

Course information:

Course title	Clinical Skills Course 1
Course number	0111500101
Credit hours	1
Course date	2nd Semester
Course meeting time	According to timetable, usually Monday and Wednesday afternoons 12:30 – 3:30pm
Course location	Clinical Skills Education and Testing Centre Laboratories, Faculty of Medicine,
Instructor	Dr Katherine Miles Office No : 3033 Office hours Tuesday and Wednesday 9am – 12pm Email: katemiles@doctors.org.uk / phone: 0779803235

Course description:

The aim of this course is to help students to acquire clinical skills through the integrated basic science module which will ultimately help in better patient care.

Through emphasis on communication skills between health care provider and patients and between different medical staff, we are hoping to prepare our students for their future career, also it will help students to integrate their knowledge of basic sciences with clinical practice.

The Clinical Skills Course 1 incorporates basic medical history taking and basic physical examination.

Consultation Skills:

In these sessions, students learn the elements of effective communication. This involves satisfactory interviews with simulated patients and volunteers, initiating the medical interview and eliciting the medical history appropriately. The exercises include role plays with simulated patients and team members. Students will be given opportunities to view real videos of patient history taking.

- a. Eliciting the medical history and gathering information from patients related to:
 - Presenting problems with special emphasis on understanding, analysis and interpretation of symptoms
 - Patient's perspective, including ideas, concerns, expectations
 - Past medical history, drug history, family history and social history with special emphasis on relevance to presenting complaints

- b. Developing specific communication skills to aid the process of initiating the medical interview and gathering information
- c. Obtaining consent from a patient before performing a basic medical or invasive procedure

Physical Examination Skills:

Conducting appropriate general physical examination to elicit physical signs related to:

- General appearance and complexion of the patient
- Tongue and hands as reflectors of systemic disorders
- Patient hydration status
- Vital signs

Procedural Skills:

Performing appropriate techniques on manikins or simulated patients for:

- Assessment of pulses, respiratory rate and temperature
- Blood pressure measurement
- Relief of choking
- Cardio-Pulmonary Resuscitation (CPR)

Learning outcomes:

The course objectives are divided into three categories. These are: Knowledge, Skills, and Attitudes / Behaviors.

Knowledge:

At the end of the Clinical Skills Education and Testing Centre (CSETC) Course 1, the students shall be able to:

- Understand the items of a medical history, in relation to the Calgary-Cambridge *framework, including:*
 - presenting problems
 - analysis of the presenting problems
 - patient's perspective
 - past medical history
 - drug history and allergies
 - family history
 - personal and social history
- Interpret their general clinical examination findings based on their basic science knowledge

Skills:

By the end of the CSETC Course 1, in relation to general history taking and general examination, the students shall be able to:

- Obtain an accurate medical history with all its items

- Demonstrate effective communication skills including:
 - attentive listening
 - screening
 - open to closed question cone
 - summarising
 - signposting
 - verbal and non-verbal cues
- Demonstrate the ability to obtain consent from a simulated patient before any intervention
- Perform effective, accurate, comprehensive, and appropriate general physical examination using simulated patients
- Demonstrate the ability to accurately assess pulses, respiratory rate, temperature and measure blood pressure
- Demonstrate the ability to perform appropriate procedures for the relief of choking and basic life support with the help of manikins

Attitudes / Behaviors:

At the end of the CSETC Course 1, the students shall be able to:

- Display a professional attitude when dealing with patients / simulated patients
- Demonstrate a good understanding of the sensitive nature of the doctor / patient relationship and the importance of patient privacy and confidentiality.
- Demonstrate a proper professional demeanor by willingly and consistently using appropriate personal safety devices when handling patients, hazardous material or instruments.

Instructional methods:

The course is taught through interactive lectures and practical sessions. Instructional methods include:

- ❖ discussions
- ❖ brainstorming
- ❖ group work
- ❖ pair work or triplet work
- ❖ role play
- ❖ simulation
- ❖ audio and video feedback
- ❖ presentations
- ❖ demonstrations

Text book and material:

Author	Title	Published Year
Douglas, Nicol and Robertson Elsevier	Macleod's Clinical Examination	12th, 2009
Silverman, Kurtz Draper	Skills for Communicating with Patients	2004
Ford, Hennessy, and Japp Elsevier	Introduction to Clinical Examination	8th, 2005
Dacre and Kopelman	Handbook of Clinical Skills	1999

Grading Policy:

Multiple Choice Examination: 40%
Objective Structured Clinical Examination: 40%
Class attendance/participation/evaluation: 20%
Total Points 100

Course Policies:

Late Assignments

Students must give an explanation to the course instructor for any assignment which is submitted late. It will be at the course instructor's discretion if marks will be deducted for late assignments.

Missed exams

If a student misses the multiple choice examination then they will have to take part in the resit examination. Due to timetabling constraints, if a student misses the OSCE then they will not be able to take the OSCE at another time and they will be given 0% for the OSCE component of the final grade.

Absence

If a student is absent for a practical session then they must discuss this with the course instructor and it is the student's responsibility to attend the practical session at another time. If a student is absent for more than 25% of the sessions then they may be liable to fail the course.

Cheating

Cheating is forbidden in any form. Any students who are caught cheating will be reported to the Medical Dean and further action taken as necessary.

Classroom Protocol:

Students are expected to attend all sessions and to arrive on time for lectures and practical sessions. It is each student's responsibility to know their timetable and which session they should attend on which day. Students are expected to behave respectfully towards all

members of staff and each other. Mobile phones are to be switched off during teaching sessions and eating, drinking and smoking are forbidden.

Important Dates to Remember:

Lectures will begin the first week of the semester.

Practical sessions will begin the second week of the semester.

The OSCE is usually timetabled for the last week of teaching in the semester.

The MCQ Examination is timetabled during the examination period.

Student rights and responsibilities:

These are as detailed in the University Regulations

Course Schedule:

Lecture 1	Introduction
Lecture 2	Initiating the Medical Interview
Lecture 3	Physical Examination
Lecture 4	Gathering Information in the Medical Interview
Lecture 5	The Patient's Perspective
Lecture 6	Building the Relationship in the Medical Interview
Lecture 7	Revision and Examination Instructions
Consultation Session 1	Initiating the Medical Interview
Consultation Session 2	Gathering Information in the Medical Interview
Consultation Session 3	The Patient's Perspective and Building the Relationship in the Medical Interview
Consultation Session 4	Providing Structure and Closing the Medical Interview
Physical Examination Session 1	General Physical Examination
Clinical Procedures Session 1	Hand washing, Pulses, Blood Pressure
Clinical Procedures Session 2	Respiratory Rate, Temperature, Relief of Choking, Cardiac Arrest

Course information:

Course title	First Aid
Course number	0111501108
Credit hours	3
Course date	June 2, 2013
Course meeting time	Summer, First Year
Course location	Allied Health Science Auditorium
Instructor	Dr. Nijmeh Al-Atiyyat Office Nursing Deanship Office Office hours: by appointment Phone: 053903333 ext. 5442 or 5441 E-mail: Nijmeh@hu.edu.jo

Course description:

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.

Learning outcomes:

By the end of the course, participants will be able to

- Deal with emergency situations
- Know the limits of basic first aid
- Familiarize themselves with First Aid regulations
- Be aware of the duties of the employer as to First Aid.

Instructional methods:

- lectures
- Group discussions and case scenarios between students
- Handouts
- Audio visual material
- Electronic resources
- Guest speakers

Text book and material:

See Instructor's Addendum

Grading Policy:

The School believes that evaluation is a vital part of the learning process and indicates whether the objectives have been met and to what degree.

The Faculty of Medicine has adopted the following grading scales:

Items	Grade
First exam	25% for the two groups
Second exam	25% for the two groups
Final exam	50%

Instructions for the required exams:

The students must attend the first, second, and final exam. The exam will measure the cognitive, attitude (affective), and the psychomotor dimensions. The questions include multiple choice questions, matching, and true or false questions. To help you doing better in the exams, all the objectives of each exam will be given to the students prior to the date of the exam.

Course Policies:

- **Plagiarism/Academic Dishonesty:** Plagiarism, cheating and/or fabrication will not be tolerated. They are serious offenses in this course.
- **Attendance:** In the outside world, attendance is not optional; therefore, in this course, attendance is mandatory, and we expect you to arrive on time to class.

We will abide by the University attendance policy, which can be found in the Hashemite University Undergraduate book 2007-2008 (p. 49).

- **Absences may be excused under the following conditions:** You must provide acceptable, written documentation of the reason for your absence within three days of the absence. Some examples of acceptable documentation include a dated physician's note, a dated traffic accident report, a dated hospital bill, etc. Providing documentation does not guarantee an absence will be excused. Work that will be missed for a known, excused absence must be turned in prior to the absence in order to receive credit. Any unexcused absence will affect your grade because you will not be allowed to make up the work missed. If you miss an exam or a scheduled in-class activity you will earn a zero (0) regardless of whether the absence is excused or unexcused.
- **Students with Special needs:** It is strongly recommended that students with disabilities should contact their course coordinator early in the semester to be able to provide them with resources and help when needed.

