

# جامعة القادسية

## كلية الطب



# The Curriculum of College of Medicine University of Al Qadisiyah

Introduction:

There are 6 stages at Al Qadisiyah college of Medicine, each of which is formed of 2 courses except of the 6<sup>th</sup> year which is formed of 4 clinical training courses.

The system of teaching is subject based courses with the basic sciences given mostly in the first 3 years, clinical sciences start from 3<sup>rd</sup> year until last year and community medicine with related subjects in the 3<sup>rd</sup> and 4<sup>th</sup> years.

This system is adapted by the college since the academic year 2020-2021 which was a very challenging year due to the Covid 19 pandemic and its consequences on education in the whole country (or even the world).

In the 2 years before (2018-2019 and 2019-2020) the college adapted the module system (with horizontal integration) but the experience was not successful and the decision was made to change to the courses system.

The total courses during the 6-year curriculum are 14 courses, 10 in five years (2 per year) each is of 15 weeks' duration and the 6<sup>th</sup> year is formed of 4 clinical courses, 2 of which are 10 weeks (Pediatrics and Gynecology) and the other 2 are of 12 weeks (Medicine and Surgery)

**First year:**

**First course:**

عدد الوحدات	عدد الساعات		المادة الدراسية	ت
	العملي	النظري		
3	2	2	Anatomy I (تشریح)	.1
3	2	2	Medical physics I (الفيزياء الطبية)	.2
3	2	2	Medical Biology (الاحياء الطبي)	.3
3	2	2	Medical Chemistry (الكيمياء الطبية)	.4
1	/	1	Medical Terminology (المصطلحات الطبية)	.5
1	/	1	Arabic (العربي)	.6
1	/	1	Human rights (حقوق انسان)	.7
2	2	1	E- learning (الحاسوب)	.8
1	/	1	Sport (الرياضة)	.9
18			المجموع	

**1-Anatomy 1**

**Aims of the course:**

1. Understanding the terms used in describing different regions of the body.
2. Brief descriptions of the basic structures that compose the body.
3. A basic concept on the normal appearance of body structures in different diagnostic imaging techniques. Ethics and conduct in the anatomy laboratory.
4. A brief description of embalming.
5. Essential review of the various types of objective examinations.
6. A guide to anatomy learning resources including prints, multimedia and online resources.

**Learning objectives:****(knowledge)**

1. to make the student familiar with medical and anatomical terminology and the structures and regions of the body.
2. to introduce the laboratory materials and instrument used in medical practice related to anatomy department.
3. Describe the topography of the upper limb.

**(Skills)**

1. to enhance the moral side in treating patients by the graduate doctors.
2. make the student capable to learn the medical skills.
3. provoke the continuous medical learning even post graduate to make the doctors in touch with updates in medical practice.

**(Attitudes)**

1. Improve the students thinking ability: to estimate the ability of the student to think logically to solve the problems
2. Critical thinking: study the case problem to solve it using their knowledge.
3. To teach the student the limits of responsibilities and freedom.
4. The proper way to evaluate the patient's condition to take the appropriate decision.

**Teaching methods:**

Theory – lectures

Upload the lecture on the college website

Educational movies

Use data show and digital cam

Use the teaching specimens

Training courses

Small teaching groups.

educational lectures and discussions for problem solving skills

-Monitoring of thinking capability of students and their expressions and their responses.

-Laboratories experiments

-Self-education.

### **Assessment methods**

Theory examination

Oral examinations

Practical examinations

Problem based learning

Reports and activities.

### **Personal development objectives:**

D1: to follow the advances in medical science, and try to elevate the rank and accreditation of medical college locally and internationally.

D2: Develop the capability of student to deal with information via the internet.

D3: Develop the discussion skills of students

D4: Teach the student to write the CV and express themselves.

### **References:**

1. Clinical anatomy by regions, Richard S. Snell, 10th ed., Lippincott Williams & Wilkins, 2018.
2. Grant's atlas of anatomy, Anne M.R. Agur & Arthur F. Dalley, 14th ed., Lippincott Williams & Wilkins, 2017
3. Anatomy. The anatomical basis of life
4. Gray's Anatomy for student
5. <https://www.biodigital.com>
6. <http://anatomylearning.com/en>
7. <http://anatomyzone.com>

### **Course contents:**

طريقة التقييم	طريقة التعليم	اسم الوحدة / أو الموضوع	مخرجات التعلم المطلوبة	الساعات	الأسبوع
Questions and discussions	Theory and practical	Introduction to anatomy, skin, fascia, and bones	Study of basic body tissues	2	1
Questions and discussions	Theory and practical	Introduction to anatomy, muscles, nervous system, and joints.	Study of basic body tissues	2	2
Questions and discussions	Theory and practical	Shoulder girdle and pectoral region	Study shoulder region including muscles, nerves, blood vessels	2	3
Questions and discussions	Theory and practical	Shoulder joint, sternoclavicular joint.	Structure of joints and their function	2	4
Questions and discussions	Theory and practical	Mammary gland- PBL	Structure of breast and its blood, nerve supply and lymphatic drainage	2	5
Questions and discussions	Theory and practical	Anterior and posterior compartments of the arm	Study of muscles, nerve, blood vessels of the region	2	6
Questions and discussions	Theory and practical	Flexor compartment of the forearm	Study of muscles, nerve, blood vessels of the region	2	7
Questions and discussions	Theory and practical	Extensor compartment of the forearm	Study of muscles, nerve, blood vessels of the region	2	8
Questions and discussions	Theory and practical	Elbow joint, proximal and distal radioulnar joint, wrist joint.-PBL	Structure of joints and their function	2	9
Questions and discussions	Theory and practical	The hand part 1	Study of muscles, nerve, blood vessels of the region	2	10
Questions and discussions	Theory and practical	The hand part 2	Study of muscles, nerve, blood vessels of the region	2	11
Questions and discussions	Theory and practical	Topography and clinical anatomy- PBL	Knowing the topography of upper limb and related clinical conditions	2	12
Questions and discussions	Theory and practical	Term Examination	Assessment	2	13
Questions and discussions	Theory and practical	Imaging anatomy - revision		2	14
		Revision – sectional anatomy		2	15

## 2-Medical Physics 1

### **Aims of the course:**

1. Qualifying students for this year's curriculum course.
2. The student's scientific construction and qualifying to work in the field of medical physics in hospitals and radiotherapy centers.
3. Contribute to the development of medical and laboratory training for diagnostic purposes.
4. Provide medical education about health and harm caused by misuse of the environment.
5. Continued development of the curriculum as provided by the Branch.
6. Encourage students to be creative and think about the area of specialization and stay abreast of developments in the field of medical physics.

### **Learning objectives:**

#### **(Knowledge)**

1. Learn the fundamentals and principles of medical physics.
2. Identify the components of medical devices and how they are used.
3. Familiarize students with radiation, radioactivity, dosimetry and medical devices.
4. Familiarize students with the practice of radiation safety and radiation protection requirements.
5. Introduce students to the diagnosis and treatment of diseases.
6. Teaching medical skills and keeping up with the outside world.

#### **(Skills)**

1. Ability to diagnose diseases efficiently through medical imaging
2. Ability to radiotherapy.
3. Ability to prepare medical imaging and radiotherapy reports.
4. Ability to utilize radioactive energy in medical fields.
5. Get skills after graduation.

#### **(Attitudes)**

- 1-The ability to apply medical theoretical information in a practical way.
  - 2- The ability to gain trust and interact with the patient undergoing examination and treatment.
- 1- Developing the ethics of the medical and radiotherapy profession, by following the correct professional behavior.

### **Teaching methods:**

- Lecture
- Laboratory and small groups
- Methodical training

- Asking students to visit the library and websites to obtain additional knowledge of the study materials.
- Providing an educational climate conducive to reasonable thinking through the continuous guidance of students by professors during lectures, opening a door for open and direct discussions with students.
- Hospitals and clinics use medical imaging and radiotherapy to train students.

**Assessment methods:**

- Oral Exam Daily exams
- Semester exams
- Final exams
- Scientific projects
- Reports and studies
- Evaluation of the student in the classroom through daily attendance.
- The student's interaction with the lecture and class discussions.
- The students' subjective behavior.
- The opinion questionnaire is conducted by the professor of the subject for the students.

**Skills of personal development:**

- Developing students' skills and abilities to use diagnostic imaging devices and various medical treatments
- Developing basic skills through educational guidance, conferences, symposia, and special seminars to discuss students' research.
- Developing skills, creative thinking and innovation in the field of specialization

**References:**

- 1- Medical Physics (Cameron)
- 2- [https://www.hindawi.com/journals/bmri/2015/297158/?utm\\_source=google&utm\\_medium=cpc&utm\\_campaign=HDW\\_MRKT\\_GBL\\_SUB\\_ADWO\\_PAI\\_DYNA\\_JOUR\\_X\\_PJ\\_Sitelink\\_10authordiscount&gclid=EA1aIQobChMIssjWmPji-gIVw4bVCh1\\_GgvXEAAAYAiAAEgJGafD\\_BwE](https://www.hindawi.com/journals/bmri/2015/297158/?utm_source=google&utm_medium=cpc&utm_campaign=HDW_MRKT_GBL_SUB_ADWO_PAI_DYNA_JOUR_X_PJ_Sitelink_10authordiscount&gclid=EA1aIQobChMIssjWmPji-gIVw4bVCh1_GgvXEAAAYAiAAEgJGafD_BwE)
- 3- <https://www.news-medical.net/health/The-Role-of-Physics-in-Medicine.aspx>

**Course contents:**



week	Hours	Topic of Theory	Required learning outcomes	Lab. Experimental	Teaching method	Evaluation method
1	2h Theory +2h practical	Heat and cold in medicine	To study and understanding of Heat and cold in medicine	General information about Lab.	Theory + practical	Questions and discussions
2	2h Theory +2h practical	Pressure in human body (P.1)	To study and to provide basic information of Pressure in human body	Blood pressure (P.1)	Theory + practical	Questions and discussions
3	2 Theory +2 practical	Pressure in human body (P.2)	To study and to provide basic information of Pressure in human body	Blood pressure (P.2)	Theory + practical	Questions and discussions
4	2 Theory +2 practical	Physics of CVS (P.1)	To study and to provide basic information of Physics of CVS	Ear & hearing (P.1)	Theory + practical	Questions and discussions
5	2 Theory +2 practical	Physics of CVS (P.2)	To provide basic science information of Physics of CVS	Ear & hearing (P.2)	Theory + practical	Questions and discussions
6	2 Theory +2 practical	Physics of the lungs and breathing (P.1)	To provide basic science information for Physics of the lungs and breathing	Ear & hearing (P.3)	Theory + practical	Questions and discussions
7	2 Theory +2 practical	Physics of the lungs and breathing (P.2)	To study and to provide basic information of the lungs and breathing	Eye & vision (P.1)	Theory + practical	Questions and discussions
8	2 Theory +2 practical	Sound & Ultrasound in medicine (P.1)	To study and to provide basic information of Sound & Ultrasound in medicine	Eye & vision (P.2)	Theory + practical	Questions and discussions
9	2 Theory +2 practical	Sound & Ultrasound in medicine (P.2)	To study and to provide basic information ultrasound's interaction with the biological tissue	Eye & vision (P.3)	Theory + practical	Questions and discussions
10	2 Theory +2 practical	Sound & Ultrasound in medicine (P.3)	To study and to understand information of ultrasound's modes	Principle of laser	Theory + practical	Questions and discussions
11	2 Theory +2 practical	Principle of laser (P.1)	To study and to provide basic information of laser, commonly types of laser	Laser in medicine	Theory + practical	Questions and discussions
12	2 Theory +2 practical	Principle of laser (P.2)	To study and to provide basic information of laser interaction with the biological tissue, treatment and diagnostic	CT scanner (P.1)	Theory + practical	Questions and discussions
13	2 Theory +2 practical	Light in medicine (P.1)	To study and to understand information of Light in medicine	CT scanner (P.2)	Theory + practical	Questions and discussions
14	2 Theory +2 practical	Light in medicine (P.2)	to provide basic information about common uses of Light in medicine as diagnostic & imaging	CT scanner (P.3)	Theory + practical	Questions and discussions

### **3- Medical biology 1**

#### **Aims of the course:**

1. Understanding the concept of cell biology.
2. Studying the features of animal cells.
3. Defining the basic animal tissues.
4. Introducing the classification of lower organisms.

