404104	Family and Child Education	3
111404115	Sociology	3
111404116	Archaeology and Tourism	3
111404120	Economic Management Science	3
111404121	Law and the ordering of our life	3
111405102	Applied Arabic language	3
111405111	Applied English language	3
111405112	Technical Translation	3
110108104	Energy and its Sources	3
110108114	Automobile Essentials	3
110108115	Computer Ethics	3
110108130	Health and Nutrients	3
110108132	Sport and Health	3
110108133	Environmental Awareness	3
110108113	Biotechnology and society	3

Second: Faculty requirements (20) credit hours, all of which are *OBLIGATORY*:

A- Requirements in basic sciences (20) Credit hours consisting of the following courses:

Course No.	Course Name	Weekly teaching hours		Credit hours
		Theory	Practical	
110103237	Basics of Medical Organic Chemistry.	3	--	3
110104101	General Biology (1)	3	--	3
110108110	Computer skills.	2	--	2
110108111	Computer skills lab		3	1
111500103	Medical Economics	2	-	2
111500104	Health Policies	2	-	2
111500102	Ethics of science and technology in medicine	1	-	1
111501107	General Biochemistry	3	-	3
111501108	First aid	3	-	3
Credit hours		19	1	20
Total		20		

Third: Specialty requirements (210) credit hours:

A- Basic medical science (87) eighty seven credit hours, all of which are *OBLIGATORY*:

Course no.	Course Name	Weekly teaching hours		Credit hours
		Lectures	Practical	
111501104	General Anatomy	2	3	3
111501105	Histology and Molecular Biology	2	3	3
111501106	General Physiology	3	-	3
111501201	Principles of Genetics and molecular biology	3	-	3
111501202	General Pathology 1	2	3	3
111501203	General Pharmacology	3	-	3
111501204	General Microbiology	2.5	1	3
111501205	The Respiratory system	4	3	5
111501206	The Cardiovascular system	5	3	6
111501207	Hematopoietic System	4	3	5
111501208	Immunology	3	-	3
111501209	Introduction to Public Health	3	-	3
111501301	The Endocrinology system	4	3	5
111501302	Gastro-intestinal system	4	6	6
111501303	Musculo-skeletal system	5	6	6
111500101	Clinical skill lab 1	-	3	1
111500201	Clinical skill lab 2	-	3	1
111500303	Clinical skill lab 3	-	3	1
111500301	Clinical skill lab 4	-	3	1
111500302	Clinical skill lab 5	-	3	1
111501304	The Genitourinary system	6	6	8
111501305	Neurosciences (1)	3	3	4
111501306	Neurosciences (2)	3	3	4
111501307	Clinical decision making	3	-	3
111501308	Clinical Psychology	3	--	3
Total				87

B- Clinical Science:**1- Obligatory (114) one hundred fourteen credit hours consisting of the following courses:**

Course No.	Course Name	Clinical Training in Weeks	Credit hours
111502401	General Surgery 1	10	10
111502402	Neurosurgery	2	2.25
111503401	General Internal Medicine 1	10	10
111503402	Diagnostic Radiology 1	2	2
111502403	Urology 1	2	2.25
111503403	Neurology	4	4.5
111500401	Emergency Medicine & Anesthesia	2	2
111501401	Community medicine 1	8	9
111504501	Pediatrics 1	8	9
111505501	Obstetrics and Gynecology 1	8	9
111502501	Orthopedics 1	4	4.5
111502502	Otolaryngology 1	2	2.25
111502503	Ophthalmology 1	2	2.25
111501501	Forensic Medicine and Toxicology 1	2	2.25
111503501	Psychiatry 1	2	2.25
111503502	Family Medicine	2	2.25
111503503	Dermatology 1	2	2.25
111502601	General Surgery 2	8	9
111503601	General Internal Medicine-2	8	9
111504601	Pediatrics -2	8	9
111505601	Obstetrics and Gynecology 2	8	9
Total			114

2- Elective (9) nine credit hours selected from the following table:

Course No.	Course Name	Credit hours	Clinical training in weeks
111502602	General Surgery 3	9	8
111503602	General Internal Medicine 3	9	8
111502603	Urology 2	4.5	4
111502604	Anesthesia	4.5	4
111500601	Emergency Medicine	4.5	4
111501601	Community Medicine 2	9	8
111504602	Pediatrics 3	9	8
111505602	Obstetrics and Gynecology 3	9	8
111502605	Orthopedics 2	4.5	4
111502606	Otolaryngology 2	4.5	4
111502607	Ophthalmology 2	4.5	4
111501602	Forensic Medicine and Toxicology 2	4.5	4
111503603	Psychiatry 2	4.5	4
111503606	Family Medicine and primary health care	4.5	4
111503604	Dermatology 2	4.5	4
111503605	Diagnostic Radiology 2	4.5	4
111501603	General Pathology 2	4.5	4
111500603	Special medical topics	4.5	4
111500602	Research Project	9	8



**The Hashemite University
Faculty of Medicine**



**Doctor of Medicine
Study Plan**

First year (45 Credit hours)					
Semester I: 17 (Credit hours)			Semester II: 19 (Credit hours)		
Course Name	No.	Credit	Course Name	No.	Credit
Arabic language	111405101	3	Computer skills.	110108110	2
National education	111404118	3	Computer skills lab.	110108111	1
General biology 1	110104101	3	English language	111405110	3
Medical economics	111500103	2	General anatomy	111501104	3
Health policies	111500104	2	Cell biology & tissues	111501105	3
Ethics of science & technology in medicine	111500102	1	General physiology	111501106	3
Military sciences	111404117	3	Basics of medical organic chemistry	110103237	3
			Clinical skill lab (1)	111500101	1
Summer: 9 (Credit hours)					
Course Name	No.	Credit			
Elective university course		3			
General biochemistry	111501107	3			
First aid	111501108	3			
Second year (44Credit hours)					
Semester I: 18 (Credit hours)			Semester II: 17 (Credit hours)		
Course Name	No.	Credit	Course Name	No.	Credit
Molecular genetics	111501201	3	Respiratory system	111501205	5
General pathology 1	111501202	3	Cardio-vascular system	111501206	6
General pharmacology	111501203	3	Hemopoietic & lymphatic system	111501207	5
General microbiology	111501204	3	Clinical skill lab (2)	111500201	1
Elective university course		3			
Elective university course		3			
Summer: 9 (Credit hours)					
Course Name	No.	Credit			
Immunology	111501208	3			
Introduction to public health	111501209	3			
Elective university course		3			
Third year (45 Credit hours)					
Semester I : 18 (Credit hours)			Semester II : 18 (Credit hours)		
Course Name	No.	Credit	Course Name	No.	Credit
Endocrine system	111501301	5	Genito-urinary system	111501304	8
Gastro-intestinal system	111501302	6	Neuroscience (1)	111501305	4
Musculo-skeletal system	111501303	6	Neuroscience (2)	111501306	4
Clinical skill lab (3)	111500301	1	Clinical skill lab (4)	111500301	1
			Clinical skill lab (5)	111500302	1
Summer: 9 (Credit hours)					
Course Name	No.	Credit			
Clinical decision making	111501307	3			
Clinical psychology	111501308	3			
Elective university course		3			

Fourth year (42 Credit hours)							
Semester I :				Semester II			
No.	Course Name	Wk	Credit	No.	Course Name	Wk	Credit
111502401	General surgery 1	10	10	111503401	Internal medicine 1	10	10
111502402	Neurosurgery	2	2.25	111503402	Diagnostic radiology 1	2	2.0
111502403	Urology 1	2	2.25	111503403	Neurology	4	4.5
111500401	Emergency medicine and anesthesia	2	2.00				
Total		16.5		Total		16.5	
Summer 9							
111501401	Community medicine 1	8	9				
Fifth year (36 Credit hours)							
No.	Course Name	Wk	Credit	No.	Course Name	Wk	Credit
111504501	Pediatrics 1	8	9	111505501	Obstetrics & gynecology1	8	9
111502501	Orthopedics 1	4	4.50	111502502	Otolaryngology 1	2	2.25
111503502	Family medicine	2	2.25	111502503	Ophthalmology 1	2	2.25
111503501	Psychiatry 1	2	2.25	111503503	Dermatology 1	2	2.25
				111501501	Forensic medicine & Toxicology 1	2	2.25
Total		16	18	Total		16	18
Sixth year (45 Credit hours)							
No.	Course Name	Wk	Credit	No.	Course Name	Ws	Credit
111504601	Pediatrics 2	8	9	111505601	Obstetrics & gynecology 2	8	9
111503601	General medicine 2	8	9	111502601	General surgery 2	8	9
Total		18		Total		18	
Elective course		8 weeks			9 credit hours		