Important Dates to Remember:

The Start of the Course-First Trimester
First Exam
Second Exam
Final Exam

Course Schedule :

Topical Outline

Chapter	Content	Description
(Chapter 1)	Introduction	
(Chapter 2) Issues in Providing Care	Consent	Importance Gaining consent Other influences of consent
	Protective Precautions	Awareness of Danger Barrier Devices
	Legal Liability Critical Incident Stress & Victim Death Abuse & Neglect	
(Chapter 3) Primary Assessment & Basic Life Support	Scene Survey	Scene Survey Responsiveness Summary Calling For Help Treatment
	- A for Airway - B for Breathing	Principles Checking for breathing
	- C for Compressions	Principles Technique Making compressions effective When to Stop Obstructed Airway
	Summary of CPR	Area - check the area Awake - check level of consciousness Ambulance - call EMS Airway - open the airway Breathing - check for breathing

	D for Deadly Bleeding	Compressions - begin compressions Assessment Treatment
(Chapter 4) Secondary Assessment	Head-to-toe History Vitals	Who is this for? Priority of ABCs What is being looked for? The six areas Chief Complaint History of Chief Complaint Allergies Medical History & Medications Pain Assessment Important Information Onset Next of Kin Purpose Assessments
(Chapter 5) Circulatory Emergencies	External Bleeding Internal Bleeding Heart Attack & angina Stroke & TIA	Introduction Recognition Treatment Dressing Special cases Introduction Causes Recognition Treatment Introduction Recognition Treatment Recognition Treatment
First exam		
(chapter 6) Respiratory Emergencies	Anaphylaxis Asthma & Hyperventilation Obstructed Airway	Introduction Recognition Treatment Recognition Treatment Conscious Victims

		Unconscious Victims
(Chapter 7) Soft Tissue Injuries	Burns	Recognition Treatment
	Electrocution	Treatment
	Chest & Abdominal Wounds	Closed Chest Wounds Open Chest Wounds Abdominal Injuries
(Chapter 8) Bone & Joint Injuries	Fractures .	Introduction Recognition Treatment Femoral fractures
	Sprains, & Strains	Sprain or Fracture? Treatment
	Head & Facial Injuries	Head Injuries Injuries involving the eye
	Suspected Spinal Injuries	Recognition Treatment
Second exam		
(Chapter 9) Environmental Illness & Injury	Heat Illness & Injury	Heat Cramps Heat Exhaustion Heat Stroke
	Cold Illness & Injury	Frostbite Hypothermia
	Pressure-Related Illness & Injury Treatment Decompression Sickness (the Bends) Oxygen Toxicity Air Embolism	
(Chapter 9) Medical Conditions	Diabetes	Hypoglycemia (Insulin Shock) Hyperglycemia
	Seizure	Recognition Treatment
	Poisoning Absorption Inhalation Ingestion Injection	

(Chapter 10) Advanced Topics

- Wilderness First Aid
- Animal bites
- Extended Assessment
- Checking for underlying causes
- Additional tests for spinal injuries
- Airway Management
- Manual methods
- Oral Airways
- Bag-Valve-Mask (BVM)
- Suction Devices
- Oxygen Administration
- Nasal Cannula
- Bag-Valve-Mask
- Non-rebreathing Mask
- Pocket Mask
- Automated External Defibrillation
- D for Defibrillation
- Operation
- Basic Triage
- Simple Triage And Evacuation (START)



الجامعة الهاشمية
The Hashemite University

Course information:

Course title	General Biology I
Course number	110108105
Credit hours	3
Course date	September 8, 2013
Course meeting time	First Semester, First Year
Course location	Biology Building
Instructor	Dr. Emad Bsoul Office Room: Biology Building, Room 216 Office hours: Sundays and Tuesdays 10.0-10.0 / Mondays 11.0-12.0 Phone: 053903333 ext. 5124 E-mail: ebsoul@hu.edu.jo

Course description:

This course is an introductory course intended to introduce undergraduate first year medical students to a variety of subjects in biology. The course will provide an introduction to the basic concepts and themes of the study of life. Students are presented to an overview of biology to be able to analyze the basic concepts behind the major themes of biology and to outline the process of science in studying biology.

Learning outcomes:

Upon completion of this course, the student will be able to:

- Understand the concept of General Biology
- Recall foundational biological information necessary for entering post-baccalaureate school or entering a career in the biological sciences
- Understand cell structure, cell physiology, and molecular processes of cells
- Understand the principle of organismal physiology, evolution, and ecology
- Understand the relationship between cellular/molecular and supra-organismic principles

Instructional methods:

- Lectures-Power Point presentations
- Departmental hand-outs
- animations, educational movies, illustrations
- Self-readings

Text book and material:

Text book of Biology, N A Campbel and J B Reese.
Benjamin Cummings, San Francisco, 9th Edition, 2008.



الجامعة الهاشمية
The Hashemite University

Grading Policy:

First Exam (6th week): 25%
Second Exam (11th week): 25%
Final Exam (16th week) : 50%
Total Points 100

Course Policies:

Missed exams:

Students who are absent in any exam are allowed to sit a make-up exam after presenting an approved sick leave or any accepted certificate of absence to the assistant of the faculty dean within 72 hours. The Course Coordinator will determine the time of the exam make-up session. Also, according to the Curriculum Committee and the University regulations, the student will be given a similar examination given to the other students. All examinations must be made up within one week of returning to class. Those absents who do not present a clue will be given a zero mark.

Absence

Professionalism is a major component of our medical curriculum. We believe students should conduct themselves appropriately in the various educational activities of the curriculum. This conduct includes coming to educational activities on-time. The faculty should also demonstrate professionalism, by starting and ending all scheduled educational activities on time and providing a course schedule with clearly explained course policies in the course syllabus. Any changes in the schedule should be given to the students in a timely manner.

Students will be accountable and personally responsible for attending all educational activities (lectures, labs, examinations, etc.). Unexcused absences reflect negatively on the goals and objectives of the medical curriculum and demonstrate unprofessional behavior by the respective student.

Students are expected to attend all scheduled activities. Students are expected to be on time. Being on time is defined as being ready to start at the assigned time. If a student has an emergency that prevents her/him from attending a scheduled activity, s/he has to notify the Course Coordinator and present an approved sick leave or any accepted certificate of absence by the faculty dean assistant.

Attendance is mandatory. Students are expected to attend all scheduled activities. Students are expected to be on time. Being on time is defined as being ready to start at the assigned time. If a student has an emergency that prevents her/him from attending a scheduled activity, s/he has to notify the Course Coordinator and present an approved sick leave or any accepted certificate of absence by the faculty dean assistant.

Students who exceed the 15% limit without a medical or emergency excuse acceptable to and approved by the Dean of the faculty shall not be allowed to take the final examination and shall receive a mark of zero for the course. If the excuse is approved by the Dean, the student shall be considered to have withdrawn from the course.

Cheating:

Cheating will not be tolerated. Each individual student is responsible for his behavior and is expected to maintain standards of academic honesty and professionalism. If any instance of academic dishonesty (cheating, plagiarism, etc.) is discovered by a coordinator or an instructor, it is his or her responsibility to take appropriate action. Such action may include giving a failing grade to the student in the course and/or referring the student for Judicial Procedures Office review and possible disciplinary action, which may include disciplinary suspension or dismissal from the College.

Classroom Protocol:

Professionalism is a major component of our medical curriculum. We believe students should conduct themselves appropriately in the various educational activities of the curriculum. This conduct includes coming to educational activities on-time. The faculty should also demonstrate professionalism, by starting and ending all scheduled educational activities on time and providing a course schedule with clearly explained course policies in the course syllabus. Any changes in the schedule should be given to the students in a timely manner.

Students respond politely to faculty, staff, and student colleagues, exemplifying their maturity and empathy. Students agree to abide by appropriate biosafety practices when required.

All students are expected to be quiet in their seats in the lecture theatre before the start of the lecture. Engagement in class discussions is encouraged without side chatting.

Cell phones are not allowed to be used during lectures and exams unless prior approval has been taken from the course instructor.

Important Dates to Remember:

The Start of the Course-First Trimester

First Exam

Second Exam

Final Exam

Course Schedule :

Week	Topics	Chapter in Text
1+2	Carbon and the Molecular Diversity of Life Cycle	4
	The Structure and functioning of Macromolecules	5
3+4	The Structure and functioning of Macromolecules	5
5+6	A Tour of the Cell	6
6+7	Eid Al-Adha Almubarak	
	First Exam	
8	Membrane Structure and Function	7
9	An Introduction to Metabolism	8
10	An Introduction to Metabolism	8
	Cellular Respiration: Harvesting Chemical Energy	9
11	Cellular Respiration: Harvesting Chemical Energy	9
12	Photosynthesis	10
13	The Cell Cycle	12
14	Meiosis and Sexual Life Cycles	13
	Second Exam	
	The Molecular Basis of Inheritance	16
	From Gene to Protein	16
15	Plant Structure, Growth and Development	35
16	Final Exam	

Course information

Course title	General Anatomy
Course number	111501104
Credit hours	3 Credits
Course date	16 Weeks / Semester 2 / Year 1
Course meeting time	Sunday and Monday: Group 1: 8 – 9; Group 2: 9 – 10.
Course location	Room 301 and 302
Instructor	Dr. Raith A. S. Al-Saffar. E.mail : RaithAlSaffar@yahoo. Com

Course description:

1. The course begins with understanding; the definition and significance of anatomy and its subdivisions; the term of position and movements; and the regional term applied in the study of human gross anatomy.
2. The course introduces the basic structures encountered while dissecting a cadaver (skin, fascia, skeletal muscles, bones, joints, blood & lymphatic vessels, nervous system organization).
3. The course covers the main structures and functions of different body system; (Skeletal, muscular & Joints, CVS, Respiratory, GIT, Urinary, Male and Female Genital, and Nervous System).
4. The course covers the general embryology, which describe the development of embryo, fetal membrane, placenta and the causes of congenital malformations.