#### **Learning objectives:**

##### **(Knowledge)**

- 1- understand the basic structure of the cell
- 2- know the different cell organelles
- 3- know the different functions of the cell and its organelles
- 4- introduction to genetics and different inheritance patterns.

##### **(Skills):**

- 1- To identify the basic structure of microscopes
- 2- The ability to handle slides and the ability to analyze them
- 3- The ability to recognize basic genetic structure

##### **(Attitudes):**

- 1- Students must learn how to be professional when conducting slides study
- 2- They must learn how to be respectable and responsible

#### **Teaching methods:**

Theory – lectures

Upload the lecture on the college website

Use data show and digital cam

Use the teaching specimens

Training courses

Small teaching groups.

#### **Assessment methods:**

Theoretical exams

Oral exams

Practical exams (using slides and pictures of slides)

#### **Course contents:**

طريقة التقييم	طريقة التعليم	اسم الوحدة / أو الموضوع	الساعات	الأسبوع
Questions and discussions	Theory and practical	<b>Introduction &amp; biochemistry of the cell</b>	2	1
Questions and discussions	Theory and practical	Prokaryotic cell	2	2
Questions and discussions	Theory and practical	(Eukaryotic cell)Plasma membrane Definition, structure, function &medical application	2	3
Questions and discussions	Theory and practical	<b>Cell organelle</b> Endoplasmic reticulum, Definition, structure &function	2	4
Questions and discussions	Theory and practical	<b>Golgi apparatus and lysosomes</b> Definition, structure, function, secretory vesicles & medical applications	2	5
Questions and discussions	Theory and practical	<b>Ribosomes ,peroxisomes&amp; Proteasomes</b> -Definition &structure - -function &medical application	2	6
Questions and discussions	Theory and practical	<b>Mitochondria</b> -Definition, structure, function& Medical application -Oxidative phosphorylation <b>-Nucleus</b> -Definition &shape -structure, -Nucleolus, chromatin, nuclear matrix &function	2	7
Questions and discussions	Theory and practical	<b>Cytoskeleton</b> Microtubules, intermediate filaments Microfilaments, structure & function of each one.-medical application PBL	2	8
Questions and discussions	Theory and practical	<b>Cell junction &amp;cell's inclusions</b> Definition, structure, function -medical application <b>- Mitosis &amp; meiosis</b> -Cell cycle -Type of reproduction	2	9
Questions and discussions	Theory and practical	<u>Med term exam</u> Theory 25% Practical 10% Quizzes 5%	2	10
Questions and discussions	Theory and practical	<b>Introduction in Genetic&amp; Mendel's inheritance</b>	2	11
Questions and discussions	Theory and practical	<b>Linkage, Sex linkage &amp;Sex determination</b> X-linked Dominant pattern of inheritance X-linked Recessive pattern of inheritance -y- chromosome-linked single -Sex influenced-traits -Sex limited-traits	2	12
Questions and discussions	Theory and practical	<b>Extensions and Exceptions to Mendel's laws &amp; pedigree</b> -In complete dominance -co dominant	2	13

		-Gene interaction -Variable expressivity and incomplete Penetrance -Lethal gene  -Pleiotropy -Polygenic inheritance -Autosomal Dominant		
<b>Questions and discussions</b>	<b>Theory and practical</b>	<b>Mutation</b> -structure of human chromosome -types of structural aberration  -gene mutation <b>PBL</b>	<b>2</b>	<b>14</b>

**References:**

Basic histology, Janqira & Carneiro, 13th ed., McGraw-Hill, 2015

2. DiFiore's Atlas of Histology with Functional Correlations, Victor P. Eroschenko, 13th ed., Lippincott Williams & Wilkins, 2016

1. Histology: a text and atlas with correlated cell and molecular biology, 7th ed, 2016.

2. Human Biology, 15th ed, 2018.

[http://www.biology.arizona.edu/cell\\_bio/cell\\_bio.html](http://www.biology.arizona.edu/cell_bio/cell_bio.html)

<https://www.cellsalive.com/>

<http://www.histologyguide.com/slidebox/slidebox.html>

## 4- Medical chemistry 1

### Aims of the course:

- 1- To produce a competent medical student who is able to demonstrate comprehensive understanding of biochemistry as well as applied disciplines.
- 2 -To have a knowledge about the chemical structures of living molecules, their importance in building the cells of living organisms
- 3-To understand how living molecules linked to the formation of macromolecules for cells and knowledge of methods of detection and clinical distinction and its practical applications.
- 4-To develop and keep pace with the scientific development of biochemistry.
- 5-To have competence pertaining to basic instrumentation and procedures pertaining to biochemistry that are required to be practiced in community and at all levels of health care system.
- 6-To have acquired skills effectively in interpreting all laboratory reports

### Learning objectives:

#### (Knowledge)

- 1- Knowledge and understanding of the chemical structures of life compounds.
- 2- To identify the biological importance of life compounds in the human body
- 3- Enabling students to obtain knowledge and understanding of the practical experiences of life chemistry.

#### (Skills):

- 1- The ability to identify and handle different laboratory instruments
- 2- The ability to perform basic chemical reactions and experiments
- 3- - Critical thinking  
Critical thinking skill, which aims to pose a problem, analyze it logically, and reach the desired solution  
-The student's awareness of the need for a balance between freedom and responsibility  
-The skill of making the right decision for the patient and based on logical thinking

#### (Attitudes):

- 1- Promoting professional ethics and dealing with patients among graduates
- 2- Students acquire different therapeutic skills
- 3- Strengthening the principle of lifelong learning in order to continue developing the profession

- 4- Strengthening the principle of lifelong learning in order to continue developing the profession

**Teaching methods:**

Lectures that research and teach students ways to confront and solve problems

-Follow up the way students think, their ways of expression and the speed of their response.

Experiments in laboratories.

-Self education

**Assessment methods:**

- Theory examinations

Practical examinations

Activities and reports

**Skills of personal development:**

D1:to follow the advances in medical science, and try to elevate the rank and accreditation of medical college locally and internationally

D2: Develop the capability of student to deal with information via the internet.

D3: Develop the discussion skills of students

D4: Teach the student to write the CV and express themselves

**Practical Medical Chemistry / First Course: 30 hrs Practical (2hrs/week)**

1- Glassware and Instruments.

2- acid -base balance and electrolytes

3- Alcohols in human body (solubility, reaction and identification)

4- Aldehyde and Ketone in Human Body (solubility, reaction and identification)

5- Carboxylic Acids in Human Body (solubility, reaction and identification)

6- Qualitative analysis of Carbohydrates I

7- Qualitative analysis of Carbohydrates II

8- Qualitative analysis of amino acids I

9- Qualitative analysis of amino acids II

10- Qualitative analysis of lipids I

11- Qualitative analysis of lipids II

Assessment	Educational methods	subjects	Outcome	hours	week
General questions & discussion	Theory	Classification of organic reactions	-Types of reagents, electrophiles and nucleophiles -	2	1
General questions & discussion	Theory	Alcohols and Phenols	Structure of benzene, formulas and nomenclature, properties - Reactions of aromatic hydrocarbons, aromatic groups	2	2
General questions & discussion	Theory	Alcohols and Phenols Aldehydes,	structures, nomenclature, properties and reactions. -	2	3
General questions & discussion	Theory	ketones, Amines and Amides	- Oxidation.of.alcohol.in.living.system	2	4
General questions & discussion quiz	Theory	Carboxylic acids, Acid halides and Esters	structures, nomenclature, classification, properties and reactions Condensation reaction in living system	2	5
General questions & discussion	Theory		Aqueous solution and Colloids	2	6
General questions & discussion quiz	Theory	Acids and bases	Acids and bases, The pH scale, Buffer solutions, Acid-base balance in blood	2	7
General questions & discussion		Carbohydrates	Functions of carbohydrates, Classification of carbohydrates Optical activity of sugars, Structure of glucose -	2	8
General questions & discussion quiz		Carbohydrates	Reactions of monosaccharides, Glycosides Reactions of monosaccharides, Glycosides	2	9

<b>General questions &amp; discussion</b>	<b>Theory</b>	<b>Lipid</b>	<b>Classification of lipids, Functions of lipids Fatty acids (Saturated - and unsaturated fatty acids), Essential fatty acids -</b>	<b>2</b>	<b>10</b>
<b>General questions &amp; discussion</b>	<b>Theory</b>	<b>Lipid</b>	<b>Triacylglycerols, Properties of Phospholipids,</b>	<b>2</b>	<b>11</b>
<b>General questions &amp; discussion</b>	<b>Theory</b>	<b>Lipid</b>	<b>Glycerophospholipids, Sphingomyelins</b>		<b>12</b>
<b>General questions &amp; discussion</b>	<b>Theory</b>	<b>- Proteins and amino Acids</b>	<b>- Functions of proteins, Properties of proteins -Standard amino acids, Non-Standard amino acids -Classification of amino acids, Properties of amino acids</b>	<b>2</b>	<b>13</b>
<b>General questions &amp; discussion</b>	<b>Theory</b>	<b>- Proteins and amino Acids</b>	<b>Structure of proteins - (Primary, secondary, tertiary and quaternary (structure Peptide bond, <math>\alpha</math>-Helix, - <math>\beta</math>-Pleated sheet, Denaturation</b>	<b>2</b>	<b>14</b>
<b>exam</b>	<b>Theory</b>	<b>Midcourse Examination</b>	<b>Midcourse Examination</b>	<b>2</b>	<b>15</b>

### References:

- 1- chemical basis of life, by George H. Schmid
- 2- Principle of BioChemistry, lenniger medical biochemistry
- 3- [www.chemicalprocessing.com](http://www.chemicalprocessing.com)
- 4- [www.bytoco.com](http://www.bytoco.com)



## 5- Medical terminology

### Aims of the course:

- Each lecture handout will provide specific objectives.
- The goal of the Medical Terminology course is to provide students with essential knowledge related to medical language and a broad understanding of human body structure and function.
- This course will include theoretical lectures about medical terms categorized according to body systems and organs.

### Learning objectives:

#### (Knowledge)

- ☐ Know basic terms used to describe structure and function of human body as well as major disease processes
- ☐ Know the general and specific terms related to control unit of the body.
- ☐ Recognize different terms used to describe musculoskeletal and bone structures
- ☐ Recognize basic terms related to respiratory and cardiovascular system
- ☐ Identify how to communicate basic and clinical knowledge among medical fields
- ☐ Know different parts of each system of the body
- ☐ Recognize the categorization of various structures of organs and tissues

#### (Skills)

- ☐ To build up fluent and clear medical language shared by all students.

#### (Attitudes):

- ☐ Identify and explain tissues and organs using specific medical terms.
- ☐ Identify different parts of the body and their related substructure.
- ☐ Write paragraphs to describe functions and structure of each body system

### Teaching methods:

Lectures

### Assessment methods:

Written Examination: Assessment of knowledge and understanding and intellectual skills. These are usually done as summative assessments at the end of each system

Practical Examination: no practical examination

## Course contents:

Date	Lecture	objectives
1 <sup>st</sup> wk.	Introduction to medical terminology	Introduce the students to basic word structure
2 <sup>nd</sup> wk.	Cell structure and function	Medical terms related to cell structure and function
3 <sup>rd</sup> wk.	Nervous system	Basic terminology of central and peripheral nervous system
4 <sup>th</sup> wk.	Organs of special sense	Terms describing eye and ear
5 <sup>th</sup> wk.	The heart and great vessels	Terms related to chambers and valves of heart
6 <sup>th</sup> wk.	Circulatory system	Major blood vessels names and terminology
7 <sup>th</sup> wk.	Musculoskeletal system	General plan of naming muscles and bones
8 <sup>th</sup> wk.	Kidney and urinary tract	Terms related to gross and histology of kidney
9 <sup>th</sup> wk.	Genital organs	Terminology related to male and female genital systems
10 <sup>th</sup> wk.	Liver, gall bladder and pancreas	Terms related to hepatic structure and biliary system
11 <sup>th</sup> wk.	GIT	The naming of small and large intestines
12 <sup>th</sup> wk.	Respiratory system	Terms related to upper and lower respiratory tract
13 <sup>th</sup> wk.	Endocrine system	Terms related to hormones and major endocrine glands
14 <sup>th</sup> wk.	Blood and hematology	Terms related blood, bone marrow and blood elements
15 <sup>th</sup> wk.	Review	Review of body system plan and organization

## References:

The language of medicine

10 the edition by Davi-Elen Chabner

## 6- Arabic

### Aims of the course:

- 1- To improve the Arabic language of students as a formal language
- 2- To teach students how to use simple but accurate Arabic medical terms

### Learning objectives:

- 1- Students should be able to communicate with patients and colleagues in a safe and accurate way
- 2- They should be able to use the right terminology in medical records.