General Anatomy (111501104) 3 credit hours

This course covers introduction in gross anatomy to all parts of the body (upper limb & lower limb thorax, abdomen, head & neck, and microanatomy) including terms, regions, muscles, blood vessels, and nerves as well as to an introduction to the nervous system. This course also covers general embryology including the development of embryo starting from the zygote, the fetal membranes, placenta and congenital malformations

General Histology and tissues (111501105) 3 credit hours

This course covers the cell with respect to structure, function and classification, epithelial cells, cell structure of endocrine glands, peripheral blood, connective tissues, bone and cartilage, muscles, nerves, blood vessels, lympho-reticular tissue and skin and appendages.

General Physiology (111501106) 3 credit hours

This course covers the definition of physiology and the systems involved. It includes the study of basic principles of physiology that involve subjects like, physiological units, biological membranes, transport, homeostasis, body fluids, membrane potentials, hemodynamics and laws of blood flow.

General Biochemistry (111501107) 3 credit hours

This course covers the study of the structure and classification of carbohydrates, lipids, and amino acid, structure and characteristics of proteins, hemoglobin, fibrous proteins, enzymes including their general properties, classification, kinetics, mechanisms of inhibition and regulation.

This course covers nucleic acids and nucleotides and gene structure. It also covers energy metabolism including cellular bioenergetics, tricarboxylic acid cycle and oxidative phosphorylation. The course also covers carbohydrate and lipid metabolism, nitrogen, amines, acids in addition to nutrients and vitamins.

Introduction to Public Health (111501209) 3 credit hours

This course covers the topics of population science, primary health care, mother and child health, ecology, health care systems and health planning, It also covers the concept of environmental health, study the sources of pollution, classification of pollutants; including water, air, soil and occupational pollutants, the relationship between pollution and work and social behavior, the effect of pollution on health and methods of prevention of pollution and equipment used in this regard.

Medical Economics (111501101) 2 credit hours

This course is the branch of economics concerned with the application of economic theory to phenomena and problems associated typically with the secondary and tertiary health care. Typically, however, it pertains to cost-benefit analysis of [pharmaceutical](#) products and cost-effectiveness of various [medical](#) treatments. The course also will cover the mathematical methods to synthesize data from [biostatistics](#) and [epidemiology](#) for support of medical [decision making](#), both for individuals and for wider health policy

Health Policy (111501104) 2 credit hour

This course deals with the decisions, plans, and actions that are undertaken to achieve specific [health care](#) goals within a society. It also study the different categories of health policies, including personal health care policy, [pharmaceutical policy](#), and policies related to [public health](#) such as [vaccination policy](#) or [tobacco control policy](#). It covers topics of financing and delivery of health care, access to care, quality of care, and [health equity](#).

Ethics of Science & Technology in Medicine (111501102) 1 credit hour

This course studies the moral principles that apply values and judgments to the practice of medicine during clinical settings history taking. It covers ethical issues relating to End of life care, abortion, genetic and prenatal testing, birth control, stem cells , organ donation, patient rights.

Genetics and Molecular Biology (111501201) 3 credit hours

This course covers the study of chromosomes and heredity, genetic linkage, chemistry of the gene, mitosis and meiosis, gamete formation, mechanisms of transfer of genetic traits, genetic code and its transcription and translation, protein synthesis, mutations, genetic map, sex determination, sex-linked characteristics, human genetic disorders and their diagnosis and management, and genetic engineering.

General Pathology 1 (111501202) 3 credit hours

This course covers the study of cell injury including its types, causes, and mechanisms, cellular adaptation to growth and differentiation, inflammation including its types and mechanisms, cellular healing, infections and its causes and characteristics, tumors and neoplasia, types of cancer, its mechanisms of occurrence, characteristics and epidemiology, and circulatory disorders including edema, congestion, thrombosis, infarction and shock.