Learning outcomes:

1. The student should be familiar with the terms used in the study of anatomy.
2. The student should be familiar with basic knowledge concerning the main structures faced while dissecting a human cadaver.
3. The student should be oriented with the structures and their arrangement in each system of human body which helps him in building good basic anatomical knowledge for subsequent modules.
4. The student should be familiar with basic knowledge of general human embryology including the process fertilization, zygote formation, implantation, embryonic period, fetal membranes and placenta formation, and the main causes of congenital malformations.

Instructional methods:

- Lectures.
- Practical.

Text book and material:

Author	Title	Published Year
G.J. Tortora,	Principle of Human Anatomy.	Last edition.
R.S. Snell.	Clinical Anatomy for Medical Students.	Last edition
K.L. Moore and T.V.N. Persaud	Before we are born	Last edition
Frank H. Netter	Atlas of Human Anatomy	Last edition

Grading Policy:

Grades can be based on the following:

First Exam 30%.

Practical Exam 30%.

Final Exam 40%.

Total Points 100

Course Policies:**Late Assignments:**

Students must give an explanation to the course instructor for any assignment which is submitted late. It will be at the course instructor's discretion if marks will be deducted for late assignments..

Missed exam:

If a student misses an examination then they will have the opportunity for a make-up examination, according to the university regulations.

Absence:

If a student is absent for a teaching session then they must discuss this with the course instructor. If a student is absent for more than 25% of the course then he may be liable to fail the course.

Cheating:

Cheating is forbidden in any form. Any students who are caught cheating will be reported to the medical Dean and further action taken as necessary.

Classroom Protocol:

Students are expected to attend all sessions and to arrive on time for lectures and practical sessions. It is each student's responsibility to know their timetable and which session they should attend on which day. Students are expected to behave respectfully towards all members of staff and each other. Mobile phones are to be switched off during teaching sessions and eating, drinking and smoking are forbidden.

Important Dates to Remember:

Lectures will begin the first week of the semester.

Practical sessions will begin the second week of the semester.

The dates and locations of written and practical examinations will notified at the beginning of the semester.

Student rights and responsibilities:

These are as detailed in University Regulations.

Course Schedule :

After studying the material covered in the lectures, practical's, seminars and internet search regarding this study, the student is expected to express the following specific capacities:

Topic	General objective
General introductions	
Introduction to Human Anatomy	<ol style="list-style-type: none"> 1. Anatomical position. 2. Body planes, terms of position, and regional terms. 3. Body cavity. Subdivision & contents. 4. Levels of organization.
Axial Skeleton The Skull	<ol style="list-style-type: none"> 1. Outline the bones of axial skeleton. 2. Describe the general features of skull. 3. Introduce the bones of skull; sutures, fontanelles & their significances. 4. Describe briefly the cranial cavity and base of skull. 5. Outline important foramina of skull.
Axial Skeleton The Mandible, Vertebral Column, Sternum, and Ribs	<ol style="list-style-type: none"> 1. Describe the features of mandible. 2. Describe the general features of vertebral column. 3. Describe the structure and significance of inter- vertebral discs. 4. Outline the typical parts of the vertebra. 5. Describe briefly the main features of regional vertebrae, sacrum & coccyx. 6. Describe briefly the sternum and ribs.
Appendicular Skeleton Bones of Upper Limb	<ol style="list-style-type: none"> 1. Outline the bones of upper limb. 2. Describe the main features of clavicle, scapula & humerus. 3. Describe the features of ulna & radius. 4. Outline the general features and name of carpal bones. 5. Describe the features of metacarpal bones and phalanges.
Appendicular Skeleton Bones of Lower Limb	<ol style="list-style-type: none"> 1. Outline the bones of lower limb. 2. Describe the main features of bones of hip: ilium, ischium, & pubis. 3. Describe the main features of femur & patella. 4. Describe the features of tibia & fibula. 5. Outline bones of foot and arches of foot.
Muscular System	<ol style="list-style-type: none"> 1. Outline the types of skeletal muscle. 2. Outline the nomenclature of skeletal muscles. 3. Outline the type of actions of skeletal muscles.
Muscles of Scalp, Face, & Eye	<ol style="list-style-type: none"> 1. Outline the muscles of scalp & face. 2. Outline the muscles of mastication. 3. Outline the extra-ocular muscles of eye.
Muscles of the Neck	<ol style="list-style-type: none"> 1. Outline the main muscles of neck. 2. Outline the muscles of pharynx & larynx. 3. Outline the prevertebral muscles of neck.
Muscles of Thorax, Abdominal & Pelvic Walls	<ol style="list-style-type: none"> 1. Outline the muscles of thoracic wall. 2. Describe the diaphragm. 3. Outline the muscles of anterior abdominal wall. 4. Describe briefly the perineum.
Muscles of upper Limb	<ol style="list-style-type: none"> 1. Outline the main muscles of pectoral, shoulder, and scapular region. 2. Outline the muscles of arm, forearm, & hand.

Muscles of lower Limb	<ol style="list-style-type: none"> 1. Outline the muscles of the gluteal region & back of thigh. 2. Outline the muscles of anterior & lateral compartment of thigh. 3. Outline the muscles of leg. 4. Describe the popliteal fossa. 5. Outline the muscles of foot.
Body Joints	<ol style="list-style-type: none"> 1. Outline the type of body joints. 2. Outline the structure and types of synovial joints. 3. Outline the joints of upper limb (shoulder, elbow, radio-ulnar, wrist, and joints of hand). 4. Outline the joints of lower limb (hip, knee, ankle, and joints of foot).
Circulatory System	<ol style="list-style-type: none"> 1. Outline the parts of circulatory system. 2. Briefly describe the pericardium. 3. Briefly describe the heart (location, chambers, valves, blood supply).
Circulatory System	<ol style="list-style-type: none"> 1. Outline the great vessels of heart. 2. Outline the branches of aorta. 3. Outline the vessels of head & neck. 4. Outline the blood vessels of upper & lower limbs.
Respiratory System	<ol style="list-style-type: none"> 1. Outline the parts of respiratory system. 2. Outline the structure of nasal cavity, nasopharynx, paranasal sinuses. 3. Outline the larynx.
Respiratory System	<ol style="list-style-type: none"> 1. Describe briefly the trachea & bronchi. 2. Describe briefly the pleural sac. 3. Describe briefly the lungs.
Digestive System	<ol style="list-style-type: none"> 1. Outline the parts of digestive system. 2. Describe briefly the mouth & esophagus. 3. Outline the location, parts, openings, and borders of stomach, & peritoneal folds. 4. Introduce parts & functions of small bowel.
<u>First Examination (40 MCQ Written Exam.)</u>	
Digestive System	<ol style="list-style-type: none"> 1. Outline the parts, location and function of large intestine. 2. Outline the associated digestive glands (salivary glands, pancreas, liver & gall bladder and their functions).
Urinary System	<ol style="list-style-type: none"> 1. Outline parts of urinary system. 2. Briefly describe the location, gross structure & blood vessels of kidney. 3. Briefly outline the ureter, urinary bladder & male & female urethra.
Male Genital System	Outline the parts & functions of male genital system.
Female Genital System	Outline the parts & functions of female genital system.

Nervous System The cerebral hemisphere	<ol style="list-style-type: none"> 1. Outline the anatomical and functional parts of NS. 2. Outline the parts of CNS (brain & spinal cord). 3. Outline the meninges & ventricles of brain. 4. Outline the lobes & functions of cerebral hemisphere. 5. Outline the sulci, gyri & important functional areas. 6. Outline the other part of brain (thalamus, hypothalamus, midbrain, pons, medulla oblongata & cerebellum).
Nervous System The spinal cord	<ol style="list-style-type: none"> 1. Outline the general features of the spinal cord. 2. Outline its meninges. 3. Discuss the CSF and outline its function.
Nervous System The brain stem	<ol style="list-style-type: none"> 1. Outline the morphology of the medulla oblongata. 2. Outline the morphology of the pons. 3. Outline the morphology of the midbrain.
General Embryology – I	<ol style="list-style-type: none"> 1. Embryological terms (sperm, Oocyte, embryo, Zygote, implantation, conception, blastomeres, Morula, blastocyst, conceptus primordium, Fetus, abortion, labour). 2. Outline the process of spermatogenesis. 3. Outline the process of Oogenesis. 4. Describe the process of fertilization.
General Embryology – II	<ol style="list-style-type: none"> 1. Describe zygote cleavage, formation of blastocyst & implantation (1st week development). 2. Describe the 2nd week of development.
General Embryology – III	<ol style="list-style-type: none"> 1. Describe briefly the 3rd week of development of embryo. 2. Describe briefly the development of embryo from 4th – 8th weeks. 3. Describe fetal membranes & placenta. 4. Describe causes of congenital anomalies. 5. Outline procedures & techniques used to assess fetal status.