### Teaching methods:

Theoretical lectures

### Assessment methods:

Written exams

- مفردات الكورس:
- 1- همزة القطع – همزة الوصل
  - 2- الجملة الاسمية والجملة الفعلية
  - 3- المفعول به
  - 4- المفعول المطلق
  - 5- المفعول لأجله
  - 6- العدد وكيفية كتابته
  - 7- المصدر في العربية... الاشتقاق والدلالة
  - 8- دراسة في الشعر الحر
  - 9- المقالة واعلامها
  - 10- ادب الاعتراف والسيرة الذاتية

## 7- Human rights:

### Aim of the course:

To introduce students to the concept of human rights.

### Learning objectives:

- 1- Students should have a general idea about human rights
- 2- They should learn how to implement human rights in their practical life as future doctors
- 3- They should learn the importance of human rights and how to respect them.

### Teaching methods:

Theoretical lectures

### Assessment methods:

Written exams

مفردات الكورس:

- 1- التعريف بحقوق الانسان
- 2- خصائص حقوق الانسان
- 3- التطور التاريخي لحقوق الانسان
- 4- حقوق الانسان في الشرائع السماوية
- 5- حقوق الانسان في القانون الدولي
- 6- حقوق الانسان في زمن السلم
- 7- حقوق الانسان في زمن الحرب
- 8- مفهوم القانون الدولي الإنساني وتميزه عن القانون الدولي لحقوق الانسان
- 9- حقوق الانسان في دستور جمهورية العراق لعام 2005
- 10- نماذج من تطبيقات حقوق الانسان
- 11- حق المشاركة في إدارة الشؤون العامة
- 12- ضمانات احترام وحماية حقوق الانسان على الصعيد الوطني
- 13- ضمانات احترام وحماية حقوق الانسان على الصعيد الدولي
- 14- الإعلان العالمي لحقوق الانسان
- 15- دور المنظمات الإقليمية في حماية حقوق الانسان

## **8- E- Learning**

### **Aims of the course:**

- 1- To improve the electronic abilities of students
- 2- Make students familiar with the most commonly used operating systems (windows) especially the latest versions

### **Learning objectives:**

#### **(Knowledge)**

- 1- Students should have a general idea about the basic types and structure of computers
- 2- They should know the important electronic terms used in practice
- 3- The ability to improve their general knowledge with continuous updates in the electronic field

#### **(Skills)**

- 1- The ability to professionally use the important programs (like Microsoft word, power point and excel)
- 2- The basic electronic skills used for internet use and for writing and reading scientific research and papers

#### **(Attitudes)**

- 1- Encourage the concept of lifelong learning which is an important part of continuous updating in the electronic field
- 2- Teach students the importance of respecting other people privacy and hoe to protect their own.

### **Teaching methods:**

Theoretical lectures

Practical sessions

### **Assessment methods:**

Written exams

Practical exams using computers

Writing reports and using applications

## **Course contents:**

### **Theoretical hours**

- 1- An Introduction of Computer Science and historical introduction to the development of computer**
- 2- Definition & Generation of Computers**
- 3- Categories of Computers**
- 4- Uses of Computers & Advantages and Disadvantages of Using Computers**
- 5- Storage Units and their Types**
- 6- Computer Component” Hardware”**
- 7- Computer Component” Software”**
- 8- Hard Disk ,Diskette &CD-ROM**
- 9- Data and Information Hard Disk ,Diskette &CD-ROM**
- 10- Data Representation in a computer**
- 11- Explain Numerical Systems in a computer**
- 12- Numerical Systems and convert between them**
- 13- Numerical Systems and convert between them**

### **Practical hours:**

- 1- توضيح الاجزاء الأساسية للحاسوب وعرضها على الطلبة، مكونات سطح المكتب**
- 2- الإيعازات الأساسية للحاسوب**
- 3- مقدمة في نظام Windows10**
- 4- واجهات نظام Windows 10**
- 5- Windows 10 أوامر نظام**
- 6- Microsoft office Word 2010**
- 7- Word 2010 Microsoft office**
- 8- Microsoft office Word 2010**
- 9- Excel Program**
- 10- Excel Program**
- 11- Excel Program**
- 12- Power point program**
- 13- Power point program**

## 9- Sports:

### Aims of the course:

- 1- To understand the physiological aspects of sport
- 2- To know the beneficial effects of sports on human body

### Learning objectives:

- 1- To have a general idea about the changes that occur in the body during different sports activity
- 2- To understand the best way of using sport to improve health
- 3- Know the basic rules of different sports

### Teaching methods:

Theoretical lectures

Practical exercise

### Assessment methods:

Written exams

Practical exams

المواضيع	الاسابيع
أهمية ممارسة الرياضة وارتباطها بالصحة	1
اولا: تأثير النشاط الرياضي على الهيكل العظمي والمفاصل	
ثانيا: تأثير النشاط الرياضي على الجهاز العضلي	
ثالثا: تأثير النشاط الرياضي على الجهاز العصبي	2
رابعا: تأثير النشاط الرياضي على الدم	
خامسا : تأثير النشاط الرياضي على القلب	
سادسا : تأثير التمرينات على الجهاز التنفسي	3
الطاقة	4
انظمة انتاج الطاقة	5
نظام الطاقة الفوسفاجيني	
نظام حامض اللاكتيك	6
النظام الاوكسجيني	7
مهارات كرة القدم	8
مهارات كرة اليد	9
مهارات كرة الطائرة	10

مهارات كرة السلة	11
معلومات وقياسات ملعب كرة القدم	12
معلومات وقياسات ملعب كرة اليد	13
معلومات وقياسات ملعب كرة الطائرة	14
معلومات وقياسات ملعب كرة السلة	15

### The daily schedule of first course weeks (first grade):

3:30 -2:30	2:30 -1:30	1:30 - 12:30	12:30-11:30	11:30 - 10:30	10:30 -9:30	9:30-8:30	اليوم
نشاطات طلابية	E-Practical Anatomy A-Practical Medical Physics B-Practical Medical Biology C-Practical Medical chemistry D-Practical E -learning	B-Practical Anatomy C-Practical Medical Physics D-Practical Medical Biology E-Practical Medical chemistry A-Practical E -learning	A-Practical Anatomy B--Practical Medical Physics C-Practical Medical Biology D-Practical Medical chemistry E -Practical E -learning				الاحد
	E-learning	Anatomy I	Arabic		Medical chemistry I		الاثنين
	Human rights	Medical Biology I	Medical Terminology		Medical physics I		الثلاثاء
Problem Base Learning( PBL)	Practical Sport A	Sport	D-Practical Anatomy E-Practical Medical Physics A-Practical Medical Biology B-Practical Medical chemistry C-Practical E -learning	C-Practical Anatomy D-Practical Medical Physics E-Practical Medical Biology A-Practical Medical chemistry B-Practical E -learning			الاربعاء



## First year

## Second course:

عدد الوحدات	عدد الساعات		المادة الدراسية	ت
	العملي	النظري		
3	2	2	Anatomy II (تشريح)	.1
2	/	2	Medical physics II (الفيزياء طبية)	.2
3	2	2	Medical Biology II (الاحياء الطبي)	.3
3	2	2	Biochemistry (الكيمياء)	.4
2	2	1	Biosafety (السلامة والامن الحيوي)	.5
1	/	1	English (الانكليزي)	.6
14			المجموع	

# 1- Anatomy II

## **Aims of the course:**

1. Brief descriptions of the basic structures that compose the body.
2. Understanding the terms used in describing the anatomical position and the different regions of the body.
3. A basic concept on the normal appearance of body structures in different diagnostic imaging techniques. Ethics and conduct in the anatomy laboratory.
4. Essential review of the various types of objective examinations.
5. A guide to anatomy learning resources including prints, multimedia and online resources.

## **Learning objectives:**

### **(Knowledge)**

- 1- Understanding the terms used in describing the anatomical position and the different regions of the body.
- 2- A basic concept on the normal appearance of body structures in different diagnostic imaging techniques. Ethics and conduct in the anatomy laboratory.
- 3- Understanding the basic structure of human lower limb and thorax

### **(Skills)**

- 1- The skill of understanding different sections of human body
- 2- memory and knowledge skills.
- 3- problem solving skills.
- 4- writing scientific papers
- 5- analytical skills

### **(Attitudes):**

- 1- let think about thinking ability: to estimate the ability of the student to think logically to solve the problems
- 2- - critical thinking: study the case problem to solve it using their knowledge.
- 3- to teach the student the limits of responsibilities and freedom.
- 4- the proper way to evaluate the patient's condition to take the appropriate decision.

## **Teaching methods:**

Attending lectures

Theory lectures using multimedia facilities

Self-education, discussion groups

Training and activities

Directing the student for some medical websites

Analytical and critical thinking

Quiz and examinations

**Assessment methods:**

Student activities

Reports

Daily and weekly self-assessments

Course examination

**Personal skills development:**

D1: to follow the advances in medical science, and try to elevate the rank and accreditation of medical college locally and internationally.

D2: Develop the capability of student to deal with information via the internet.

D3: Develop the discussion skills of students

D4: Teach the student to write the CV and express themselves.

**References:**

Clinical anatomy by regions, Richard S. Snell, 10th ed.,  
Lippincott Williams & Wilkins, 2018.

2. Grant's atlas of anatomy, Anne M.R. Agur & Arthur F. Dalley,  
14th ed., Lippincott Williams & Wilkins, 2017

Anatomy. The anatomical basis of life

Gray's Anatomy for student

<https://www.biodigital.com>

<http://anatomylearning.com/en>

<http://anatomyzone.com>

طريقة التقييم	طريقة التعليم	اسم الوحدة / أو الموضوع	مخرجات التعلم المطلوبة	الساعات	الأسبوع
Questions and discussions	Theory and practical	Introduction to lower limb, hip joint and pelvic girdle	Study of lower limb, and joints	2	1
Questions and discussions	Theory and practical	Gluteal region	Study gluteal region including muscles, nerves, blood vessels	2	2
Questions and discussions	Theory and practical	Anterior, medial compartment of the thigh	Study of muscles, nerve, blood vessels of the region	2	3
Questions and discussions	Theory and practical	Posterior compartment of the thigh and popliteal fossa-PBL	Study of muscles, nerve, blood vessels of the region	2	4
Questions and discussions	Theory and practical	Knee joint and tibiofibular joints	Structure of joints and their function	2	5
Questions and discussions	Theory and practical	Anterior and lateral compartments of the leg	Study of muscles, nerve, blood vessels of the region	2	6
Questions and discussions	Theory and practical	Posterior compartment of the leg	Study of muscles, nerve, blood vessels of the region	2	7
Questions and discussions	Theory and practical	Ankle joint, the foot part 1	Study of muscles, nerve, blood vessels of the region	2	8
Questions and discussions	Theory and practical	2- The foot part sectional anatomy of lower limb-PBL	Study of muscles, nerve, blood vessels of the region	2	9
Questions and discussions	Theory and practical	Introduction to thorax, osteology of thoracic wall, and mediastinum	Study of the region	2	10
Questions and discussions	Theory and practical	The intercostal muscles and diaphragm. The mediastinum and great vessels	Study of muscles, nerve, blood vessels of the region	2	11
Questions and discussions	Theory and practical	The lungs and pleura	Study the structure and function of the organs	2	12
Questions and discussions	Theory and practical	The heart and pericardium-imaging and sectional anatomy of thorax	Study the structure and function of the organs	2	13
Questions and discussions	Theory and practical	Imaging and sectional anatomy-PBL		2	14
		Term examination	Assessment	2	15

## **2- medical physics II:**

### **Aims of the course:**

1. Qualifying students for this year's curriculum course.
2. The student's scientific construction and qualifying to work in the field of medical physics in hospitals and radiotherapy centers.
3. Contribute to the development of medical and laboratory training for diagnostic purposes.
4. Provide medical education about health and harm caused by misuse of the environment.
5. Continued development of the curriculum as provided by the Branch.
6. Encourage students to be creative and think about the area of specialization and stay abreast of developments in the field of medical physics.