General Microbiology (111501204)**3 credit hours**

This course covers the study of microorganisms with respect to classification and structure of bacteria, viruses, parasites, and fungi, their characteristics, growth and replication, and their susceptibility to antimicrobials. It also covers the study of the types of microorganisms that cause human disease, and their pathogenesis, methods of diagnosis and prevention and control.

**Clinical Skill lab 1 (111500101)
hour****1 credit**

This course discuss the needs of medical students for adequate preparation before their patient encounters in order to maximise their learning effect, reduce stress imposed on patients, develop clinical skills that are at the heart of every medical curriculum. The course highlights the importance of integration between the basic medical science and the clinical practice. During this course have to perform certain clinical skills for each age group such as Measuring blood pressure, Intramuscular and subcutaneous injection, Intravenous injection, Hearing test, Assessment of visual acuity, and Cardiopulmonary resuscitation

First Aid (111501108)**3 credit hours**

This course introduces the basics of emergency first aid treatment. Topics include issues in providing care, primary assessment and basic life support, secondary assessment, circulatory emergencies, respiratory emergencies, soft tissue injuries, bone & joint injuries, environmental illness & injury, medical conditions, advanced topics. Upon completion, students should be able to demonstrate skills in providing emergency care for the sick and injured until medical help can be obtained.

General Pharmacology (111501203)**3 credit hours**

This course should cover the following subjects, Pharmacokinetics, Pharmacodynamics, dose response relationship, drug toxicities and side effects, drug cost-benefit relationship, principles of drug trials, principles of drug prescription, principles of drug utilization, drug information facilities and drug interaction, drug epidemiology, principals of antimicrobial drugs, principals of anticancer drugs, immunosuppressants.

The Respiratory System (111501205)**5 credit hours**

This course covers the respiratory system from the standpoints of its anatomic and histological structure, functions including respiration and its mechanisms and characteristics, airway resistance, gas diffusion in the lung, and gas exchange and transport, pulmonary function tests, chemical properties of oxygen, its transport and abnormalities and respiratory alkalosis and acidosis. It also covers diseases of the respiratory tract including infections, vascular, obstructive, occupational and immune-mediated diseases, tumors of the respiratory tract and pharmacologic treatment of these diseases. The course is concluded by covering the clinical aspects of the system.

The Cardiovascular System (111501206)**6 credit hours**

This course covers the study of the cardiovascular system from the standpoints of anatomic and histologic structure of heart, veins, arteries and capillaries, functions of the cardiovascular system including the physiology of the heart, membrane properties, heart contractility and its mechanisms, electrical conduction and electrocardiography, heart as a pump and cardiac cycle, blood flow and its disorders, cardiac output, blood pressure regulation, cardiac effort, circulatory disorders, heart failure, and cardiac enzymes and their relationship to myocardial infarction. It also covers diseases of the heart and blood vessels including infections, atherosclerosis, hypertension, ischemic heart diseases, congenital heart diseases and treatment of cardiovascular diseases. The course is concluded by the study of the clinical aspects of the cardiovascular system including signs, symptoms, and disease presentation.

Hematopoietic system (111501207)**5 credit hours**

This course covers the study of cellular elements of lymph, blood and the histology of both central and peripheral lymphatic systems, including bone marrow, thymus, spleen and lymph nodes. It also covers the production of blood cells, the physiology of tissue fluids, lymph and plasma including the functions of these fluids and cells, bleeding, coagulation, chemistry of blood and lymph together with the structure of hemoglobin, its functions and hemoglobinopathies, plasma proteins, immunological properties of plasma globulins, complement, immunological mechanisms, the diseases that affect blood and the lymphatic system including disturbances of red blood cells, various types of anemia; disturbances of white blood cells including their numbers and functions; leukemias and lymphomas; disturbances of bleeding and coagulation; diseases of the spleen and thymus; therapeutics of blood and lymphatic diseases. The course also covers the clinical aspects of hematologic and lympho-reticular diseases.

Clinical Skill lab 2 (111500201)**1 credit hour**

This course covers the skills of history taking and physical examination of the Respiratory system, Cardio-vascular system and Hematopoietic & Lymphatic system. It also covers the study of signs and symptoms of the diseases that affect these systems through seminars and practical training performed on the highly sophisticated manikins available at the skill lab in the Faculty of Medicine.