A. Practical Table

Week – 1

Introduction

Week – 2

Skull, vertebrae, sternum, and ribs

Week – 3

Skull, vertebrae, sternum, and ribs.

Week – 4

Bones of upper and lower limbs.

Week – 5

Muscles of the scalp, face, and neck.

Week – 6

Muscles of upper limb, and thoracic & abdomen wall.

Week – 7

Muscles of upper limb.

Week – 8

Muscles of lower limb.

Week – 9

CVS.

Week – 10

CVS.

Week – 11

Respiratory system.

Week – 12

Digestive system.

Week – 13

Urogenital system.

Week – 14

Practical Examination (second exam.)

Course information

Course title	General Biochemistry
Course number	111501107
Credit hours	3
Course date	July (Summer semester)
Course meeting time	July, First year medical students
Course location	Faculty of medicine lecture halls
Instructor	Prof. Muayad Mehdi Abboud Office Room: Faculty of medicine, Third floor, Department of medical sciences, Room 3017 Office hours: Sunday and Wednesday, 11.0-13.0 Phone: 053903333 ext. 5573 E-mail: muayadabboud@yahoo.com

Course description:

After presenting some preliminary principles of biochemistry in previous course of molecular biology, this comprehensive course will introduce medical students to more advance knowledge on biochemistry. At the beginning there is more emphasis on understanding enzymes as efficient biological protein catalyst, in addition to the factors which affect their activation and inhibition. Then students will learn the correlation between vitamins and coenzymes as well as some bioenergetics before they are introduced to the metabolism of human body. This part will cover the anaerobic and aerobic metabolism of carbohydrates, amino acids and protein metabolism, lipid metabolism and finally their integration which involves the coordination between these metabolic pathways under different nutritional states.

Learning outcomes:

Students will become acquainted with principles of basic biochemistry and body metabolism, as pre-request subjects needed for the subsequent introduction to the courses of clinical biochemistry in the modules.

Instructional methods:

- Lectures as power point presentations
- Departmental hand-outs
- Reference text books

Text book and material:

1. Lippincott's Illustrated Reviews: Biochemistry
2. Biochemistry by Campbell

Grading Policy:

First in-course exam (MCQ):	30 %
Second in-course exam (MCQ):	30 %
Final exam at end of the semester (MCQ):	40 %
Total Points	100

Course Policies:

Late Assignments

Students should give an explanation to the course instructor for any late submitted assignments. It will be at the course instructor's discretion if marks will be deducted for late assignments.

Missed exams:

Will be compensated later by make-up examination according to the university regulations.

Absence

Students are encouraged to make maximum attendance at lectures, but an absence of more than 25% from the course makes the student liable for a course failure.

Cheating:

Cheating is not tolerated and proved cases will be reported to the dean for further actions to be taken according to the university regulations.

Classroom Protocol:

Students are expected to stick to the fixed time table of sessions and behave politely during lectures attendance. Mobile phones should be switched off during the lecture period while eating, drinking and smoking are not allowed.

Important Dates to be remembered

- Lectures begin at first week of the semester.
- Dates of first, second and final examinations will be notified at the beginning of the semester.

Students rights and responsibilities

These are detailed in the University regulations

Course Schedule :

Introduction to biochemistry	1. What is biochemistry? 2. Outlines of biochemistry application in medicine
Enzymes I	1. Understanding enzyme as a catalyst 2. The catalytic cycle 3. How enzymes accelerate cellular reactions? 4. The basis of enzyme classifications 5. Exploring the factors affecting the rate of enzymic reaction
Enzymes II	1. Effect of substrate concentration on rate of enzymic reaction 2. Understanding enzyme kinetics 3. Michaelis-Menten equation 4. What are K_m and V_{max} values? 5. Enzyme activation and inhibition 6. Irreversible and reversible inhibitors 7. Kinetics of reversible inhibitors
Enzymes III	1. What are isozymes? 2. Application of isozymes in diagnosis 3. Control of enzyme activity a. Allosteric regulation b. Covalent modification
Enzymes cofactors	1. Inorganic cofactors 2. Coenzymes a. Thymine pyrophosphate b. Flavin c. Nicotinamide d. Pyridoxal phosphate e. Cobalamin f. Tetrahydrofolate g. Biotin h. Ascorbic acid
Bioenergetics	1. Potential and kinetic energy 2. Laws of thermodynamics 3. Gibbs free energy 4. Exergonic and endergonic reactions 5. High energy compounds 6. Energy coupling
Introduction to Metabolism	1. Definition of metabolism 2. Anabolism and catabolism 3. Autotrophic versus heterotrophic nutrition 4. Human as heterotrophic nutritional organism
Carbohydrates metabolism I Anaerobic metabolism	1. Glycolysis a. First phase b. Second phase

	2.Pentose phosphate pathway 3.Metabolism of non-glucose sugars a.metabolism of fructose. b.metabolism of galactose c.metabolism of glucuronic acid 3.Glycogen metabolism a. Glycogen synthesis b. Glycogen breakdown
Carbohydrates metabolism II Aerobic metabolism	1.Gluconeogenesis Synthesis of glucose from lactate, amino acids and glycerol 2. Krebs cycle 3.Electron transport and oxidative phosphorylation 4.Inhibitors of electron transport and oxidative phosphorylation
	Mid-term exam
Lipids metabolism	1.Fatty acids metabolism a. Fatty acid synthesis b .Fatty acid catabolism 2. Cholesterol synthesis 3. Eicosanoids synthesis from fatty acids
Amino acids metabolism	1.Synthesis of non-essential amino acids 2.Catabolism of amino acids 3.Nitrogen metabolism and urea cycle 4.Heme synthesis from glycine and succinyl-CoA
Integration of metabolism	1. Coordination between metabolic pathways under different nutritional states. 2. Central junction points in metabolism 3.Amphipathic pathways

Learning Objective

At the end of this course student should be able to understand:

- Relationship between structure and functions of biochemical molecules
- Water soluble but not fat soluble vitamins are precursors of coenzymes.
- Why human body prefer aerobic metabolism over anaerobic metabolism
- Why carbohydrates can be converted to fats inside the body, but the reverse pathway does not take place.
- Why metabolic pathways are varied according to the body nutritional state.

Course information:

Course title	Health Economics
Course number	111500103
Credit hours	2 hours / Theory
Course date	September- December(first Semester)
Course meeting time	Variable
Course location	Faculty of Medicine
Instructor	Assistant professor Dr Eman A. Al- Kamil Office No: 3034 phone:5568 Office Hours : Sunday 12-2 / Tuesday 12-1 / Thursday 12-1 E-mail: emanadnan@ hu.edu.jo

Course description:

Against a background of increasing demands on limited resources, health economics is exerting an influence on decision making at all levels of health care. Health economics seeks to facilitate decision making by offering an explicit decision making framework based on the principle of efficiency. It is not the only consideration but it is an important one and practitioners will need to have an understanding of its basic principles and how it can impact on clinical decision making. This course is based to review some of the basic principles of health economics and in particular economic evaluation.

This course is specifically designed to enable the medical student to understand the principles of health economic that drive the demand for and supply of medical care in Jordan. After completing this course, the student should be able to understand the logic behind decisions made by physicians, hospitals, managed care organizations, and government as well as the choices made by consumers on individual and aggregate levels. The ultimate goal is for students to become better equipped at becoming effective decision-makers, themselves. Emphasis will be placed throughout the course on empirically sound and well-grounded economic theory; however applications of such theory in real situations that have occurred and/or predicted to occur in the future will be illustrated.

Learning outcomes:

1. After the end of the course, the student should be able to answer the following questions:

- What is health and how do we put a value on it?
- What influences health other than health care?
- What are the health needs of the individuals and the population?
- What influences the demand for health care and health care seeking behaviour?
- What influences the supply of health care? (The behaviour of doctors and health care providers.)
- Alternative ways of production and delivery of health care.
- Planning, budgeting, and monitoring of health care.

- Economic evaluation—relating the costs and benefits of alternative ways of delivering health care.
1. The course will shed the lights on the implications of studying health economics (why)?
 2. Shed the light on determinants of health.
 3. Differentiate between changes in “demand” and changes in “quantity demanded ” and identify factors which may facilitate changes in either. .
 4. Define the following terms: fixed cost, variable cost, marginal cost, marginal analysis, opportunity cost, and universal cost.
 5. Identify factors which affect the demand for medical care; predict the effect of certain occurrences (i.e., changes in income, recession, shifts in insurance policy) on the demand for medical care.
 6. Identify paying methods of health care providers
 7. Understand methods of economic evaluation.
 8. Understand health care financing.
 9. Identify health service financing in Jordan
 10. Understand globalization and health
 11. Discuss health worker migration

Instructional methods:

Lectures are the main method of teaching the course.

Text book and material:

1. Introduction to health economics
Author: Wonderling, David. Gruen, Reinhold. Black, Nick. .
Publisher: Open University Press,
Publication Date: 2005.
2. Selected articles and handout documents on health economic issues (will be available to students as paper or electronic versions).