### **Learning objectives:**

#### **(Knowledge)**

1. Learn the fundamentals and principles of medical physics.
2. Identify the components of medical devices and how they are used.
3. Familiarize students with radiation, radioactivity, dosimetry and medical devices.
4. Familiarize students with the practice of radiation safety and radiation protection requirements.
5. Introduce students to the diagnosis and treatment of diseases.
6. Teaching medical skills and keeping up with the outside world.

#### **(Skills)**

1. Ability to diagnose diseases efficiently through medical imaging
2. Ability to radiotherapy.
3. Ability to prepare medical imaging and radiotherapy reports.
4. Ability to utilize radioactive energy in medical fields.
5. Get skills after graduation.

#### **(Attitudes)**

- The ability to apply medical theoretical information in a practical way.
- The ability to gain trust and interact with the patient undergoing examination and treatment.

- Developing the ethics of the medical and radiotherapy profession, by following the correct professional behavior.

### **Teaching methods:**

- Lecture
- Laboratory and small groups
- Methodical training
- Asking students to visit the library and websites to obtain additional knowledge of the study materials.

Providing an educational climate conducive to reasonable thinking through the continuous guidance of students by professors during lectures, opening a door for open and direct discussions with students.

- Hospitals and clinics use medical imaging and radiotherapy to train students.

### **Assessment methods:**

- Oral exams
- Daily exams
- Semester exams
- Final exams
- Scientific projects
- Reports and studies
  - Evaluation of the student in the classroom through daily attendance.
  - The student's interaction with the lecture and class discussions.
  - The students' subjective behavior.

The opinion questionnaire is conducted by the professor of the subject for the students.

### **Personal skills development:**

- Developing students' skills and abilities to use diagnostic imaging devices and various medical treatments
- Developing basic skills through educational guidance, conferences, symposia, and special seminars to discuss students' research.
- Developing skills, creative thinking and innovation in the field of specialization.

-	Hours	Topic of Theory	Required learning outcomes	Teaching method	Evaluation method
1	2h Theory	Electricity within the body (P.1)	To study and understanding of electricity within the body	Theory	Questions and discussions
2	2h Theory	Electricity within the body (P.2)	To study and understanding of electricity within the body	Theory	Questions and discussions
3	2h Theory	Physics of nuclear medicine (P.1)	To study and to provide basic information of radiation in medicine and radioactivity	Theory	Questions and discussions
4	2h Theory	Physics of nuclear medicine (P.2)	To study and to provide basic science information of radiation for using in in diagnostic, imaging and therapeutic	Theory	Questions and discussions
5	2h Theory	Physics of radiotherapy (P.1)	To provide physical information of radiotherapy	Theory	Questions and discussions
6	2h Theory	Physics of radiotherapy (P.2)	To provide basic radiation-science information of radiation interaction with body and how treatment by radiation doses	Theory	Questions and discussions
7	2h Theory	Radiation protection in Medicine	To study and to provide basic information about the method of radiation protection in Medicine	Theory	Questions and discussions
8	2h Theory	Physics of diagnostic X-ray (P.1)	To study and to provide physical science information of X ray	Theory	Questions and discussions

9	2h Theory	Physics of diagnostic X-ray (P.2)	To study and to provide physical science information of X ray interaction with the biological tissue	Theory	Questions and discussions
10	2h Theory	Physics of diagnostic X-ray (P.3)	To study and to provide physical science information of X ray images, Diagnostic and treatment	Theory	Questions and discussions
11	2h Theory	NMR (P.1)	To study and to provide basic information of nuclear magnetic resonance	Theory	Questions and discussions
12	2h Theory	NMR (P.2)	To study and to provide basic information of radiation and commonly used in diagnostic, imaging and therapeutic	Theory	Questions and discussions
13	2h Theory	Diagnostic Resonance imaging (P.1)	To study and to provide basic information of radiation	Theory	Questions and discussions
14	2h Theory	Diagnostic Resonance imaging (P.2)	To study and to provide basic information of radiation and commonly used in therapeutic and treatment	Theory	Questions and discussions
15		Examination			

### References:

- 1- Medical Physics (Cameron)
- 2- [https://www.hindawi.com/journals/bmri/2015/297158/?utm\\_source=google&utm\\_medium=cpc&utm\\_campaign=HDW\\_MRKT\\_GBL\\_SUB\\_ADWO\\_PAID\\_DYNOUR\\_X\\_PJ\\_Sitelink\\_10authordiscount&gclid=EA1aIQobChMIssjWmPji-gIVw4bVCh1\\_GgvXEAAAYAiAAEgJGafD\\_BwE](https://www.hindawi.com/journals/bmri/2015/297158/?utm_source=google&utm_medium=cpc&utm_campaign=HDW_MRKT_GBL_SUB_ADWO_PAID_DYNOUR_X_PJ_Sitelink_10authordiscount&gclid=EA1aIQobChMIssjWmPji-gIVw4bVCh1_GgvXEAAAYAiAAEgJGafD_BwE)
- 3- <https://www.news-medical.net/health/The-Role-of-Physics-in-Medicine.aspx>



### **3- Medical biology II**

**Aims of the course:**

**Aims of the course:**

1. Defining the basic animal tissues.
2. Introducing the classification of lower organisms.

Learning objectives:

(Knowledge):

- 1- The ability to differentiate between basic human tissues.
- 2- The basic structure and function of different human tissues

**(Skills):**

- 1- Understanding the basic structure of microscopes and how to use it
- 2- Recognizing the different types of microscopes
- 3- The ability to differentiate slides of different tissues

**(Attitudes):**

- 1- The concept of dealing with lab instrument in a professional way
- 2- Understanding the basic rules of behaving and respecting patients and colleagues.

**Teaching methods:**

Theory – lectures

Upload the lecture on the college website

Use data show and digital cam

Use the teaching specimens

Training courses

Small teaching groups.

**Assessment methods:**

Theoretical exams

Oral exams

Practical exams (using slides and pictures of slides)

## Course contents:

طريقة التقييم	طريقة التعليم	اسم الوحدة / أو الموضوع	الساعات	الأسبوع	
Questions and discussions	Theory and practical	Epithelial Tissue	2	1	
Questions and discussions	Theory and practical	Epithelium tissue types	2	2	
Questions and discussions	Theory and practical	Glandular epithelium	2	3	
Questions and discussions	Theory and practical	Connective tissue types,	2	4	
Questions and discussions	Theory and practical	Adipose tissue	2	5	
Questions and discussions	Theory and practical	Cartilage,	2	6	
Questions and discussions	Theory and practical	Development of cartilage	2	7	
Questions and discussions	Theory and practical	Bone	2	8	
Questions and discussions	Theory and practical	Bone marrow - PBL	2	9	
Questions and discussions	Theory and practical	Bone development	2	10	
Questions and discussions	Theory and practical	Muscular tissue I	2	11	
Questions and discussions	Theory and practical	Muscular tissue II	2	12	
Questions and discussions	Theory and practical	General Nervous tissue	2	13	
Questions and discussions	Theory and practical	Nervous structure of brain and spinal cord- PBL	2	14	
		Examination	Assessment	2	15

## References:

Basic histology, Janquira & Carneiro, 13th ed., McGraw-Hill, 2015

2. DiFiore's Atlas of Histology with Functional Correlations, Victor P. Eroschenko, 13th ed., Lippincott Williams & Wilkins, 2016

1. Histology: a text and atlas with correlated cell and molecular biology, 7th ed, 2016.

2. Human Biology, 15th ed, 2018.

[http://www.biology.arizona.edu/cell\\_bio/cell\\_bio.html](http://www.biology.arizona.edu/cell_bio/cell_bio.html)

<https://www.cellsalive.com/>

<http://www.histologyguide.com/slidebox/slidebox.html>

## **4- Biochemistry**

### **Aims of the course:**

- 1- Introducing students to the structures of life molecules and their importance in the human body and how they are interconnected to form macromolecules for cells and their relationship to the functions of the human body, and to know the methods of detecting and distinguishing them in the laboratory and their practical applications
- 2- To produce a competent medical student who is able to demonstrate comprehensive understanding of biochemistry as well as applied disciplines.
- 3 -To have a knowledge about the chemical structures of living molecules, their importance in building the cells of living organisms
- 4 -To understand how living molecules linked to the formation of macromolecules for cells and knowledge of methods of detection and clinical distinction and its practical applications.
- 5-To develop and keep pace with the scientific development of biochemistry.

### **Learning objectives:**

#### **(Knowledge):**

- 1- Clarify the basic concepts of biochemistry.
- 2-Knowledge and understanding of the chemical structures of life compounds
- 3-To identify the biological importance of life compounds in the human body
- 4-Enabling students to obtain knowledge and understanding of the practical experiences of life chemistry.

#### **(Skills):**

- 1- To have competence pertaining to basic instrumentation and procedures pertaining to biochemistry that are required to be practiced in community and at all levels of health care system.
- 2- To have acquired skills effectively in interpreting all laboratory reports.
- 3- The ability to perform basic chemical experiments and interpret findings in the lab
- 4- Critical thinking skill, which aims to pose a problem, analyze it logically, and reach the desired solution

#### **(Attitudes):**

- 1- Promoting professional ethics and dealing with patients among graduates

Students acquire different therapeutic skills

- 2- Strengthening the principle of lifelong learning in order to continue developing the professional skills
- 3- The student's awareness of the need for a balance between freedom and responsibility
- 4- The skill of making the right decision for the patient and based on logical thinking

**Teaching methods:**

Lectures that research and teach students ways to confront and solve problems

Follow up the way students think, their ways of expression and the speed of their response.

Experiments in laboratories.

Self-education

**Assessment methods:**

- Theory examinations

Practical examinations

-Activities and reports

**Personal skill development:**

D1: to follow the advances in medical science, and try to elevate the rank and accreditation of medical college locally and internationally

D2: Develop the capability of student to deal with information via the internet.

D3: Develop the discussion skills of students

D4: Teach the student to write the CV and express themselves

**Course contents:**

Assessment	Educational methods	subjects	Outcome	hours	week
General questions & discussion	theory	vitamins	Classification of - vitamins (Fat and water soluble vitamins)	2	1
General questions & discussion	theory	vitamins	<b>Chemistry, absorption, transport, mobilization, biochemical functions, dietary sources, deficiency and hypervitaminosis of Vitamin (A, D, E, K, C, B1, B2, B6, B12, Niacin, Biotin, Pantothenic acid, Folic acid)s</b>	2	2
General questions & discussion	theory	<b>Enzymes</b>	<b>Nomenclature and classification of enzymes - Chemical nature and properties of enzymes - Factors affecting enzyme activity, Active site - Enzyme inhibition (Reversible, irreversible and allosteric inhibition- Fatty acids (Saturated and unsaturated fatty acids), Essential fatty acids</b>	2	3
General questions & discussion	theory	<b>Enzymes</b>	- Competitive inhibition, Non-competitive, Enzyme specificity - Coenzymes, Mechanism of enzyme action - Thermodynamics of enzymatic reactions - Regulation of enzyme activity, Units of enzyme activity, Isoenzymes	2	4

<b>General questions &amp; discussion quiz</b>	<b>theory</b>	<b>Plasma proteins</b>	<b>Acids and bases, The pH scale, Buffer solutions, Acid-base balance in blood</b>	<b>2</b>	<b>5</b>
<b>General questions &amp; discussion</b>	<b>theory</b>	<b>Plasma proteins</b>	Globulins, Haptoglobin, Ceruloplasmin, Transferrin and C-reactive protein - Immunoglobulins, Classes of Immunoglobulins (Ig G, Ig A, Ig M, Ig D and Ig E) - Blood clotting -	<b>2</b>	<b>6</b>
<b>General questions &amp; discussion quiz</b>	<b>theory</b>	<b>Nucleic acid</b>	Introduction / DNA and RNA structure <b>Nucleotide structure nucleoside</b>	<b>2</b>	<b>7</b>
<b>General questions &amp; discussion</b>	<b>theory</b>	<b>Nucleic acid</b>	- Therapeutic applications of nucleosides and oligonucleotides DNA / protein interactions	<b>2</b>	<b>8</b>
<b>General questions &amp; discussion quiz</b>	<b>theory</b>	<b>Biological Membranes and Transport</b>	Chemical composition and structure of membranes - Transport across membranes - Passive diffusion, Facilitated diffusion and Active transport.	<b>2</b>	<b>9</b>
<b>General questions &amp; discussion</b>	<b>theory</b>	<b>- Biological Membranes and Transport</b>	Transport systems, - Passive transport of water-osmosis - Transport of macromolecules, - Diseases due to loss of membrane transport systems	<b>2</b>	<b>10</b>
<b>General questions &amp; discussion</b>	<b>theory</b>	<b>- Hemoglobin and porphyrins</b>	Binding and transport of - O <sub>2</sub> and CO <sub>2</sub> by hemoglobin, Bohr effect	<b>2</b>	<b>11</b>
<b>General questions &amp; discussion</b>	<b>theory</b>	<b>Hemoglobin and porphyrins</b>	Hemoglobin derivatives (Methemoglobin and Carboxyhemoglobin) - Structure and nomenclature of porphyrins, Biosynthesis of Heme		<b>12</b>
<b>General questions</b>	<b>theory</b>	<b>Digestion and absorption</b>	Gastrointestinal tract, Digestion and mechanism		<b>13</b>

