



## ***Study Plan of the Doctor of Medicine (MD) Degree***

**Name of Degree:** Doctor of Medicine (MD)

This plan is to be applied on students admitted to the Faculty of Medicine as of the academic year 2006 / 2007.

### **Components of the Plan**

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

<b><u>First</u></b>	<b>University Requirements</b>	<b>27 Credit hours</b>
<b><u>Second</u></b>	<b>Requirements in Basic Sciences</b>	<b>13 Credit hours</b>
<b><u>Third</u></b>	<b>Medical Requirements</b>	<b>217 Credit hours</b>
<hr/>		
	<b>Total</b>	<b>257 Credit hours</b>

## *Coding System*

<b>Faculty No.</b>		<b>Department No.</b>		<b>Level</b>	<b>Sr. No.</b>	
1	5	0	4	2	0	1

### *1-Department Codes*

<i>No.</i>	<i>Department</i>
00	Combined (More than one department)
01	Anatomy and Histology
02	Physiology and Biochemistry
03	Pathology, Microbiology and Forensic Medicine
04	Pharmacology
05	Family and Community Medicine
06	General surgery and anesthesia
07	Internal medicine
08	Pediatrics
09	Obstetrics and Gynecology
10	Special surgery

### **First: -**

**University Requirements:** 24 credit hours distributed as Shown below:-

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

***A- Obligatory requirements: - (15) credit hours consisting of:-***

<i>Course No.</i>	<i>Course Name</i>	<i>Credit hours</i>
0107106	Military Sciences	3
0107108	National Education	3
2110100	Communication Skill/Arabic	3
2120100	Communication Skill/English	3
1001115	Computer Skills	3

**B- Elective Requirements: - (12) credit hours to be chosen from the three tracks { at least one courses form each track}:-**

**1<sup>st</sup> track:-**

Course No.	Course Name	Credit Hours
107102	Jordan History and Civilization	3
107112	Islam and Contemporary Issues	3

**2<sup>nd</sup> track:-**

Course No.	Course Name	Credit Hours
303101	Family Violence	3
2303121	Psychology	3
107105	Science of Sociology	3

**3<sup>rd</sup> track:-**

Course No.	Course Name	Credit Hours
1203100	Principles of Environmental Science	3
401160	Traffic Safty	3

**Second:**

Faculty Requirements (217) credit hours, all of which are Obligatory, distributed as shown below:-

- A- Requirements in basic sciences (13) credit hours
- B- Requirement in basic medical sciences  
And in clinical sciences (208) credit hours
- C- Obligatory requirements can be elected (9) credit hours

**A- Requirements in basic sciences: - (13) credit hours consisting of the Following courses:-**

Course No.	Course Name	Weekly teaching hours		Credit hours
		Theory	Practical	
0102109	General Physics for medical student's	3	--	3
0103101	General Chemistry (1)	3	--	3
0103236	Organic Chemistry for non chemistry students.	3	--	3
0104101	General Biology (1)	3	--	3
0104103	General Biology-Practical (1)	--	3	1
<b>Total</b>		<b>12</b>	<b>3</b>	<b>13</b>

***B- Requirement in basic medical sciences and in clinical sciences***

Course no.	Course Name	Weekly Teaching Hours		Credit hours
		Lectures	Practical/Lab /Clinical	
1500201	The Respiratory system	4	3	5
1500202	The Cardiovascular system	4	3	5
1500203	Hematopoetic System	4	3	5
1500301	The Endocrinology system	4	3	5
1500302	The Digestive system	4	6	6
1500303	Skin and Locomotors system	5	6	7
1500304	The Genitourinary system	5	3	6
1500305	Neurosciences I	4	3	5
1500306	Neurosciences II	3	3	4
1501101	General Anatomy	2	3	3
1501102	Histology and Molecular Biology	2	3	3
1502101	General Biochemistry	3	--	3
1502102	General Physiology	2	--	2
1503201	Principles of Genetics and molecular biology	2	--	2
1503202	General Pathology	1.5	1	2
1503203	General Microbiology	2.5	1	3
1503204	Immunology	2	--	2
1504201	General Pharmacology	2	-	2
1505101	Introduction to Community medicine	3	--	3
1505202	Occupational & Environmental Health and Field Project		4	3
1505201	Epidemiology and Biostatics	3	-	3
1505301	clinical Psychology	3	--	3

<i>Course No.</i>	<i>Course Name</i>	<i>Clinical Training in Weeks</i>	<i>Credit hours</i>
1500307	Introduction to clinical medicine and medical ethics	8	9
1500504	Emergency Medicine	4.0	4.5
1503503	Forensic Medicine and Toxicology	2	2.25
1505501	Family Medicine	2	2.25
1506401	General Surgery and Anesthesia-1	10	11.25
1506601	General Surgery -2	8	9
1507401	General Internal Medicine -1	10	11.25
1507501	Diagnostic Radiology	2	2.25
1507502	Psychiatry	4	4.5
1507503	Neurology	4	4.5
1507504	Dermatology	2	2.25
1507601	General Internal Medicine -2	8	9
1508401	Pediatrics -1	10	11.25
1508601	Pediatrics -2	8	9
1509401	Obstetric and Gynecology -1	10	11.25
1509601	Obstetrics and Gynecology -2	8	9
1510501	Neurosurgery	2	2.25
1510502	Urology	2	2.25
1510503	Orthopedics and trauma	4	4.5
1510505	Otolaryngology	2	2.25
1510506	Ophthalmology	2	2.25
<b>Total</b>			208