Grading Policy:

1. First Exam	MCQ	30%
2. Second Exam	MCQ	30%
3. Final Exam	MCQ	40%
Total points		100

Course Policies:

Late Assignments

Students must give an explanation to the course instructor for any assignment which is submitted late. It will be at the course instructor's discretion if marks will be deduced for late assignments.

Students are responsible for satisfying all academic objectives. Acceptable reasons for absence from class include illness, serious family emergencies, severe weather conditions and participation in official university activities.

Missed exams

If students are absent for a reason approved above and have given prior notification to the instructor when possible, they will have to take part in the reset exams within one week after the missed exam. All other missed will receive grade of zero.

Absence

If a student is absent for more than 25% of the sessions then they may be liable to fail the course.

Cheating

Cheating is forbidden in any form. Any students who are caught cheating will be reported to the Dean of the Faculty of Medicine and further action taken as necessary.

Classroom Protocol:

- Students are expected to attend all sessions and to arrive on time for lectures.
- Turn off all cell phones upon entering the classroom.
- Students may be engaged in class discussions and encourage the students to ask and/or answer questions of the instructor, keep side conversation to minimum.
- No drinks or food allowed in the classroom.
- Smoking is prohibited in the classroom.
- Cell phones are not allowed during exams.

Important Dates to Remember:

First Exam

Second exam

Final exam

Student rights and responsibilities:

These are as detailed in the University Regulations

Course Schedule :

Lectures 1-6

1. Basic definitions and terminology; definitions of the following:
 - What is economics?
 - What is "Health"?
 - What is "Health Economics"?
 - What is Health care?
 - Levels of Health Care
 - Health care system
 - Why Health Economics?
2. Health economics 'map'
3. Types of health care

4. Scope of health economics

- Why Health Economics?
- Demand for health
- Need for health
- Supply of health
- Law of demand
- Law of supply
- Supply and Demand Relationship
- Disequilibrium

Lectures 7-12

5. Healthcare Economic Terms

- Medical Care Cost
 - Accounting Costs
 - Fixed cost
 - Variable cost
 - Social cost
 - Opportunity cost
 - Marginal cost
- Macroeconomic
- Microeconomic

6. Paying for Care

7. Paying methods of health care providers

8. The impact of financing

9. The Role of the Health Care Consumer

10. Paying methods for health care and health care providers

11. Methods of Economic Evaluation:

- Cost-minimisation analysis (CMA).
- Cost-effectiveness analysis (CEA).
- Cost-benefit analysis (CBA)
- Cost-utility analysis (CUA).

First Exam

Lectures 13- 24

12. Health care finance:

- Methods of financing
- Universal coverage
- Health service financing source

13. The Health System in Jordan

- Health sectors in Jordan

- Councils and organizations
- Sources of Health Care Financing
- Health financing functions
 - i. Revenues collection mechanism:
 - ii. Pooling mechanism
 - iii. Purchasing mechanism
- The major challenges facing Jordan in reaching efficient universal health coverage.

14. Globalization and Health

- Globalization and disease
- Global natural environment
- Global workforce
- The Changing Global Health landscape
- Medical tourism :Globalization of the Healthcare Marketplace

Second Exam

Lectures 25-32

15. Health Worker Migration

- Motives for migration
- Causes of migration
- Impact of migration
- Scope of migration
- Negative effects of health worker migration
- strategies to combat HRH migration and shortages
- World Health Organization response
- Measuring migration
- Managing migration

Final Exam

Course information:

Course Title	Health Policy
Course number	111500104
Credit hours	2 hours / Theory
Course Date	September- December(first Semester)
Course meeting time	Variable
Course location	Faculty of Medicine
Instructor	Assistant professor Dr Eman A. Al- Kamil Office 3034 phone:5568 e-mail: emanadnan@ hu.edu.jo Office Hours : Sunday 12-2 / Tuesday 12-1/ Thursday 12-1

Course Description:

Those of us who have been concerned with medical care, its quality, cost, and access, have always tended to think of it as an undifferentiated good, with a need defined by levels of disease in the population. It is important to display the importance of the changes in the trends or pattern of diseases which will require continuous changes in the trends or pattern of health care as a dynamic process, consequently it implies the continuous changes in the health policies and programmes accordingly.

Many of the faculties of Medical Colleges have already been involved in teaching this subject of health policy and programme. The faculty of Medical College of the Hashemite University started to involve this subject in the curriculum of the first year. A simple framework that shows how medical faculty can play a role in development of basic knowledge in health policy making and programmes. We will discuss this framework in details with a special reference to health policy making and health laws in Jordan.

Building goal-oriented teaching programme to build the capacity of medical students to understand the concepts and principles of health policy making and to perceive that health policy making is an important activity as it helps translate planning functions of health care into actions .

Learning outcome:

At the end of the course, the students are able:

1. To elaborate the implications of studying health policy making.
2. To shed the light on the effects of Health Transition on health needs
3. To shed the light on the effects of Demographic Transition on health needs
4. To describe the different types of population pyramid and its implications on health care needs.
5. To elaborate what is a health policy? What is the process of its development?
6. To shed the light on Global health and Global health policies.
7. To be familiar with Health System organization in Jordan and the different factor that affect policy making process in Jordan.

8. To familiarize students with Public Laws in Jordan.
9. To identify health policy concerns and priorities related to major health system topics.
10. To provide students with basic knowledge of legal principles and regulatory programs applicable to the provision of health care.

Instructional methods:

Lectures are the main method of teaching the course.

Textbooks and material:

1. Making health policy, Author: Buse, Kent. Mays, Nicholas. Walt, Gillian.
Publisher: Open University Press,
Publication Date: 2005.
2. Selected articles and handout documents on health policy issues (will be available to students as paper or electronic versions).

Grading policy:

- | | |
|-----------------------|-----|
| 1. 1. First Exam MCQ | 30% |
| 2. 2. Second Exam MCQ | 30% |
| 3. 3. Final Exam MCQ | 40% |
| 4. Total points | 100 |

Course Policies:

Late Assignments

Students must give an explanation to the course instructor for any assignment which is submitted late. It will be at the course instructor's discretion if marks will be deducted for late assignments.

Students are responsible for satisfying all academic objectives. Acceptable reason for absence from class include illness, serious family emergencies, severe weather conditions and participation in official university activities.

Missed exams

If students are absent for a reason approved above and have given prior notification to the instructor when possible, they will have to take part in the reset exams within one week after the missed exam. All other missed will receive grade of zero.

Absence

If a student is absent for more than 25% of the sessions then they may be liable to fail the course.

Cheating

Cheating is forbidden in any form. Any students who are caught cheating will be reported to the Dean of the Faculty of Medicine and further action taken as necessary.

Classroom Protocol:

- Students are expected to attend all sessions and to arrive on time for lectures.
- Turn off all cell phones upon entering the classroom.
- Students may be engaged in class discussions and encourage the students to ask and/or answer questions of the instructor, keep side conversation to minimum.
- No drinks or food allowed in the classroom.
- Smoking is prohibited in the classroom.
- Cell phones are not allowed during exams.

Important Dates to Remember:

First Exam

Second exam

Final exam

Student rights and responsibilities:

These are as detailed in the University Regulations

Course Schedule :

Lecture 1-6

1. Introduction

Course Terminology or basic definitions

Introduction to Health Policy

Health Transition

Definition

Causes

Importance

Demographic Transition

Definition

Causes

Importance

Demographic transition model

Definition

Stages of Demographic Transition

Epidemiologic Transition

Definition

Causes

Implications

Population pyramid

Types of population pyramids

Uses of population pyramids

Lecture 7-12

2. Health Policy

- Health care system
Definition
- Health Care Administration
Definition and functions
- Planning in Health care
 - General principles in planning
 - Population-based planning
 - Resource-based planning
- Health Policy making
 - Definition
 - Implications for Health Policy - Making
 - Health Policy Priorities
 - Health care policy
 - Personal health care policy options
 - Health care financing policy

First Exam

Lecture 13 -24

3. Global health

- History
- Disciplinary perspectives
- Measurement
 - Life expectancy
 - Disability adjusted life years
 - Quality adjusted life years
 - Infant and child mortality
 - Morbidity
- Health conditions
 - Respiratory diseases and measles
 - Diarrhoeal diseases
 - Maternal health
 - HIV/AIDS
 - Malaria
 - Nutrition and micronutrient deficiency
 - Surgical disease burden
 - Health Care Workforce
 - Chronic disease
- Health interventions

4. Global Health Priorities

- Global health policy actors
- Priority setting in health policy making
- Priority Agenda for the 21st Century
- Approaches for improved global health

Second exam

Lecture 25-32

5. Health system organization in Jordan

- Health Priorities and programmes
 - i. Primary Healthcare
 - ii. Human Resources Management
 - iii. Secondary and Tertiary Care
 - iv. Monitoring and Control
 - v. Knowledge Management
 - vi. Priorities for the Health Sector
 - Human resources development reforms
 - Health Promotion / Lifestyle
 - Child health
 - Maternal health
 - Family planning
 - Drug Safety Drug Quality Control
 - Food safety and food control