<b>&amp; discussion</b>			of carbohydrates absorption - Digestion and mechanism of protein and amino acids absorption		
<b>General questions &amp; discussion</b>	<b>theory</b>	<b>Digestion and absorption</b>	Digestion and mechanism of lipid absorption - Digestion and mechanism of nucleic acids absorption		<b>14</b>
<b>exam</b>	<b>theory</b>	<b>Midcourse Examination</b>	<b>Midcourse Examination</b>	<b>2</b>	<b>15</b>

### Practical Biochemistry / Second Course: 30 hrs Practical (15 Units)

#### Practical (2 hrs/week)

- 1- Chromatography for amino acid separation
- 2- Collection and handling of Samples
- 3- Estimation of Vit-D in blood
- 4- Estimation of Vit-C in blood
- 5- Hemoglobin test
- 6- Estimation of iron
- 7- Estimation of albumin
- 8- Estimation of gamma globulin in the serum
- 9- Estimation of Amylase in Serum
- 10- Estimation of lipase in serum

#### References:

chemical basis of life, by George H. Schmid .  
Principle of Biochemistry ,lenniger medical biochemistry

[www.chemicalprocessing.com](http://www.chemicalprocessing.com)

[www.bytoco.com](http://www.bytoco.com)

## **5- Biosafety**

### **Aims of the course:**

- 1- To introduce students to the concept of biosafety
- 2- To ensure that students are aware of the importance of biosafety

### **Learning objectives:**

#### **(Knowledge):**

- 1- The understanding of different types of biohazards
- 2- The recognition of basic rules of biosafety

#### **(Skills):**

- 1- The ability to deal with hazardous accidents in labs
- 2- how to protect self and others from general chemical hazards
- 3- the prevention of dangerous lab procedures

#### **(Attitudes):**

- 1- to understand the responsibility of protecting patients
- 2- how to deal professionally with potentially hazardous chemicals
- 3- how to be safe doctors and safe lab workers

### **Teaching methods:**

Theoretical lectures  
Practical sessions  
Small group discussions  
Interactive electronic lessons

### **Assessment methods:**

Written exams  
Practical exams  
Students reports

### **Course contents:**

#### **1-introduction to Biosafety and Biosecurity..... (1 Week)**

- Key components of biorisk management
- Component of safety in all the laboratories
- Chemical safety and chemical segregation
- General safety precautions

#### **2- Biosafety barriers in labs..... (2 Week)**

- PPT, - Laboratories design

#### **3- Biosafety levels ..... (3 Week)**

- Risk assessment strategy
- Risk group, Biosafety levels, practice and equipments
- Standard practices required in bio labs

#### **4- Biological agents ..... (4 Week)**

- Routes of infection, - Basic of control measures
- Hazards groups classification system



- A biosafety cabinet (BSC)
- 5- Bio risk and Biohazards ..... (5 Week)**
  - COSHH: Control of substances hazardous to health
  - Assessing risk for work with blood and human tissues hazards
  - Control measures for work with blood and human tissues
  - Containment level
- 6 - Mid Course Exam..... (6 Week)
- 7- Biorisk management system ..... (7 Week)**
  - Assess the capability of the laboratory staff to control hazards
  - Relation of risk group to Biosafety levels: practice and equipment
  - Mitigation control measures
  - Sustainability of biorisk Management system
  - Strengthening biorisk management
- 8- Types of biological wastes ..... (8 Week)**
  - Categories of biological wastes
  - Decontamination of biological wastes
- 9- Transportation of biological materials ..... (9 Week)**
  - International transport regulation
  - The basic triple packaging system
- 10-Accident response ..... (10 Week)**
  - Spill clean –up procedure, - Investigation an incident
- 11- Overview of biological safety and Security equipment ..... (11 Week)**
- 12- Introduction to Biosecurity ..... (12 Week)**
  - Risk characterization in biosecurity
  - Vulnerability assessment, - Component of lab biosecurity
- 13- Biosafety "practical part" ..... (13 Week)**
- 14- Biosafety rules "simulation 3D" ..... (14 Week)**
- 15- Biosafety training..... (15 Week)**

## **6- English**

### **Aims of the course:**

- 1- To improve the English language of students
- 2- To make students more capable of making conversations and presentations in English
- 3- To make it easier for students to navigate their way when reading different texts and studying through reading internet sites and scientific researches

### **Learning objectives:**

#### **(Knowledge):**

- 1- Expand the vocabulary of medical subjects
- 2- How to translate the conversations with patients into English case sheets
- 3- The appropriate grammar and punctuation rules in English

#### **(Skills):**

- 1- How to listen and understand lectures and presentations in English
- 2- How to write and prepare reports, case sheets and seminars in English
- 3- The principles of writing drug prescriptions.

#### **(Attitudes):**

- 1- How to respect patients when taking history and conducting clinical examination
- 2- How to be tactful when discussing embarrassing topics

### **Teaching methods:**

Theoretical lectures

Listening to medical conversations

### **Assessment methods:**

Written exams

Oral exams

Writing reports and presentations

### **Course contents:**

- 1- Presenting complaints
- 2- Working general practice
- 3- Instructions and procedures
- 4- Explaining and reassuring
- 5- Dealing with medications

- 6- Lifestyle
- 7- Parents and young children
- 8- Communications
- 9- Working in psychiatry
- 10- Terminal illness and dying
- 11- Working in a team
- 12- Diversity at work

**The daily schedule of second course weeks (first grade):**

3:30 -2:30	2:30 -1:30	1:30 - 12:30	12:30-11:30	11:30 - 10:30	10:30 -9:30	9:30-8:30	اليوم
نشاطات طلابية	E-Practical Anatomy A-Practical Medical Physics B-Practical Medical Biology C-Practical Biochemistry D-Practical Biosafety		B-Practical Anatomy C-Practical Medical Physics D-Practical Medical Biology E-Practical Biochemistry A-Practical Biosafety		A-Practical Anatomy B--Practical Medical Physics C-Practical Medical Biology D-Practical Biochemistry E -Practical Biosafety		الاحد
		Biosafety	Medical physics II		Medical chemistry II		الاثنين
		English	Medical Biology II		Anatomy II		الثلاثاء
	Problem Base Learning(PBL)		D-Practical Anatomy E-Practical Medical Physics A-Practical Medical Biology B-Practical Biochemistry C-Practical Biosafety		C-Practical Anatomy D-Practical Medical Physics E-Practical Medical Biology A-Practical Biochemistry B-Practical Biosafety		الاربعاء

## Second year

### First course:

عدد الوحدات	عدد الساعات		المادة الدراسية	ت
	العملي	النظري		
4	2	3	Anatomy I (تشریح)	.1
5	2	4	Physiology I (الفسلجة)	.2
4	2	3	Biochemistry I (الكيمياء)	.3
3	2	2	Histology I (الانسجة)	.4
1	/	1	Embryology I (الاجنة)	.5
2	2	1	General pathology I (الامراض)	.6
1	/	1	Democracy (ديمقراطية)	.7
20			المجموع	

# 1- Anatomy I

## **Aims of the course:**

1. Describe the topography of the head and neck.
2. Emphasize the clinical significance of anatomical structures and relations facilitating the understanding of a disease process or surgical procedure on anatomical grounds.

## Learning objectives:

### (Knowledge):

1. Provide the anatomy essential to understand clinical procedures in the examination of head and neck structures.
2. Provide surface markings of anatomical structures on the body wall.

### (Skills):

- 1- Direct the anatomical knowledge towards the appearance of structures when they are imaged in radiographs.
- 2- Establish working knowledge of sectional anatomy.

### (Attitudes):

- 1- let think about thinking ability: to estimate the ability of the student to think logically to solve the problems
- 2- - critical thinking: study the case problem to solve it using their knowledge.
- 3- to teach the student the limits of responsibilities and freedom.
- 4- the proper way to evaluate the patient's condition to take the appropriate decision.

## **Teaching methods:**

Attending lectures  
Theory lectures using multimedia facilities  
Self-education, discussion groups  
Training and activities  
Directing the student for some medical websites  
Analytical and critical thinking  
Quiz and examinations

## **Assessment methods:**

Student activities  
Reports  
Daily and weekly self-assessments  
Course examination

## **Course contents:**

طريقة التقييم	طريقة التعليم	اسم الوحدة / أو الموضوع	الساعات	الأسبوع
Questions and discussion	Theory and practical	Osteology of the skull	2	1
Questions and discussion	Theory and practical	The scalp, face, muscles, nerves and blood supply	2	2
Questions and discussion	Theory and practical	Temporal, infratemporal and pterygopalatine fossae	2	3
Questions and discussion	Theory and practical	The ear, external, middle and inner ear- PBL	2	4
Questions and discussion	Theory and practical	The nose and nasal cavity	2	5
Questions and discussion	Theory and practical	The orbit and eyeball	2	6
Questions and discussion	Theory and practical	The oral cavity	2	7
Questions and discussion	Theory and practical	The neck region, triangles and muscles	2	8
Questions and discussion	Theory and practical	the sub occipital region and contents- PBL	2	9
Questions and discussion	Theory and practical	The pharynx	2	10
Questions and discussion	Theory and practical	The larynx	2	11
Questions and discussion	Theory and practical	The thyroid gland and parathyroid glands	2	12
Questions and discussion	Theory and practical	The blood vessels of the head and neck	2	13
Questions and discussion	Theory and practical	Revision – sectional anatomy- PBL	2	14

### References:

Clinical anatomy by regions, Richard S. Snell, 10th ed.,  
Lippincott Williams & Wilkins, 2018.

2. Grant's atlas of anatomy, Anne M.R. Agur & Arthur F. Dalley,  
14th ed., Lippincott Williams & Wilkins, 2017

Anatomy. The anatomical basis of life

Gray's Anatomy for student

<https://www.biodigital.com>

<http://anatomylearning.com/en>

<http://anatomyzone.com>

## **2- Physiology I**

### **Aims of the course:**

1. Determine the functions of all parts of body systems
2. Description of the mechanism of action of body system and the physiological events associated with it
3. Evaluation of reference value of various vital organs under different biological conditions.
4. Discriminations between normal and abnormal functions of the organs
5. Brief description of pathophysiology of systems.
6. Graduate an expert physician in the laboratory investigations

### **Learning objectives:**

#### **(Knowledge):**

1. Make the student oriented in link between clinical symptoms with lab diagnosis or lab investigation
2. Ability of the student to manage the cases depending on the lab diagnosis
3. The necessary information about the physiology of the Nervous system, Endocrine system and Cardiovascular system

#### **(Skills):**

1. Be familiar with basic clinical procedures like vital signs measurement
2. Be familiar with normal ranges of different clinical investigations results

#### **(Attitudes):**

1. Make the students familiar with novel medical skills
2. Make the students familiar with continuous medical learning even post graduate to make the physician in touch with updates in medical practice
3. Estimate the ability of the student to think logically to solve the problem
4. Ability of the arrange of the information and application
5. Critical thinking: study the case problem to solve it using their knowledge

### **Teaching methods:**

Theory – lectures

Upload the lectures on the formal website of the college of medicine

Educational movies

Use data show and digital cam

Training courses

Small teaching groups.