- (9) Credit hours obligatory requirement can be selected from the following table:

<i>Course No.</i>	<i>Course Name</i>	<i>Credit hours</i>	<i>Clinical training in weeks</i>		
1500602	Emergency Medicine -e	4.5	4		
1500605	Special Topics	4.5	4		
1503601	Forensic Medicine and Toxicology -e	4.5	4		
1503602	Pathology -e	4.5	4		
1505601	Community Medicine -e	9	8		
1505602	Research Project	9	8		
1505605	Family Medicine and primary health care -e	4.5	4		
1506602	General Surgery -e	9	8		
1506603	Anesthesia	4.5	4		
1507605	General Internal Medicine -e	9	8		
1507602	Psychiatry -e	4.5	4		
1507603	Dermatology -e	4.5	4		
1507604	Diagnostic Radiology -e	4.5	4		
1508602	Pediatrics -e	9	8		
1509602	Obstetrics and Gynecology -e	9	8		
1510601	Orthopedics -e	4.5	4		
1510602	Otolaryngology -e	4.5	4		
1510604	Ophthalmology -e	4.5	4		
1510605	Urology -e	4.5	4		

## *Annual Plan*

### *First Year:*

<i>First Semester</i>		
Course No.	Course Name	Credit Hours
0102109	General Physics for medical students	3
0103101	General Chemistry (1)	3
0104101	General Biology (1)	3
0104103	General Biology – Practical -1	1
2110100	Arabic	3
-	Elective University Requirement	3
-	Computer skills	3
<b>Total</b>		<b>19</b>
<i>Second Semester</i>		
Course No.	Course Name	Credit Hours
1502102	General Physiology	2
1501101	General Anatomy	2+1
0107106	Military Sciences	3
2120100	English	3
0103236	Organic Chemistry	3
1501102	Histology and molecular Biology	2+1
<b>Total</b>		<b>17</b>
<i>Summer Semester</i>		
Course No.	Course Name	Credit hours
-	Elective University Requirement	3
1502101	General Biochemistry	3
1505101	Introduction to Community Medicine	3
<b>Total</b>		<b>9</b>

### *Second Year:*

<i>First Semester</i>		
Course No.	Course Name	Credit Hours
0107108	National Education	3
1503201	Molecular Genetics	2
1503202	General Pathology	1.5+ 0.5
1503203	General Microbiology	2.5+ 0.5
1504202	General Pharmacology	2
-	Elective University Requirement	3
<b>Total</b>		<b>15</b>

<i>Second Semester</i>		
<b>Course No.</b>	<b>Course Name</b>	<b>Credit Hours</b>
1500201	Respiratory system	5
1500202	Cardiovascular system	5
1500203	Hematopoetic system	5
1505201	Epidemiology and Biostatistics	3
<b>Total</b>		<b>18</b>
<i>Summer Semester</i>		
<b>Course No.</b>	<b>Course Name</b>	<b>Credit Hours</b>
1503204	Immunology	2
1505202	Occupational & Environmental Health and Field Project	3
	Elective University Requirement	3
<b>Total</b>		<b>8</b>

***Third Year***

<i>First Semester</i>		
<b>Course No.</b>	<b>Course Name</b>	<b>Credit Hours</b>
1500301	The Endocrinology System	5
1500302	The Digestive System	6
1500303	Skin & Locomotor System	7
<b>Total</b>		<b>18</b>
<i>Second Semester</i>		
<b>Course No.</b>	<b>Course Name</b>	<b>Credit Hours</b>
1500304	The Genitourinary System	6
1500305	Neurosciences -I	5
1500306	Neurosciences -II	4
1505301	Clinical psychology	3
<b>Total</b>		<b>18</b>
<i>Summer Semester</i>		
<b>Course No.</b>	<b>Course Name</b>	<b>Credit Hours</b>
1500307	Introduction to clinical medicine and medical ethics	9
<b>Total</b>		<b>9</b>



**Fourth Year**

<b>Course No.</b>	<b>Course Name</b>	<b>Clinical Training in Weeks</b>	<b>Credit Hours</b>
1506401	General Surgery & Anesthesia-1	10	11.25
1507401	Internal Medicine - 1	10	11.25
1508401	Pediatrics – 1	10	11.25
1509401	Obstetrics & Gynecology-1	10	11.25
<b>Total</b>		<b>40</b>	<b>45</b>