6. Public Health Law in Jordan

- Review and Analysis of Public Health Law in Jordan
- Review of Selected Health legislations in Jordan (part 1)
- Review of Selected Health legislations in Jordan (part 2)

Final Exam

Course information:

Course title	Medical Ethics
Course number	0111501103
Credit hours	1 hour/ Theory
Course date	September- December (first Semester)
Course meeting time	Variable
Course location	Faculty of Medicine
Instructor	Assistant professor Dr Eman A. Al- Kamil
	Office No: 3034 / phone:5568
	Office Hours : Sunday 12-2 / Tuesday 12-1/ Thursday 12-1
	E-mail: emanadnan@ hu.edu.jo

Course description:

The medical profession since time immemorial has conducted itself with a high level of ethical behavior that has earned the trust that patients have in doctors today. Medical ethics is defined, as a civil code of behavior considered correct by members of the profession for the good of both the patient and profession. This trust goes beyond written words and leads the public at large to expect of the doctor to have not only a high standard of medical ability and skill but also impeccable behavior. The need for patient's trust in his doctor is the basis for ethical codes from many centuries ago as manifested in the traditions of all the major civilizations. In recent times, national, regional and world associations of doctors as well as other health care professionals have revised existing codes of ethics and formulated new ones to keep up with advances in medical knowledge, medical practice and research as well as changes in society. All doctors subscribe to the spirit of caring and confidentiality that regulate the doctor-patient relationship and these values continue to be accepted by all those who practice the art of medicine.

A new doctor entering the profession of medicine joins a fraternity dedicated to the service of humanity. He will be expected to subordinate his personal interests to the welfare of his patients, and, together with his fellow practitioners seek to raise the standard of health in the community where he practices. He inherits traditions of professional behavior on which he must base his own conduct, and which he must pass on untarnished to his successors. This course is an introduction to medical ethics. The first part of the course provides an introduction to basic ethical issues, codes & principles, which are intended to serve as a background aid for thinking through the particular issues discussed in the remainder of the course.

Learning outcomes:

At the end of the course, students should acquire, think and behave according to the ethical issues and codes, and they will be:

1. Able to discuss different Codes of ethics in different subjects and correlate these codes with everyday practice.
2. Able to discuss and involve the principles of medical ethics in everyday practice.

3. Able to discuss and identify the common ethical issues in different medical subjects.
4. Able to discuss major bioethical issues ; and
5. Appreciate medicine as a profession.
6. Able to understand the ethical issue of patient –doctor relationship.
7. Able to understand the different types of patients' personality and the ways of dealing with each type.
8. Aware of different types of communication styles with patients.

Instructional methods:

Lectures are the main method of teaching the course.
Case studies and discussion.

Text book and material:

1. Law & ethics for medical careers / Law and ethics for medical careers
Author: Judson, Karen, 1941-
Hicks, Sharon, 1953- JT. AUTH.
Publisher: Glencoe/McGraw-Hill,
Publication Date: 2003.
2. Selected articles and handout documents on medical ethics issues (will be available to students as paper or electronic versions).

Grading Policy:

1. First Exam MCQ	30%
2. Second Exam MCQ	30%
3. Final Exam MCQ	40%
Total points	100

Course Policies:

Late Assignments

Students must give an explanation to the course instructor for any assignment which is submitted late. It will be at the course instructor's discretion if marks will be deducted for late assignments.

Students are responsible for satisfying all academic objectives. Acceptable reasons for absence from class include illness, serious family emergencies, severe weather conditions and participation in official university activities.

Missed exams

If students are absent for a reason approved above and have given prior notification to the instructor when possible, they will have to take part in the reset exams within one week after the missed exam. All other missed will receive grade of zero.

Absence

If a student is absent for more than 25% of the sessions then they may be liable to fail the course.

Cheating

Cheating is forbidden in any form. Any students who are caught cheating will be reported to the Dean of the Faculty of Medicine and further action taken as necessary.

Classroom Protocol:

- Students are expected to attend all sessions and to arrive on time for lectures.
- Turn off all cell phones upon entering the classroom.
- Students may be engaged in class discussions and encourage the students to ask and/or answer questions of the instructor, keep side conversation to minimum.
- No drinks or food allowed in the classroom.
- Smoking is prohibited in the classroom.
- Cell phones are not allowed during exams.

Important Dates to Remember:

First Exam

Second exam

Final exam

Student rights and responsibilities:

These are as detailed in the University Regulations

Course Schedule :

Lectures 1-6

1. Introduction
 - System governing human social behaviour
 - Socialization - Primary Socialization
 - Secondary Socialization
 - Why Ethics Become Important?
 - Aims of teaching medical ethics.
 - Basic Rights and Ethical Duties
 - Definition and scope of medical ethics.
1. Historical background of medical ethics.
2. Theories of medical ethics.
3. Declaration and Codes of medical ethics:
 - a) Hippocratic oath
 - b) Geneva(1947)
 - c) London 1949, revise 1968, 1983

- d) Helsinki (1946 revised 1975 and 1983)
 - e) Lisbon(1981)
 - f) Sydney(1968)
 - g) Oslo (1970) revised 1983
 - h) Tokyo(1975)
 - i) Hawaii (1977 revised in 1983)
 - j) Venice (1983)
4. Principles of medical ethics.
- A. The Principle of Non-Maleficence
 - B. The Principle of Beneficence
 - C. The Principle of Autonomy
 - a. Telling the truth.
 - b. Informed consent.
 - c. Confidentiality.

First Exam

Lectures 7-12

- D. The Principle of Justice
 - d. Fairness
 - e. Discrimination in medicine
 - f. Allocation of resources
5. Different issues in medical ethics :
- A. Biomedical research
 - B. Use of computer in medicine.
 - C. Patients right to privacy.
 - D. End of Life Issues
 - E. Abortion
 - F. Ethical Issues in the Treatment of Seriously Disabled Children
6. Patient -Doctor relationship
- Types of Patient -Doctor relationship
 - Privileged access
 - Importance of interpersonal aspect
 - Communication styles
 - Personality types

Second Exam

Lectures13-16

7. Medicine as a profession
 - a. Professional ethics
 - b. Profession & social Mobility
8. Medical education
9. Euthanasia and Physician Assisted Suicide

Final Exam

Course information:

Course title	Molecular Biology And Histology
Course number	0111501105
Credit hours	3 hours
Course date	First year – 2nd Semester (12 weeks)
Course meeting time	Variable
Course location	Faculty of Medicine Lecture halls 301 and 302
Instructor	Dr. Moayed Abboud – Molecular Biology (Faculty of Medicine – Room 3017) Dr. Mustafa Saad Yousuf – Histology (Faculty of Medicine – Room 3019)

Course description:

Histology is one of the basic medical courses. Histology is the science for researching normal microscopic structures, ultra structures and their related function. Through class lectures and lab sessions, the students will be made to master the basic knowledge and theory of human histology. Students are also encouraged to train themselves to use the microscope correctly and to refine their abilities to analyze and describe various histological structures.

In Molecular Biology, the students are taught about the relationship between macromolecules structure and properties and their biological functions inside the cells.

Learning outcomes:

1. To describe the methods of tissue preparation for microscopic examination.
2. To list and understand the different types of light and electron microscopes.
3. To describe different histological techniques used in the study of tissues.
4. To recognize the structure, types & functions of the four basic types of tissues (epithelium, connective tissue, muscular and nervous tissues).
5. Explain why a certain cell or tissue has a particular appearance.
6. Relate features of various cells and tissues to their functions and vice versa.
7. Understand the basic chemistry of sugars, lipids, amino acids and proteins.
8. Understand basic concepts of nucleoproteins and sugar proteins.
9. Know about cell membrane structure and functions.

Instructional methods:

1 Histology lecture / week
1 Molecular biology lecture / week
1 Histology Lab session / week

Text book and material:

Histology:

- 1) Basic Histology, text & atlas; L C Junqueira & J Carneiro, 12th edition or latest, McGraw-Hill Medical Publishing Division.

Molecular Biology:

- 1) Essential Molecular biology. 4th edition or latest. Malacinsk, George M. Jones and Bartlett, 2003.
- 2) Molecular biology of the Cell. 4th edition or latest. Alberts, Bruce; Johnson, Alexander; Lewis, Julian; Raff, Martin; Roberts, Keith and Walter, Peter. New York, Garland Publishing 2002.
- 3) The Cell – a Molecular Approach. 2nd edition or latest. Cooper, Geoffrey; M. Sunderland (MA): Sinauer Associates Inc. 2000.

Grading Policy:

- Midterm: 40% (Theory – Molecular Biology and Histology)
- Practical Exam: 20% (Histology)
- Final Exam: 40 % (Theory – Molecular Biology and Histology)

Total Points 100

Course Policies:

Late Assignments

Students must give an explanation to the course instructor for any assignment which is submitted late. It will be at the course instructor's discretion if marks will be deducted.

Missed exams

If a student misses an examination then he/she has the opportunity to do a make-up examination, according to the University Regulations.

Absence

If a student is absent for a teaching session then he/she must discuss this with the course instructor. If a student is absent for more than 25% of the course then he/she may be liable to fail the course.