### **Assessment methods:**

Theory exam

Oral exam

Practical examinations

Problem based learning

Reports and activities

Course contents:

<i>Week</i>	<i>Lecture number</i>	<i>Topics Covered</i>	<i>Objectives</i>
1	1	Introduction to nervous tissue	<ul style="list-style-type: none"> <li>Describe the organization of the nervous system.</li> <li>Describe the three basic functions of the nervous system.</li> </ul>
1	2	Electrical signals in neurons ;resting membrane potential, generation of A.P,propagation of AP	<p>Describe the cellular properties that permit communication among neurons and effectors.</p> <ul style="list-style-type: none"> <li>Compare the basic types of ion channels, and explain how they relate to graded potentials and action potentials.</li> <li>Describe the factors that maintain a resting membrane potential.</li> <li>List the events that generate an action potential.</li> </ul>
1	3	Signal transmission at synapses	<ul style="list-style-type: none"> <li>Explain the events of signal transmission at electrical and chemical synapses.</li> <li>Distinguish between spatial and temporal summation.</li> <li>Give examples of excitatory and inhibitory neurotransmitters, and describe how they act.</li> </ul>
1	4	Neurotransmitters	Classes &function of Neurotransmitters
2	5	Spinal cord physiology: sensory & motor tracts	<ul style="list-style-type: none"> <li><b>Describe</b> the functions of the major sensory and motor tracts of the spinal cord.</li> </ul>
2	6	Reflexes& reflex arc	<ul style="list-style-type: none"> <li><b>Describe</b> the functional components of a reflex arc and the ways reflexes maintain homeostasis.</li> </ul>
2	7	Brain & cranial nerves	<ul style="list-style-type: none"> <li><b>Identify</b> the major parts of the brain.</li> <li><b>Describe</b> how the brain is protected.</li> <li><b>Describe</b> the blood supply of the brain.</li> </ul>
2	8	Blood brain barrier, CSF	<ul style="list-style-type: none"> <li><b>Explain</b> the formation and circulation of cerebrospinal fluid.</li> </ul>
3	9	Brain stem & reticular formation	<ul style="list-style-type: none"> <li><b>Describe</b> the structures and functions of the brain stem and reticular formation.</li> </ul>
3	10	Cerebellum ,thalamus ,hypothalamus	<ul style="list-style-type: none"> <li><b>Describe</b> the structure and functions of the cerebellum.</li> <li><b>Describe</b> the components and functions</li> </ul>



			of the diencephalon (thalamus, hypothalamus, and epithalamus)
3	11	Cerebral cortex , basal nuclei	<ul style="list-style-type: none"> <li>• <b>Describe</b> the cortex, gyri, fissures, and sulci of the cerebrum.</li> <li>• <b>Locate</b> each of the lobes of the cerebrum.</li> <li>• <b>Describe</b> the tracts that compose the cerebral white matter.</li> <li>• <b>Describe</b> the nuclei that compose the basal nuclei</li> </ul>
3	12	Limbic system	• <b>Describe</b> the structures and functions of the limbic system.
4	13	ANS : comparison of somatic & ANS	<b>Compare</b> the structural and functional differences between the somatic and autonomic parts of the nervous system.
4	14	Sympathetic & parasympathetic responses	<b>Describe</b> the major responses of the body to stimulation by the sympathetic and parasympathetic divisions of the ANS.
4	15	ANS Neurotransmitters & receptors	<p><b>Describe</b> the neurotransmitters and receptors involved in autonomic responses.</p> <p><b>Describe</b> the major responses of the body to stimulation by the sympathetic and parasympathetic divisions of the ANS</p>
4	16	Somatic sensation	<ul style="list-style-type: none"> <li>• <b>Describe</b> the location and function of the somatic sensory receptors for tactile, thermal, and pain sensations.</li> <li>• <b>Identify</b> the receptors for proprioception and <b>describe</b> their functions.</li> </ul>
5	17	Somatic sensory P.W	<b>Describe</b> the neuronal components and functions of the posterior column–medial lemniscus pathway, the anterolateral pathway, and the spinocerebellar pathway.
5	18	Somatic motor P.W	• <b>Identify</b> the locations and functions of the different types

			<p>of neurons in the somatic motor pathways.</p> <ul style="list-style-type: none"> <li>• <b>Compare</b> the locations and functions of the direct and indirect motor pathways.</li> <li>• <b>Explain</b> how the basal nuclei and cerebellum contribute to movements</li> </ul>
5	19	<b>Special sense physiology</b> anatomy of eye ball	<b>identify</b> each of the accessory structures of the eye and the structural components of the eyeball.
5	20	Physiology of vision	<ul style="list-style-type: none"> <li>• <b>Discuss</b> image formation by describing refraction, accommodation, and constriction of the pupil.</li> </ul>
6	21	Visual P.W.	<ul style="list-style-type: none"> <li>• <i>Describe the processing of visual signals in the retina and the neural pathway for vision</i></li> </ul>
6	22	Functions of retina: photoreception	Photoreceptors and Photopigments
6	23	Error of refraction	Describe myopia, hypermetropia, astigmatism
6	24	Functional anatomy of ear: impedance matching	<b>Describe</b> the anatomy of the structures in the three main regions of the ear.
7	25	Organ of Corti: peripheral auditory mechanism	<b>Explain</b> the function of each of the receptor organs for equilibrium.
7	26	Auditory pathway, physiology of hearing	<ul style="list-style-type: none"> <li>• <b>List</b> the major events in the physiology of hearing.</li> </ul>
7	27	Physiology of equilibrium	<ul style="list-style-type: none"> <li>• <b>Describe</b> the auditory and equilibrium pathways</li> </ul>
7	28	Physiology of taste & smell	<ul style="list-style-type: none"> <li>• <b>Describe</b> the structure of the olfactory receptors and other cells involved in olfaction. • <b>Outline</b> the neural pathway for olfaction.</li> <li><b>Describe</b> the structure of the gustatory receptors and the neural pathway for gustation.</li> </ul>
8	29	<b>Introduction to endocrinology</b>	<b>Compare</b> control of body functions by the nervous system and endocrine system.
8	30	Endocrine gland	<b>Distinguish</b> between exocrine and endocrine glands.

8	31	Hormone activity	<p><b>Describe</b> how hormones interact with target-cell receptors.</p> <ul style="list-style-type: none"> <li>• <b>Compare</b> the two chemical classes of hormones based on their solubility..</li> </ul>
8	32	Mechanism of action	<p><b>Describe</b> the two general mechanisms of hormone action.</p> <ul style="list-style-type: none"> <li>• <b>Describe</b> the mechanisms of control of hormone secretion.</li> </ul>
9	33	Hypothalamus And pituitary gland	<p><b>Describe</b> the locations of and relationships between the hypothalamus and pituitary gland. • <b>Describe</b> the location, histology, hormones, and functions of the anterior and posterior pituitary.</p>
9	34	Anterior pituitary gland	<ul style="list-style-type: none"> <li>• Control if secretion of ant. Pituitary</li> <li>• Solve problems concerning hypothalamic–anterior pituitary axis</li> <li>• Solve problems concerning disorders of the hypothalamic– anterior pituitary axis</li> </ul>
	35	Posterior pituitary gland	<ul style="list-style-type: none"> <li>• Answer questions about hormones of the posterior pituitary</li> <li>• Explain information related to regulation of ECF volume and osmolarity</li> <li>• Answer questions about pathophysiologic changes in ADH secretion</li> <li>• Use knowledge of hyponatremia</li> </ul>
	36	Thyroid gland	<ul style="list-style-type: none"> <li>• Solve problems concerning overview of the thyroid gland</li> <li>• Use knowledge of biosynthesis and transport of thyroid hormones Interpret scenarios on physiologic actions of thyroid hormones</li> </ul> <p>.. Answer questions about control of thyroid hormone secretion</p> <p>.. Answer questions about pathologic changes in thyroid hormone secretion</p>
10	37	Adrenal gland	<p>.. Use knowledge of functional regions of the adrenal gland</p>

			<ul style="list-style-type: none"> <li>.. Demonstrate understanding of biosynthetic pathways of steroid hormone synthesis</li> <li>.. Interpret scenarios on physiologic actions of glucocorticoids</li> <li>.. Solve problems concerning control of adrenocorticotropin and cortisol secretion</li> <li>.. Demonstrate understanding of physiologic actions of aldosterone .. Explain information related to control of aldosterone secretion</li> <li>.. Explain information related to glucocorticoid disorders</li> <li>.. Explain information related to mineralocorticoid disorders</li> <li>.. Explain information related to enzyme deficiencies</li> <li>Answer questions about hormones of the adrenal medulla</li> <li>.. Demonstrate understanding of major metabolic actions of epinephrine</li> <li>.. Interpret scenarios on pheochromocytomas</li> </ul>
	38	<p>Insulin and glucagon Diabetes mellitus</p>	<ul style="list-style-type: none"> <li>. Use knowledge of hormones of the islets of Langerhans</li> <li>.. Use knowledge of actions of insulin .. Use knowledge of control of insulin secretion</li> <li>.. Explain information related to actions of glucagon</li> <li>.. Answer questions about control of glucagon secretion</li> <li>.. Use knowledge of diabetes mellitus .. Answer questions about pancreatic endocrine-secreting tumors</li> </ul>
	39	<p>Parathyroid gland Calcitonin hormone</p>	<ul style="list-style-type: none"> <li>.. Solve problems concerning parathyroid hormone</li> <li>.. Solve problems concerning calcitonin</li> </ul>
	40	<p>Calcium and phosphate homeostasis</p>	<ul style="list-style-type: none"> <li>Solve problems concerning overview of calcium and phosphate</li> <li>.. Solve problems concerning bone remodeling</li> <li>.. Demonstrate understanding of role of vitamin D (calcitriol) in calcium homeostasis</li> <li>.. Solve problems concerning disorders in calcium and phosphate</li> <li>.. Answer questions about metabolic bone disorder</li> </ul>

11	41	<b>CVS</b> Physiology of heart : cardiac structures	<p>CV 1. Contrast the duration of the action potential and the refractory period in a cardiac muscle, a skeletal muscle, and a nerve. Sketch the temporal relationship between an action potential in a cardiac muscle cell and the resulting contraction (twitch) of that cell. On the basis of that graph, explain why cardiac muscle cannot remain in a state of sustained (tetanic) contraction.</p> <p>CV 2. State the steps in excitation contraction coupling in cardiac muscle. Outline the sequence of events that occurs between the initiation of an action potential in a cardiac muscle cell and the resulting contraction and then relaxation of that cell. Provide specific details about the special role of Ca<sup>2+</sup> in the control of contraction and relaxation of cardiac muscle.</p> <p>CV 3. Compare cardiac and skeletal muscle with respect to: cell size, electrical connections between cells, and arrangement of myofilaments. Based on ion permeability and electrical resistance describe role of gap junctions in creating a functional syncytium.</p> <p>CV 4. Identify the role of extracellular calcium in cardiac muscle contraction. Identify other sources of calcium that mediate excitation-contraction coupling, and describe how intracellular calcium concentration modulates the strength of cardiac muscle contraction.</p> <p>CV 5. Describe the role of Starling's Law of the Heart in keeping the output of the left and right ventricles equal.</p> <p>CV 6. Describe the difference in the way changes in preload and changes in contractility influence ventricular force development. Compare the energetic consequences of these two separate mechanisms of force modulation.</p>
	42	Cardiac conduction	
	43	Ventricular AP	
	44	Phases of excitation	
12	45	Mechanical properties	
	46	ECG	<p>CV . Define the term dipole. Describe characteristics that define a vector. Describe how dipoles generated by the heart produce the waveforms of the ECG. CV . Describe the electrode conventions used by clinicians to standardize ECG measurements. Know the electrode placements and polarities for the 12 leads of a 12lead electrocardiogram and the standard values for pen amplitude calibration and paper speed.</p> <p>CV . Name the parts of a typical bipolar (Lead II) ECG tracing and explain the relationship between each of the waves, intervals, and segments in relation to the electrical state of the heart. CV . Explain why the ECG tracing looks different in each of the 12 leads.</p>
	47	ECG	
	48	ECG parts	