**Fifth Year**

<b>Course No.</b>	<b>Course Name</b>	<b>Clinical Training in Weeks</b>	<b>Credit Hours</b>
1510501	Neurosurgery	2	2.25
1510502	Urology	2	2.25
1510503	Orthopedics and trauma	4	4.5
1510505	Otolaryngology	2	2.25
1510506	Ophthalmology	2	2.25
1503503	Forensic Medicine and Toxicology	2	2.25
1505501	Family Medicine	2	2.25
1507501	Diagnostic Radiology	2	2.25
1507504	Dermatology	2	2.25
1507502	Psychiatry	4	4.5
1507503	Neurology	4	4.5
1500504	Emergency Medicine-1	4	4.5
<b>Total</b>		<b>32</b>	<b>36</b>

**Sixth Year**

<b>Course No.</b>	<b>Course Name</b>	<b>Clinical Training in Weeks</b>	<b>Credit Hours</b>
	Elective Clinical Training	8	9
1506601	General Surgery - 2	8	9
1507601	Internal Medicine -2	8	9
1508601	Pediatrics -2	8	9
1509601	Obstetrics and Gynecology -2	8	9
<b>Total</b>		<b>40</b>	<b>45</b>

# Course Description

## **General Anatomy (1501101)**

**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 Molecular Biology (1501102)**

**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, lymphoreticular tissue and skin and appendages.

## **General Physiology (1502102)**

**2 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 (1502101)**

**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 Community Medicine (1505101)**

**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.

**Genetics and Molecular Biology (1503201) 2 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 (1503202) 2 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 (1503203) 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.

**General Pharmacology (1504201) 2 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 (1500201)****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 (1500202)****5 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 myo-cardiac 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.

**Hematopoetic system (1500203)****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 haemoglobin, its functions and haemoglobinopathies, 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 anaemia; disturbances of white blood cells including their numbers and functions; leukaemias 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 lymphoreticular diseases.

**Epidemiology and biostatistics (1505201)****3 credit hours**

This course covers analytical and descriptive epidemiology, the epidemiology of infectious and chronic diseases; transmission of infectious diseases, descriptive statistics, the theory of probabilities, levels of significance, hypothesis testing, regression and correlation and the use of statistics in epidemiology.

**Immunology (1503204)****2 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 Endocrine System (1500301)****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 endocrinologic 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.

**Occupational and Environmental Health and Field Project (1505202) 3 credit hours**

This course covers different topics in the field of occupational health, sources of health hazards in workplace, major occupation diseases, and workplace hazards prevention. It also covers the relationship between environment and health including major types of environment pollutants and methods of protection of the environment. This course includes field applications in various occupation and environmental issues.

**The Digestive system (1500302)****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.

**Skin and The Locomotor system (1500303)****7 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 tumours 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 (1500304)**

**6 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.

**The Neuroscience I (1500305) 5 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.

**The Neuroscience II (1500306) 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 Psychology (1505301) 3 credit hours**

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

**Introduction to clinical medicine (1500307) 9 credit hours and and medical ethics**

This course covers communication skills with patients and their relatives and the skills of history taking and physical examination of the different body systems and the study of signs and symptoms of the diseases that affect the body through clinical training, lectures and seminars over an eight week period. The course also covers the topics of medical informatics and medical ethics through lectures, seminars and practical training.

**General Surgery and anesthesia-1 (1506401) 11.25 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 in addition to clinical training in anesthesia and critical care.

**General Internal Medicine – 1 (1507401) 11.25 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.

**Pediatrics – 1 (1508401)**

**11.25 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 (1509401)**

**11.25Credit 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 ceasorean 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-1 (1500504)**

**4.5 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****9 credit hours**

**1-Forensic medicine and toxicology (1503503) 2.25 credit hours** This course covers topics in legal aspects in medical practice, medicolegal accidents, medicolegal death, medicolegal 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.

**2- family medicine (1505501) 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.

**3- Radiology (1507501) 2.25 credit hours** This course is achieved through lectures and seminars which 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, nuclear resonance, ultrasonography, and radioisotope scanning.

**4- Dermatology (01507504) 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****13.5 credit hours**

**1- neurosurgery (1510501) 2.25 credit hours,** This course including injuries of the central and peripheral nervous system, and diseases such as tumors and congenital anomalies through a two week clinical training, lectures and seminars.

**2-Urology (1510502) 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.

**3-Orthopaedics and traumatology (1510503) 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.

**4-diseases of the ear, nose and throat (1510505) 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 audiotesting and testing of balance, together with the ways of treatment of such disturbances both medicaly and surgically, and prevention and control, through a two week period of programmed clinical training including lectures, seminars and group discussions.

**5-Ophthalmology (1510506) 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****9 credit hours**

**1- Psychiatry (1507502) 4.5 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.

**2-Neurology (1507503) 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 (1506601)****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 followup. The course is delivered through clinical training, tutorials and seminars.

**General Internal Medicine -2 (1507601)****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 (1508601)****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 (1509601)****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