Cheating

Cheating, in any form, is forbidden. Any student caught cheating will be reported to the Dean of Medicine and further action taken as necessary.

Classroom Protocol:

Students are expected to attend all sessions and to arrive on time for lectures and practical sessions. It is each student's responsibility to know their timetable and which session they should attend on which day. Students are expected to behave respectfully towards all members of staff and to each other. Mobile phones are to be switched off during teaching sessions. Eating, drinking and smoking are forbidden.

Important Dates to Remember:

- Course begins: 1st week of the semester
- Lab sessions begin: 2nd week of semester
- Practical Exam: Date and location will be determined at the beginning of the semester
- Final Exam: Date and location will be determined at the beginning of the semester

Student rights and responsibilities:

These are detailed in the University Regulation.

Course Schedule :

Molecular Biology Lectures

Lecture	Specific Objectives
Lecture 1: Introduction	<ol style="list-style-type: none"> 1) Understand the chemistry of living cell 2) Know the relationship between biochemistry and molecular biology
Lecture 2: Basic Chemistry of Sugars	<ol style="list-style-type: none"> 1) Compare between Monosaccharides, oligosaccharides and polysaccharides. 2) Understand the structure and properties of these molecules. 3) Understand the functions of various carbohydrates.
Lecture 3: Basic Chemistry of Amino Acids and Proteins	<ol style="list-style-type: none"> 1) Classify the common amino acids. 2) Know their biological functions. 3) Obtain knowledge about some important oligopeptides. 4) Understand the biochemistry of proteins.
Lecture 4: Basic chemistry of Lipids	<ol style="list-style-type: none"> 1) Enumerate the different types of lipids. 2) Understand their structure and functions.
Lecture 5: Nucleoprotein complexes	<ol style="list-style-type: none"> 1) Introduction to viruses. 2) Understand basic structure of chromatin and chromosomes.
Lecture 6: Sugar- protein complexes	<ol style="list-style-type: none"> 1) Know about proteoglycans in connective tissues. 2) Obtain basic information about bacterial cell wall.
Lecture 7: Cell Membrane	<ol style="list-style-type: none"> 1) Understand the structure and function of cell membrane. 2) Know the type of membrane transports. 3) Understand the types and functions of receptors.

Histology Lectures

Week	Specific Objectives
Lecture 1: Introduction	<ol style="list-style-type: none"> 1) Understand the steps of tissue preparation in histological studies and the principles behind them. 2) Understand the principles of various types of microscopes. 3) Know some specific methods of histological studies and how they work. 4) Identify problems with tissue preparation.
Lecture 2: Epithelium I (Definition + Classification)	<ol style="list-style-type: none"> 1) To describe the general features & characteristics of epithelium. 2) To understand the basic structure & functions of Basal Lamina and it differs from Basement Membrane. 3) Enumerate the types of epithelium and the bases of their classification.
Lecture 3: Epithelium II (Epithelial cell polarity)	<ol style="list-style-type: none"> 1) Define epithelial cell polarity. 2) List and differentiate between the types of cellular junctions. 3) Identify the types of apical surface specialization. 4) Know the basal surface specialization. 5) Understand why each of these features is present.
Lecture 4: Connective Tissue I (Definition + Cells)	<ol style="list-style-type: none"> 1) Define connective tissue. 2) Enumerate the various types of cells that are present in this tissue. 3) Understand the histological features and functions of each type.
Lecture 5: Connective Tissue II (ECM + Fibers + Classification)	<ol style="list-style-type: none"> 1) Define the extracellular matrix and understand its main components. 2) Enumerate the different types of fibers in the connective tissues and understand the function of each. 3) Differentiate between the various types of connective tissue proper.
Lecture 6: Connective Tissue III (Adipose tissue)	<ol style="list-style-type: none"> 1) Define Adipose tissue and know its functions. 2) List the features of adipose cells and the importance of each. 3) Understand the difference between white and brown adipose tissue.
Lecture 7: Connective Tissue IV (Cartilage)	<ol style="list-style-type: none"> 1) Enumerate the types of cartilage. 2) Know the general location of each type. 3) Understand the histological features and function of each type.
Lecture 8: Connective Tissue V (Bone)	<ol style="list-style-type: none"> 1) Define bone. 2) List the main functions of bones. 3) Understand the features and functions of the cells in bone tissue. 4) Differentiate between various types of bone.

Lecture 9: Nervous Tissue I (Neurons + Glia cells)	<ol style="list-style-type: none"> 1) Understand the main features of nervous tissue. 2) Know the main features and characteristics of neurons. 3) Enumerate the various types of glia cells. Know their location and understand their function.
Lecture 10: Nervous Tissue II	<ol style="list-style-type: none"> 1) Describe the cerebral cortex and the cells it contains. 2) Describe the layers of the cerebellar cortex and the cells each one contains. 3) Enumerate the structures that form the blood-brain barrier. 4) Understand the structure of nerves. 5) Understand the structure of ganglia.
Lecture 11: Muscular Tissue	<ol style="list-style-type: none"> 1) Understand the features of skeletal muscles. 2) Understand the features of cardiac muscles. 3) Understand the features of smooth muscles.

Histology Labs

Labs	Specific Objectives
(1)	Epithelium
(2)	Epithelium II + Connective Tissue I
(3)	Connective Tissue II
(4)	Nervous Tissue I
(5)	Nervous Tissue II + Muscle
(6)	Review Lab

Course information

Course title	Essentials of Organic Chemistry for Medical Students
Course number	0110103237
Credit hours	3
Course meeting time	Second Semester, First Year
Course location	Eastern Theater
Instructors	Dr. Emad Hamed and Dr. Abdulla Saleh Office Room: Chem 106 and Chem 202 Office hours: Dr. Hamed - Sundays Tuesdays and Thursdays 10.0-11.0 Dr. Saleh - Tuesdays and Thursdays 11.30-1.0 Phone: 053903333 ext. 5161 and 4739 E-mail: hamed@hu.edu.jo // a-saleh@hu.edu.jo

Course description:

This course is an introductory course intended to introduce undergraduate medical students to the basic principles of organic chemistry. The first part of the course will cover the fundamental aspects of structural organic chemistry to familiarize the medical students the main families of organic chemistry functions as well as the 3D structure of organic molecules. The basics of reactivity will also be covered using the mechanisms. The course will be frequently illustrated with examples linked to other scientific disciplines, in particular to the field of life sciences.

Learning outcomes:

Upon completion of this course, the student will be able to:

- Understand the concept of Bonding and isomerism
- Understand the concept of Alkanes and Cycloalkanes
- Differentiate between alkenes and alkynes
- Understand the structure and function of aromatic compounds
- Understand stereoisomerism and organic halogen compounds
- Understand the structure and function of alcohols, phenols, Thiols, ethers and epoxies
- Differentiate the structure and reactions of aldehydes and ketones as well as carboxylic acid
- Understand the concept of amines

Instructional methods:

- Lectures-Power Point presentations
- Solved examples to be done traditionally on the board
- Overhead transparencies may be used for complex molecules

Text book and material:

- Organic Chemistry A Brief Course, Harold Hart, Leslie Craine, David Hart and C. Hadad, 13th Edition, 2011. Houghton Mifflin Company, Boston, USA.
- Organic Chemistry, 8th Edition. By Solomon, 2004.
- Organic Chemistry, J. McMurry, 2004.

Grading Policy:

First Exam: 25%
Second Exam: 25%
Final Exam: 50%
Total Points 100

Course Policies:

Missed exams:

Students who are absent in any exam are allowed to sit a make-up exam after presenting an approved sick leave or any accepted certificate of absence to the assistant of the faculty dean within 72 hours. The Course Coordinator will determine the time of the exam make-up session. Also, according to the Curriculum Committee and the University regulations, the student will be given a similar examination given to the other students. All examinations must be made up within one week of returning to class. Those absents who do not present a clue will be given a zero mark.

Absence

Professionalism is a major component of our medical curriculum. We believe students should conduct themselves appropriately in the various educational activities of the curriculum. This conduct includes coming to educational activities on-time. The faculty should also demonstrate professionalism, by starting and ending all scheduled educational activities on time and providing a course schedule with clearly explained course policies in the course syllabus. Any changes in the schedule should be given to the students in a timely manner.

Students will be accountable and personally responsible for attending all educational activities (lectures, labs, examinations, etc.). Unexcused absences reflect negatively on the goals and objectives of the medical curriculum and demonstrate unprofessional behavior by the respective student.

Students are expected to attend all scheduled activities. Students are expected to be on time. Being on time is defined as being ready to start at the assigned time. If a student has an emergency that prevents her/him from attending a scheduled activity, s/he has to notify the Course Coordinator and present an approved sick leave or any accepted certificate of absence by the faculty dean assistant.

Attendance is mandatory. Students are expected to attend all scheduled activities. Students are expected to be on time. Being on time is defined as being ready to start at the assigned time. If a student has an emergency that prevents her/him from attending a scheduled activity, s/he has to notify the Course Coordinator and present an approved sick leave or any accepted certificate of absence by the faculty dean assistant.

Students who exceed the 15% limit without a medical or emergency excuse acceptable to and approved by the Dean of the faculty shall not be allowed to take the final examination and shall receive

a mark of zero for the course. If the excuse is approved by the Dean, the student shall be considered to have withdrawn from the course.