Immunology (111501208)***3 credit hours***

This course covers the immune system including types of cells and tissues, their distribution in the body, their functions, growth, development and differentiation, antigens and their characteristics, antibodies and their types and functions, serologic reactions, the complement system and its functions and activation, interaction between cells in the generation of the immune response, and immunologic disorders including autoimmunity, hypersensitivity, tumor immunology, immunology of transplantation, and immunodeficiency diseases. Also is covered the drugs used in the treatment of these diseases.

The Endocrinology System (111501301)***5 credit hours***

This course covers the endocrine system from the standpoints of anatomic and histologic structure, hormones including their structures, functions, mechanisms of action receptors, and their metabolism in addition to the endocrinology disorders including hyperactivity or hypoactivity, immune-mediated diseases, benign and malignant tumors and pharmacological properties of hormones and drugs used in the treatment of endocrine diseases. The course is concluded by studying the clinical aspects of the endocrine system including signs, symptoms and disease presentation.

Gastro Intestinal system (111501302)***6 credit hours***

This course covers the digestive system including the alimentary tract, liver, gallbladder and the pancreas from the standpoints of anatomic and histological structure and function including motility, secretions, digestion, chemistry of saliva and gastric secretions, bile, pancreatic secretions, and digestive enzymes. It also covers diseases of the digestive system including infections, congenital and acquired malformations, vascular disorders, peptic ulcer, tumors of the digestive system, immune mediated diseases, and drugs used in the treatment of these diseases as well as the clinical aspects of the system including signs, symptoms, and disease presentation.

Musculo skeletal System (111501303)***6 credit hours***

This course covers the study of the locomotor system and skin including the anatomy and histology of nerves, muscles and skin; the physiology of nerves and muscles, the biochemistry of muscle contraction and neurotransmission. It also covers the diseases of the skin, muscles and nervous tissues including bacterial, viral, parasitic and fungal infections, together with disturbances of metabolism and genetics of the locomotor system and tumors of muscles, bones and joints. The course covers also the therapeutics of such diseases and their clinical aspects including signs and symptoms, and disease presentation.

The Genitourinary system (111501304)***8 credit hours***

This course covers the study of the male and female genitourinary systems from the standpoints of anatomic and histologic structure and function including renal physiology which covers glomerular filtration, renal tubule functions, acid base balance and the role of the kidney in that. It also covers the physiology of the reproductive system of males and females, hormones and their functions as well as diseases of the genitourinary system and breast including infections, benign and malignant tumors, inflammation, placental disorders, gestation, infertility, renal failure and the treatment of these diseases. The course is concluded by covering the clinical aspects of the system including the study of signs, symptoms, and disease presentation.

Neuroscience 1 (111501305)***4 credit hours***

This course covers the study of the nervous system from the stand points of anatomy, histology and organization of the central nervous system including the brain, spinal cord, cerebral cortex and intellectual functions, neurotransmission including its chemistry, receptors and neurotransmitters,. It also covers diseases of the central nervous system including bacterial, viral, fungal and parasitic infections, brain edema, hydrocephalus, vascular disturbances, trauma, congenital malformations, tumors, degenerative and immune-mediated disorders and the drugs used for the treatment of these diseases. The course is concluded by covering the clinical aspects of disease that affect the central system.

Neuroscience 2 (111501306)***4 credit hours***

This course covers the study of the peripheral nervous system and special senses from the stand points of anatomy, histology and organization of the peripheral nervous system including nerves their motor and sensory functions in addition to the study of vision, hearing including its chemistry, receptors and neurotransmitters, and chemistry of vision. The course is concluded by covering the clinical aspects of disease that affect the special senses.

Clinical Skill lab 3 (111500202)***1 credit hour***

This course covers the skills of history taking and physical examination of the Gastro-intestinal system, Endocrine system, and Musculo-skeletal system. It also covers the study of signs and symptoms of the diseases that affect the these systems through seminars and practical training performed on the highly sophisticated manikins available at the skill lab in the Faculty of Medicine

Clinical Skill lab 4 (111500301)**1 credit hour**

This course covers the skills of history taking and physical examination of the genitourinary system. It also covers the study of signs and symptoms of the diseases that affect the these systems through seminars and practical training performed on the highly sophisticated manikins available at the skill lab in the Faculty of Medicine

Clinical Skill lab 5 (111500302)**1 credit hour**

This course covers the skills of history taking and physical examination of the neuroscience I and neuroscience II system. It also covers the study of signs and symptoms of the diseases that affect the these systems through seminars and practical training performed on the highly sophisticated manikins available at the skill lab in the Faculty of Medicine

Clinical decision making (111501307)**3 credit hours**

This course is a cognitive process concerned with the identification of relevant clinical features, data gathering from the medical history and physical examinations, assimilation, analysis, evaluation and choice, to develop a list of possible causes of the disorder. Data gathering, assimilation and analysis are part of the assessment process. Evaluation and choice are part of the judgment process.