			<p>CV 39. Define mean electrical vector (axis) of the heart and give the normal range. Determine the mean electrical axis from knowledge of the magnitude of the QRS complex in the standard limb leads.</p> <p>CV . Describe the alteration in conduction responsible for most common arrhythmias: i.e., tachycardia, bradycardia, A-V block, Wolff-Parkinson-White (WPW) syndrome, bundle branch block, flutter, fibrillation.</p> <p>CV. Describe electrocardiographic changes associated respectively with myocardial ischemia injury, and death. Define injury current and describe how it is alters the S-T segment of the ECG</p>
13	49	Cardiac cycle	<ul style="list-style-type: none"> <li>.. Interpret scenarios on normal cardiac cycle</li> <li>.. Interpret scenarios on pressure volume loops</li> <li>.. Interpret scenarios on valvular dysfunction</li> </ul>
	50	Cardiac output	<p>Factors affecting cardiac out put</p> <p>Regulation of C.O.P venous return</p>
	51	efficiency & failure	
	52	Neural regulation of cardiac activity Cardiovascular reflexes	<p>.Nerve supply of the heart, nervous control of the C. V</p> <p>. Vagal tone, vasosenory areas and cardiovascular reflexes</p>
14	53	Regulation of heart rate	<p>Factors controlling the heart rate. .. Demonstrate understanding of overview of the cardiovascular system</p>
	54	Nutrition & metabolism of heart	<ul style="list-style-type: none"> <li>.. Demonstrate understanding of systemic arterial pressure regulation</li> <li>.. Demonstrate understanding of hemodynamics</li> <li>.. Demonstrate understanding of wall tension</li> </ul>
	55	Revision	<ul style="list-style-type: none"> <li>.. Use knowledge of vessel compliance</li> </ul>
	56	Peripheral circulation - General aspect of CVS	<ul style="list-style-type: none"> <li>.. Use knowledge of determinants of cardiac output</li> <li>.. Solve problems concerning the effect of gravity</li> </ul>

15	57	Regulation of blood flow & blood pressure	<p>.. Answer questions about characteristics of systemic arteries</p> <p>.. Demonstrate understanding of Fick principle of blood flow .. Interpret scenarios on blood flow regulation</p> <p>.. Explain information related to blood flow to the various organs .. Demonstrate understanding of fetal circulation</p> <p>.. Explain information related to cardiovascular stress: exercise</p>
15	58	Neural control of circulation	<p>. Contrast the local and neural control of cerebral blood flow. Discuss the relative important of O<sub>2</sub>, CO<sub>2</sub>, and pH in regulating cerebral blood flow. . Describe the structural components of the blood-brain barrier and how this barrier impedes the movement of gases, proteins, and lipids from the blood to neurons. Identify the differences in cerebrospinal fluid and plasma relative to protein concentration, and describe the function of cerebrospinal fluid. . Contrast the mechanisms of the two major types of stroke, hemorrhagic and occlusive stroke.</p> <p>. Contrast the local and neural control of the splanchnic circulation.</p> <p>Describe the role of the hepatic portal system and the hepatic artery in providing flow and oxygen to the liver.</p> <p>: Describe the blood pressure in the hepatic portal vein, hepatic sinusoids, and the vena cava. Given an increase in central venous pressure, predict how hepatic microcirculatory fluid exchange will be altered, including the development of ascites.</p> <p>Contrast local and neural control of cutaneous blood flow.</p> <p>Discuss the unique characteristics of skin blood flow that are adaptive for body temperature regulation.</p>
	59	Special features of cerebral circulation	
	60	Special features of circulation in skeletal m. & skin	

## Small group & Practical physiology

Time - Group	Subject	objectives
1 <sup>st</sup> week - as sensory	B D	<b>Neurophysiology</b> C Conduction of A.P Case M.S
		<ol style="list-style-type: none"> <li>1. How is the action potential propagated in nerves (such as nerves of the visual system)?</li> <li>2. What is a length constant, and what factors increase it?</li> <li>3. Why is it said that action potentials propagate “nondecrementally?”</li> <li>4. What is the effect of nerve diameter on conduction velocity, and why?</li> <li>5. What is the effect of myelination on conduction velocity, and why?</li> <li>6. In myelinated nerves, why must there be periodic breaks in the myelin sheath (nodes of Ranvier)?</li> </ol>
2 <sup>nd</sup> week - neuromuscular ] affect	B D	Synaptic C Case M.G . A
		<ol style="list-style-type: none"> <li>1- What effect would an AChE inhibitor have at the transmittion of A.P junction?</li> <li>2- How would a large reduction in extracellular [Ca<sup>2+</sup>] affect synaptic transmission at the neuromuscular junction?</li> <li>3- What is the ionic mechanism that underlies the endplate potential (EPP) produced by acetylcholine (ACh) release .</li> </ol>
3 <sup>rd</sup> wk	Sensory & motor P.W of spinal cord	
		<ol style="list-style-type: none"> <li>1--What are the two ascending sensory pathways, and what information does each convey?</li> <li>2--What are the two anatomic divisions of the dorsal columns, and from which anatomic structures do these respective divisions relay sensory information?</li> <li>3-At what neuroanatomic locations do projections in the corticospinal tract, dorsal columns, and anterolateral system (spinothalamic system) cross over?</li> </ol>
4 <sup>th</sup>	UMNL & LMNL(	How do upper motor neurons differ from lower motor neurons?
5 <sup>th</sup>	case of ALS) Parkinsonism	<ol style="list-style-type: none"> <li>1-Which nuclei compose basal ganglia</li> <li>2- where is lesion in Parkinson disease?</li> <li>3-diffrentiate between resting tremor, intentional &amp; positional tremor</li> </ol>
6 <sup>th</sup>	ANS	<ol style="list-style-type: none"> <li>1- What is the relationship of the adrenal medulla to the autonomic nervous system?</li> <li>2. What hormones are secreted by a pheochromocytoma?</li> <li>3. Why does an elevated urinary level of VMA (a metabolite of epinephrine and norepinephrine) suggest the presence of a pheochromocytoma?</li> <li>4. In view of the pathophysiology of pheochromocytoma, explain the why blood pressure increase.</li> </ol>
7 <sup>th</sup> week	Examination of cerebellum	<b>DANISH</b>
8 <sup>rd</sup> week	referred pain	<ol style="list-style-type: none"> <li>1- Why is pain related to myocardial ischemia often presented in such regions of the body (neck , left shoulder , epigastric region ) .</li> <li>2- What is the name of such pain type?</li> </ol>



- 3- Read about pain : receptors . types of stimuli , type of nerve fiber , neurotransmitters , Analgesia system ??
- 4- Tectile stimuli increase or inhibit pain ?? why??

9<sup>th</sup> week      Snellen chart ?      Examination of Visual acuity , Visual field Defect in visual pathway examination

& pupillary reflex

10<sup>th</sup>      Hearing test      Interpretations results of Rinne's & wibber Tests

11<sup>th</sup>      CVS      The arterial and venous pulsations and their abnormalit

12<sup>th</sup>      CVS      heart sounds

13<sup>th</sup>      CVS      Methods for recording E. C. G, electro cardiographic leads.

14<sup>th</sup>      CVS      Normal E. C. G. (apparatus)- connections-leads

15<sup>th</sup>      Cvs      Normal variations in different E. C. G. Leads 16<sup>th</sup>      CVS      Some ECG

### References:

- 1.Guyton and Hall textbook of medical physiology
- 2.Ganong's Review of Medical Physiology

### **3- Biochemistry I**

#### **Aims of the course:**

- 1- Graduating distinguished doctors and rehabilitating them scientifically, professionally and ethically so that they can provide health and medical care to individuals, families and society on sound scientific bases and in accordance with the noble moral, social and humanitarian values with great interest in primary health care
- 2- Developing curricula, teaching aids and methods to improve quality based on international quality standards and academic accreditation
- 3- Achieving accreditation through the institutional capacity standards of the college. Achieving academic accreditation standards for student and graduate programs offered by the college
- 4-Continuous support for distinguished cadres of faculty members through an academic environment that encourages production and creativity
- 5- Continuous development of the scientific research system to identify and diagnose major health problems in the community, propose appropriate scientific solutions to them, and keep pace with development in basic and clinical medical sciences.

#### **Learning objectives:**

##### **(Knowledge):**

- 1- The student acquires adequate knowledge of scientific terms used in medicine and theoretical material.
- 2- The student will be familiar with the different types of materials and devices used in the field of medicine
- 3- Understanding the basics of clinical biochemistry
- 4- The students will learn about the basics of human metabolism

##### **(Skills):**

- 1- Carry out routine laboratory tests and measure the levels of many blood components such as blood sugar, blood lipids, liver function tests,
- 2- Identify the metabolism of biological compounds in disease states in the human body and how to diagnose them.
- 3- Enabling students to obtain knowledge and understanding of practical life chemistry experiments
- 4- Making students able to analyze the results of important biochemical tests and how to relate them to clinical cases

##### **(Attitudes):**

- 1- Promoting professional ethics and dealing with patients among graduates
- 2- Students acquire different therapeutic skills
- 3- Strengthening the principle of lifelong learning in order to continue developing the profession
- 4- Critical thinking skill, which aims to pose a problem, analyze it logically, and reach the desired solution

- 5- The student's awareness of the need for a balance between freedom and responsibility
- 6- The skill of making the right decision for the patient and based on logical thinking

**Teaching methods:**

- lectures
- Upload lecture on the college website
- Educational movies
- Use data show and digital cam
- Training courses
- Small group discussion with case study and problem solving.

**Assessment methods:**

- . Written Examination
- . Oral examination
- practical examination
- Small group discussion
- reports and activities

**Course contents:**

**Practical Biochemistry I / First Course: 30 hrs Practical (15 Units)  
(2 hrs/week)**

- 1- Introduction and Principles of Spectrophotometer ( Measuring of Sample)
- 2- Estimation of Blood Sugar
- 3-Oral glucose tolerance test
- 4- Estimation of HA1c
- 5- PBL (T2DM : case scenario)
- 6- Estimation of Serum TG
- 7-Serum HDL test
- 8-Serum LDL test
- 9-Serum total cholesterol
- 10-PBL (hyperlipidemia case: scenario)
- 11- Estimation of ketone bodies
- 12-Estimation of Serum Total Proteins

**Theory:**

طريقة التقييم Assessment	طريقة التعليم Educational methods	اسم الوحدة / أو الموضوع subjects	مخرجات التعلم المطلوبة Outcome	الساعات hours	الأسبوع week
General questions & discussion	theory	Metabolism of carbohydrates	Major pathways of carbohydrate metabolism Glycolysis, Reactions - of glycolysis, Regulation of glycolysis - Citric acid cycle, Reactions of citric acid cycle, Regulation of citric acid cycle	2	1
General questions & discussion and quiz	theory	Metabolism of carbohydrates	Gluconeogenesis, Reactions and regulation of gluconeogenesis	2	2
General questions & discussion and quiz	theory	Metabolism of carbohydrates	- Glycogen metabolism, Glycogenesis, Glycogenolysis and their Regulation	2	3
General questions & discussion	theory	Metabolism of carbohydrates	Disorder of carbohydrate, -Diabetes mellitus	2	4
General questions &	Theory	Metabolism of lipids	Triacylglycerols, Transport of lipids, Plasma lipids, Fatty acid oxidation - Oxidation of fatty acids, Ketone bodies, Ketogenesis	2	5
General questions & discussion	theory	Metabolism of lipids	- Regulation of ketogenesis, Ketoacidosis - Biosynthesis of fatty acids, Reactions of fatty acid - Synthesis of triacylglycerols, Metabolism and synthesis of phospholipids	2	6
General questions & discussion	theory	Metabolism of lipids	- Metabolism, functions, regulation, transport and degradation of Cholesterol	2	7

			<b>- Disorder of lipids, Hyper and Hypocholesterolemia</b>		
<b>General questions &amp; discussion</b>	<b>theory</b>	<b>Lipoproteins metabolism</b>	<b>Structure and classification of lipoproteins - Metabolism of lipoproteins, Metabolism of HDL</b>	<b>2</b>	<b>8</b>
<b>General questions &amp; discussion ش General questions &amp; discussion and quiz</b>	<b>theory</b>	<b>Lipoproteins metabolism</b>	<b>Disorders of plasma lipoproteins, Hyper and hypolipoproteinemias, Obesity</b>	<b>2</b>	<b>9</b>
<b>General questions &amp; discussion</b>	<b>theory</b>	<b>- Proteins and amino Acids</b>	<b>Classification of - Proteins (Functional, chemical nature, (Nutritional - Biologically important peptides.</b>	<b>2</b>	<b>10</b>
<b>General questions &amp; discussion</b>	<b>theory</b>	<b>Metabolism of amino acids</b>	<b>Amino acid pool, Transamination, Mechanism of transamination, Deamination</b>	<b>2</b>	<b>11</b>
<b>General questions &amp; discussion</b>	<b>theory</b>	<b>Metabolism of amino acids</b>	<b>- Metabolism of ammonia, Urea Cycle, Reaction, regulation, Integration of Urea Cycle</b>	<b>2</b>	<b>12</b>
<b>General questions &amp; discussion</b>	<b>theory</b>	<b>Metabolism of amino acids</b>	<b>- Metabolism and disorders of individual amino acids (Glycine, phenylalanine, tyrosine) le</b>	<b>2</b>	<b>13</b>
<b>General questions &amp; discussion</b>	<b>theory</b>		<b>review</b>	<b>2</b>	<b>14</b>

## **4- Histology I**

### **Aims of the course:**

1. Understanding the features of basic body tissues.
2. Identification of the differences between various body tissues.
3. Correlation between the cellular and functional aspects of tissues.