Cheating:

Cheating will not be tolerated. Each individual student is responsible for his behavior and is expected to maintain standards of academic honesty and professionalism. If any instance of academic dishonesty (cheating, plagiarism, etc.) is discovered by a coordinator or an instructor, it is his or her responsibility to take appropriate action. Such action may include giving a failing grade to the student in the course and/or referring the student for Judicial Procedures Office review and possible disciplinary action, which may include disciplinary suspension or dismissal from the College.

Classroom Protocol:

Professionalism is a major component of our medical curriculum. We believe students should conduct themselves appropriately in the various educational activities of the curriculum. This conduct includes coming to educational activities on-time. The faculty should also demonstrate professionalism, by starting and ending all scheduled educational activities on time and providing a course schedule with clearly explained course policies in the course syllabus. Any changes in the schedule should be given to the students in a timely manner.

Students respond politely to faculty, staff, and student colleagues, exemplifying their maturity and empathy. Students agree to abide by appropriate biosafety practices when required.

All students are expected to be quiet in their seats in the lecture theatre before the start of the lecture. Engagement in class discussions is encouraged without side chatting.

Cell phones are not allowed to be used during lectures and exams unless prior approval has been taken from the course instructor.

Important Dates to Remember:

The Start of the Course-First Trimester

First Exam

Second Exam

Final Exam

Course Schedule :

Week	Topics	Chapter in Text
1	Bonding and Isomerism	Chapter 1
1	Alkanes and Cycloalkanes	Chapter 2
2	Alkenes and Alkynes	Chapter 3
2	Aromatic compounds	Chapter 4
3	Stereoisomerism	Chapter 5
3	Organic Halogen Compounds	Chapter 6
4	Alcohols, Phenols and Thiols	Chapter 7
5	Ethers and Epoxies	Chapter 8
5	Aldehydes and Ketones	Chapter 9
6	Carboxylic acids	Chapter 10
7,8	Amines	Chapter 11

Course information:

Course title	General Physiology
Course number	111501106
Credit hours	3
Course date	15 weeks, 2nd Semester, Year 1
Course meeting time	According to the Faculty of Medicine Timetable
Course location	Faculty of Medicine, Hashemite University
Instructor	Prof. Faik Hussain Mohammed Office No: 3013 // Telephone Ext 5435 Office hours Monday and Wednesday 10am - 12pm Email faikalkulib@yahoo.com

Course description:

This course gives a general introduction to Physiology.

Learning outcomes:

1. To introduce and familiarize students with basic definitions and principles related to physiology as a study of the living body at molecular, cellular as well as the level of intact organism.
2. To introduce the concept of internal environment and homeostasis and to present some examples of homeostatic mechanisms of the major functional systems and various control systems that are utilized by different organs to regulate various physiological functions.
3. To cover the physiological implications related to circulating body fluids and hemodynamic.
4. To describe the principles and mechanisms of membrane transport.
5. To describe the physiological implications related to circulating body fluids.
6. To describe the electrical and ionic events that underline the excitation of nerves, muscles as well as the mechanism underlying skeletal muscle contraction.
7. To describe synaptic transmission and electrical properties of synaptic potential.
8. To cover the general organization and functional aspects of the autonomic nervous system.
9. To describe the general principles and mechanisms of synaptic transmission.

Instructional methods:

The course will be taught through lectures.

Text book and material:

Author	Title	Published Year
Guyton and Hall	Text book of Medical Physiology	Latest edition
Lauralee Sherwood	Human Physiology From Cell to System	Latest edition

Grading Policy:

- First in-course exam (MCQ): 30 Marks
 - Second in-course exam (MCQ): 30 Marks
 - Final exam at the end of the semester (MCQ): 40 Marks
- Total Points 100

Course Policies:

Late Assignments

Students must give an explanation to the course instructor for any assignment which is submitted late. It will be at the course instructor's discretion if marks will be deducted for late assignments.

Missed exams

If a student misses an examination then they will have the opportunity for a make-up examination, according to the University Regulations.

Absence

If a student is absent for a teaching session then they must discuss this with the course instructor. If a student is absent for more than 25% of the course then they may be liable to fail the course.

Cheating

Cheating is forbidden in any form. Any students who are caught cheating will be reported to the Medical Dean and further action taken as necessary.

Classroom Protocol:

Students are expected to attend all sessions and to arrive on time for lectures and practical sessions. It is each student's responsibility to know their timetable and which session they should attend on which day. Students are expected to behave respectfully towards all members of staff and each other. Mobile phones are to be switched off during teaching sessions and eating, drinking and smoking are forbidden.

Important Dates to Remember:

Lectures will begin the first week of the semester.

Practical sessions will begin the second week of the semester.

The dates and locations of written and practical examinations will be notified at the beginning of the semester.

Student rights and responsibilities:

These are as detailed in the University Regulations

Course Schedule:

Date	Lecture Topics
Sun Mon Tues ا.د. فائق حسين	<ul style="list-style-type: none"> - General outline of physiology, Definition and fields of physiology, with emphases on human physiology. - Cells as the living units of the body. - Basic cell functions - Organizational levels of tissues, organs, system, and organism - The origin of nutrients and removal of end products of metabolism in unicellular versus multicellular organisms, the external and internal environments. - The external and internal environment, the extracellular fluid as the internal environment. - The role of circulating body fluids, the continuous fluid exchange between the blood (transporting media) and interstitial fluid, and its regulation.
Sun Mon Tues ا.د. فائق حسين	<ul style="list-style-type: none"> - The external and internal environment, the extracellular fluid as the internal environment. - The concepts of homeostasis. - The concepts of feedback mechanisms (negative and positive feedback).
Sun Mon Tues ا.د. فائق حسين	<ul style="list-style-type: none"> - Overview of the circulation; Interrelationships of pressure, flow and resistance - Total body water (TBW). - The effect of age, and sex. - Body fluid compartments. - The composition of the extracellular fluid (ECF). - The composition of the intracellular fluid (ICF).
Sun Mon Tues .. حسين	<ul style="list-style-type: none"> - Measurement of body fluid compartments - the indicator-dilution principle. - Fluid exchange between ICF and ECF. - The principle of osmosis and osmotic pressure. - Mole, osmole, osmolality and osmolarity, the relation between osmotic pressure and osmolarity.
Sun Mon Tues ا.د. فائق حسين	<ul style="list-style-type: none"> - Isotonic, hypotonic, and hypertonic fluids. - Isosmotic, hyperosmotic, and hypo-osmotic fluids. - Regulation of ECF volume & osmolarity - Volume and osmolality of ECF and ICF in abnormal states ECF hypertonicity, ECF hypotonicity
Sun Mon Tues	<p style="text-align: center;"><u>FIRST EXAM</u></p> <ul style="list-style-type: none"> - Acid – Base balance

ا.د. فائق حسين	<ul style="list-style-type: none"> - The microcirculation and the lymphatic system - Pressure, flow, resistance of the circulation - Edema.
Sun Mon Tues ا.د. فائق حسين	<ul style="list-style-type: none"> - Transport of substances through the cell membrane. Passive transport: <ul style="list-style-type: none"> a. simple diffusion (criteria, factors determine diffusion). b. facilitated diffusion. - Active transport: <ul style="list-style-type: none"> a. primary active. b. secondary active: Co- and Counter-transport - Phagocytosis and pinocytosis.
Sun Mon Tues د. محمد شعبان	<ul style="list-style-type: none"> - general outline of neural function - Excitable membranes. Resting membrane potential (RMP), origin, and determinants. - Electrochemical equilibrium (Nerst equation). - Goldman-Hodgkin-Katz equation.
Sun Mon Tues د. محمد شعبان	<ul style="list-style-type: none"> - Action potential (AP) initiation and propagation. - Special types of AP , Slow response and pacemaker concept - Cardiac AP(fast response AP) - Latent and ectopic pacemakers - All or non versus graded AP
Sun Mon Tues د. محمد شعبان	<ul style="list-style-type: none"> - Synapses: types. Transmission of AP, neurotransmitters - EPSP, IPSP - Neural circuits, Divergence, convergence reverberating cycles - Neural and endocrine integration to maintain homeostasis - Extra cellular regulators: nervous, endocrine, paracrine, autocrine
Sun Mon Tues .	<ul style="list-style-type: none"> - Signal transduction - Receptors, sensation, types, neural versus hormonal - Ionic channels. - Second messengers, cAMP, GMP,etc
Sun Mon Tues د. محمد شعبان	<p style="text-align: center;"><u>SECOND EXAM</u></p> <ul style="list-style-type: none"> - Autonomic nervous system, Sympathetic Vs. parasympathetic - Neurotransmitters, types . receptors types, locations (pre and post ganglionic) - Adrenal medulla.
Sun Mon Tues د. محمد شعبان	<ul style="list-style-type: none"> - Skeletal muscles, levels of organization - Neuromuscular junction and transmission - Excitation contraction and molecular basis of muscle contraction - Smooth and cardiac muscle contraction. Comparison of the three types of muscle (skeletal, cardiac and smooth)

Sun Mon Tues د. محمد شعبان	- Body temperature regulation - Physiology and structure of steroid hormones
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