Clinical Psychology (111501308)**3 credit hours**

This course covers principles of psychology and introduction to behavioral sciences.

Behavioral Science, including Clinical Psychology, demonstrates the ties between the basic and the clinical sciences in approaching and understanding the human behavior.

The course will focus mainly on understanding the Psychological basis, Biological component, and Social aspects of individual behavior. More emphasis toward understanding the biological and social determinant of physical abuse, aggressive behavior and multiple substance abuses was made.

Special lectures are arranged for basic understanding the relationship between Psychological Medicine & physical illnesses, Doctor – Patient Communication, Signs and Symptoms of Mental illnesses, and the Principles of Psychiatric Epidemiology, Biostatistics and Health Care System in Jordan.

Community Medicine (111501401)**9 credit hours**

This course covers the topics of population science, primary health care, mother and child health, ecology, health care systems and health planning, It also covers the concept of environmental health, study the sources of pollution, classification of pollutants; including water, air, soil and occupational pollutants, the relationship between pollution and work and social behavior, the effect of pollution on health and methods of prevention of pollution and equipment used in this regard.

General Surgery 1 (111502401) 10 credit hours

This course covers the study of surgical diseases that affects the different body systems, including history taking and physical examination to reach into a diagnosis and the surgical methods used for their treatment and patient follow up after surgery through clinical training, lectures and seminars .

Neurosurgery (111502402) 2.25 credit hours

This course also studies the injuries of the central and peripheral nervous system, and diseases such as tumors and congenital anomalies through a clinical training, lectures and seminars.

General Internal Medicine 1 (111503401) 10 credit hours

This course covers through twelve weeks of clinical training, lectures and seminars the study of diseases that affect humans including methods of history taking and performing the physical examination to reach into a diagnosis by studying these signs and symptoms. Additionally the course covers the therapeutics and interventions used in the treatment of such diseases.

Diagnostic Radiology (111503402) 2 credit hours

This course will cover the principles of imaging and its clinical applications in the diagnosis of diseases and injuries of the different body systems utilizing simple x-rays, computerized tomography, magnetic resonance imaging, ultrasonography, and radioisotope scanning

Pediatrics 1 (111504501) 9 credit hours

This course covers child development and growth both mentally and physically since birth, pediatric care and prevention and control of diseases of childhood. It also covers the study of diseases affecting children their, etiology, mechanisms, symptoms and signs, diagnosis, prevention and treatment of these diseases medically or surgically through eight weeks of programmed clinical training, lectures, seminars and group discussions.

Gynecology and Obstetrics 1 (111505501) 9 Credit hours

This course covers the study of diseases affecting the female reproductive system, infertility, menstrual disturbances; their signs and symptoms, pathogenesis, methods of diagnosis and evaluation, medical and surgical treatment, follow up, epidemiology, prevention and control. It also covers methods of caring for the pregnant during pregnancy, labor and after delivery, normal and instrumental delivery and cesarean section. In addition, diseases of pregnancy, fertility, ectopic and pathological pregnancy, birth control and contraception are covered. The course is executed through programmed clinical training, lectures seminars, and group discussion.

Emergency medicine & Anesthesia (111500401) 2 credit hours

This course involves the training of students in emergency and accident medicine covering the study of diseases and trauma requiring the provision of urgent care. This includes the study of clinical manifestations, their diagnosis and management. The course also involves training in the field of anesthesia including preparation of patients before surgery, methods and types of anesthesia and drugs used and patient recovery. Students are also trained in the intensive care unit.

Selected Medical Specialties**Forensic medicine and toxicology 1 (111501501) 2.25 credit hours**

This course covers topics in legal aspects in medical practice, medico-legal accidents, medico-legal death, medico-legal responsibilities as well as criminal investigations and methods of identification of the dead and the alive through two weeks of programmed clinical training in the clinic, postmortem rooms and the court, lectures and seminars. It also covers occupational, agricultural, industrial and medical poisoning.

Family medicine (111501502) 2.25 credit hours

This course covers two weeks involving the training of students to provide comprehensive medical care for all family members utilizing available resources and consultative services with the aim to reach to a quality care. The course also covers subjects related to community health including environmental health, school health, immunization programs as well as medical records and medical informatics through a two-week programmed clinical training, lectures and seminars. And this course covers clinical training for a period of eight weeks in a specialty the student elects to be spent in a recognized medical center for training inside or outside Jordan. It also covers the concept of environmental health, study the sources of pollution, classification of pollutants; including water, air, soil and occupational pollutants, the relationship between pollution and work and social behavior, the effect of pollution on health and methods of prevention of pollution and equipment used in this regard.

Dermatology 1(111503502) 2.25 credit hours

This course covers the study of the disease of the skin and its appendages and pigmentation disorders involving causes, signs and symptoms and therapeutic interventions as well as their epidemiology through two weeks of clinical training, lectures and seminars.

Special Surgery**Urology 1 (111502403) 2.25 credit hours**

This course involving diseases that affect the urinary system including infections, obstructive lesions, tumors and anomalies as well as methods of diagnosis and treatment through a two week clinical training, lectures and seminars. Additionally.

Orthopedics 1 (111502501) 4.5 credit hours

This course study in signs and symptoms, etiology and means of clinical, laboratory and radiological diagnoses, in addition to ways of medical and surgical treatment including physiotherapy and rehabilitation for a period of four weeks of clinical training including lectures seminars and group discussions.

Otolaryngology 1 (111502502) 2.25 credit hours

This course cover disturbances of hearing, speech and balance, through the study of signs and symptoms, etiology and means of clinical, laboratory and radiological diagnoses, in addition to audio testing and testing of balance, together with the ways of treatment of such disturbances both medically and surgically, and prevention and control, through a two week period of programmed clinical training including lectures, seminars and group discussions.

Ophthalmology 1 (111502503) 2.25 credit hours

This course study of eye diseases and trauma and refractive errors and ways of their diagnosis and medical and surgical treatment including corrections of refractive errors, through a two week period of clinical training including lectures, seminars and group discussions.

Clinical Neurosciences

Psychiatry 1 (111503501) 2.25 credit hours

The course covers psychiatric disorders affecting humans, their etiology, mechanisms symptoms and signs, diagnosis and dealing with the psychiatric patient and psychiatric interventions. It also covers psycho-organic connection in certain diseases, pediatric and geriatric disorders, drug abuse and narcotic and alcohol addiction, and psycho-sexual disorders. These topics are covered through clinical training for eight weeks in psychiatric outpatient clinics and hospitals through lectures, seminars and group discussions, following the problem solving approach.

Neurology (111503403) 4.5 credit hours

This course study of diseases that affect the central and peripheral nervous system including infections, tumors, degenerative diseases and aging-related illnesses. It also covers history taking and performing proper physical to reach into their diagnosis through programmed clinical training for four weeks, lectures and seminars.

General Surgery 2 (111502601) 9 credit hours

This course involves the training of students in outpatient clinics, specialized units and operating rooms covering the study of the clinical manifestations of diseases, their diagnosis and treatments in addition to postoperative follow-up. The course is delivered through clinical training, tutorials and seminars.

General Internal Medicine 2 (111503601) 9 credit hours

This course involves the training of students in outpatient clinics and specialized units covering the study of the clinical manifestations of diseases,

their diagnosis and treatment. The course is delivered through clinical training, tutorials and seminars.

Pediatrics 2 (111504601) 9 Credit hours

This course covers pediatric diseases, methods of treatment and caring for the child through programmed clinical training in outpatient clinics, Intensive Care Unit, and Neonatal Intensive Care Unit, seminars and group discussions. Students are trained to deal with pediatric diseases through a problem solving approach.

Gynecology and Obstetrics 2 (111505601) 9 Credit hours

This course covers the study of gynecological diseases, pregnancy, antenatal care, family planning and contraception through programmed clinical training for a period of four weeks in outpatient clinics, delivery room, obstetrics operation room in addition to seminars and group discussions