### **Learning objectives:**

#### **(Knowledge):**

- 1- The characteristics of normal human tissues of Nervous, Endocrine, Cardiovascular and Respiratory systems
- 2- The understanding of the structure and function of different tissues

#### **(Skills)**

- 1- The ability to recognize slides of normal tissues of nervous, endocrine, cardiovascular and respiratory systems organs
- 2- The ability to deal with microscopic examinations

#### **(Attitudes):**

- 1- How to be professional and safe doctor
- 2- The right understanding of the rules and principles of team work

### **Teaching methods:**

Theoretical lectures

Practical sessions showing and discussing slides and pictures of slides

Educational movies

### **Assessment methods:**

Written exams

Practical exams

Prepare reports, seminars and presentations

### **Course contents:**

طريقة التقييم	طريقة التعليم	اسم الوحدة / أو الموضوع	الساعات	الأسبوع
Questions and discussion	Theory and practical	Tissue Preparation(Light Microscope &Transmission Electron Microscope)	2	1
Questions and discussion	Theory and practical	Primary Tissues Review (Epithelium, Connective, muscular &Nervous Tissues)	2	2
Questions and discussion	Theory and practical	Central Nervous System (Brain &Spinal Cord)	2	3
Questions and discussion	Theory and practical	Myelin Sheath &Myelination of Axons, Neuroglia	2	4
Questions and discussion	Theory and practical	PBL –Peripheral Nervous System	2	5
Questions and discussion	Theory and practical	Endocrine System(Pituitary gland)	2	6
Questions and discussion	Theory and practical	Endocrine System(Thyroid ,Parathyroid &Suprarenal Glands)	2	7
Questions and discussion	Theory and practical	First Mid Examination	2	8
Questions and discussion	Theory and practical	Cardiovascular System( General structure of Blood Vessel, Arteries)	2	9
Questions and discussion	Theory and practical	Cardiovascular System(Veins ,Capillaries &Heart)- PBL	2	10
Questions and discussion	Theory and practical	Respiratory System (Conducting Portion )	2	11
Questions and discussion	Theory and practical	Respiratory System (Respiratory Portion )	2	12
Questions and discussion	Theory and practical	Immune System(Lymph Node)	2	13
	Revision- PBL		2	14

## References:

Basic histology, Janquira & Carneiro, 13th ed., McGraw-Hill, 2015

2. DiFiore's Atlas of Histology with Functional Correlations, Victor P. Eroschenko, 13th ed., Lippincott Williams & Wilkins, 2016

1. Histology: a text and atlas with correlated cell and molecular biology, 7th ed, 2016.

<http://www.histologyguide.com/slidebox/slidebox.html>

<http://medcell.med.yale.edu/histology/histology.php>

<http://www.meddean.luc.edu/lumen/MedEd/Histo/virtualhistology.htm>

## **5- Embryology I**

### **Aims of the course:**

- 1.Introducing the concept of medical embryology.
- 2.Study the features of early development of embryo.
- 3.Understanding the basics of birth defects.
- 4.Mapping the fate of embryonic tissues and organs.

### **Learning objectives:**

#### **(Knowledge)**

- 1- Introduction to the normal development of human fetus
- 2- The understanding of stages of fertilization

#### **(Skills)**

The recognition of the characteristics of the fetus in the zygote stage

The recognition of the characteristics of the fetus in the early weeks of development

#### **(Attitude):**

The appropriate ethical and professional considerations of congenital abnormalities

The respect to intrauterine human life

### **Teaching methods:**

Theoretical lectures

Practical sessions showing samples and pictures of embryos

Small group teaching

### **Assessment methods:**

Written exams

Practical exams

Reports and seminars

Course contents:



طريقة التقييم	طريقة التعليم	اسم الوحدة / أو الموضوع	الساعات	الأسبوع
Questions and discussion	Theory	Introduction	2	1
Questions and discussion	Theory	Gametogenesis	2	2
Questions and discussion	Theory	Gametogenesis	2	3
Questions and discussion	Theory	Ovarian cycle	2	4
Questions and discussion	Theory	Fertilization	2	5
Questions and discussion	Theory	Second week of development	2	6
Questions and discussion	Theory	Second week of development	2	7
Questions and discussion	Theory	Third week of development	2	8
Questions and discussion	Theory	Third week of development- PBL	2	9
Questions and discussion	Theory	Third to eighth week of development	2	10
Questions and discussion	Theory	Third to eighth week of development	2	11
Questions and discussion	Theory	Third Month to Birth-The Fetus and Placenta	2	12
Questions and discussion	Theory	Third Month to Birth-The Fetus and Placenta	2	13
Revision- PBL			2	14

### References:

Langman's Medical Embryology, T.W. Sadler, 14th ed.,

Lippincott Williams & Wilkins, 2018

The Developing Human: Clinically Oriented Embryology, 10th edition, 2016

<http://embryo.soad.umich.edu/>

<https://www.3dembryoatlas.com/blank>

<http://www.embryology.ch/indexen.html>

## **6- General Pathology**

### **Aims of the course:**

- The goal of the Pathology Course is to provide students with essential medical knowledge and a broad understanding of human disease
- This course will include gross, microscopic to help the students in understanding the disease processes.
- Practical labs will be directed to create objective knowledge by students about gross and microscopic morphological changes accompanying each disease process.
- Small groups student based learning sessions will help students to communicate and cooperate in order to reduce time needed to build up the required deep and enormous pathologic information and to motivate students toward active process of learning.
- Problem based learning (PBL) sessions are going to include selected common and emergent and critical problems that will be faced by students in their later life of studying and practicing medicine.

### **Learning objectives:**

#### **(knowledge):**

- 1- Know basic pathology processes and relate structural and functional changes and the associated clinical manifestations
- 2- Know the general pathological features of inflammation, tissue repair, cell injury and cell death
- 3- Recognize different forms of circulatory disturbances and their underlying pathogenesis
- 4- Recognize types of immune cells, types, pathogenesis and examples of different types of hypersensitivity reactions and autoimmunity
- 5- Identify types, pathogenesis and clinical features of different genetic disorders and Recognize methods of diagnosis of genetic disorders
- 6- Know different patterns of cellular adaptation as atrophy, hypertrophy, metaplasia and dysplasia

#### **(Skills):**

- 1- Work within a team and communicate ideas and arguments effectively.
- 2- Present scientific presentation.
- 3- Apply knowledge to analyze and understand the alterations of the cellular mechanisms underlying the human pathologies
- 4- Know and translate different techniques used in pathology

**(Attitude):**

- 1- Identify and explain the clinical manifestations of disease and investigation results in terms of underlying pathology.
- 2- Identify different tools in diagnostic pathology including the ancillary techniques such as immunohistochemistry, flow cytometry & molecular techniques.
- 3- Recognize and apply appropriate professional attitudes and problem solving skills.
- 4- Perform scientific research.
- 5- Work and learn within a team and communicate ideas and arguments effectively.

**Teaching methods:**

1. Lectures
2. Practical classes
3. Small group discussion with case study and problem solving
4. formative assessment

**Assessment methods:**

Written Examination: Assessment of knowledge and understanding and intellectual skills. These are usually done as summative assessments at the end of each system

Practical Examination: A. Assessment of practical skills.

B. Intellectual skills: a. Stations, b. Objective Structured Test (OST), c. Report

Time	Activity	Marks	Description
first course	Quizzes	10	10 theory and 10 practical quizzes; 0.5 mark for each
	Mid- course I theory	20	<ul style="list-style-type: none"> <li>• 60%-70% Problem based questions in the form of case scenarios with short essay questions and single best answers</li> <li>• 30%-40% Essay questions and MCQs</li> </ul>
	Mid course I , Practical exam	10	Gross specimens and microscopical slides
Final first course	Final course I ,Theory exam	45	<ul style="list-style-type: none"> <li>• 60%-70% Problem based questions in the form of case scenarios with short essay questions and single best answers</li> <li>• 30%-40% Essay questions and MCQs</li> </ul>
	Final course I ,Practical exam	15	Gross specimens and microscopical slides
<b>Total of first course</b>		<b>100 marks</b>	

## Course contents:

### Theory lectures

Date	Lecture	objectives	lecturer
1 <sup>st</sup> wk.	Introduction to pathology	Introduce the students to the basis of pathology	Dr.Aws
2 <sup>nd</sup> wk.	Cell injury	Definition & causes of cell injury	Dr.Aws
3 <sup>rd</sup> wk.	Cell death	Cause & complication of cell death	Dr.Aws
4 <sup>th</sup> wk.	Adaptation	Different types of adaptive response to injury	Dr.Aws
5 <sup>th</sup> wk.	General features of inflammation	Definition of inflammatory response	Dr.Dena
6 <sup>th</sup> wk.	Acute inflammation	Causes , acute inflammatory cells, morphological pictures, possible outcome	Dr.Dena
7 <sup>th</sup> wk.	Chronic inflammation	Causes ,chronic inflammatory cells , difference from acute inflammation	Dr.Dena
8 <sup>th</sup> wk.	Granuloma	Causes of granulomas and most important examples	Dr.Dena
9 <sup>th</sup> wk.	Overview of tissue repair	Concept of tissue repair	Dr.Esra
10 <sup>th</sup> wk.	Cell and tissue regeneration	Cells according to proliferation potentials, types of tissue regeneration	Dr.Esra
11 <sup>th</sup> wk.	Mid first course exam	Mid first course exam	
12 <sup>th</sup> wk.	Hemodynamic disorder I	Introduction to homeostasis	Dr.Hamid
13 <sup>th</sup> wk.	Hemodynamic disorder II	Listing different hemodynamic pathologies	Dr.Hamid
14 <sup>th</sup> wk.	Thromboembolism	Causes, risk factor, pathogenesis of TE	Dr.Hamid
15 <sup>th</sup> wk.	Shock	Types of shock ,pathogenesis	Dr.Hamid

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### Small groups session / Practical sessions and SBL

Week	Subject	lecturer
Week-1 Group A,B,C,D,E	Introduction to pathology Lab	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thame
Week-2 Group A,B,C,D,E	Basic information regarding tissue sampling: biopsy, FNAC, etc	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thame
Week-3 Group A,B,C,D,E	Basic Knowledge on gross & microscopical pictures;	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thame
Week-4 Group A,B,C,DE,	Microscopical changes in cellular injury, cellular accumulation, adaptive responses	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-

		Aws, ,Dr-Hamid Dr.Thame
Week-5 Group A,B,C,D,E	Cell death; correlation with clinical cases	Dr. Thair ,Dr- Shoroq, Dr-Asra Dr- Dina , Dr-Mather Dr- Aws, ,Dr-Hamid Dr.Thame
Week-6 Group A,B,C,D,E	Inflammation ; different morphological pictures of acute inflammation	Dr. Thair ,Dr- Shoroq, Dr-Asra Dr- Dina , Dr-Mather Dr- Aws, ,Dr-Hamid Dr.Thame
Week-7 Group A,B,C,D,E	Inflammation; examples of chronic inflammatory processes	Dr. Thair ,Dr- Shoroq, Dr-Asra Dr- Dina , Dr-Mather Dr- Aws, ,Dr-Hamid Dr.Thame
Week-8 Group A,B,C,D,E	Granulomas ; TB	Dr. Thair ,Dr- Shoroq, Dr-Asra Dr- Dina , Dr-Mather Dr- Aws, ,Dr-Hamid Dr.Thame
Week-9 Group A,B,C,D,E	Repair	Dr. Thair ,Dr- Shoroq, Dr-Asra Dr- Dina , Dr-Mather Dr- Aws, ,Dr-Hamid Dr.Thame
Week-10 Group A,B,C,D,E	Cutaneous wound healing	Dr. Thair ,Dr- Shoroq, Dr-Asra Dr- Dina , Dr-Mather Dr- Aws, ,Dr-Hamid Dr.Thame
Week-11 Group A,B,C,D,E	Scar formation	Dr. Thair ,Dr- Shoroq, Dr-Asra Dr- Dina , Dr-Mather Dr- Aws, ,Dr-Hamid Dr.Thame
Week-12 Group A,B,C,D,E	Hemodynamic ; normal physiology , pathology	Dr. Thair ,Dr- Shoroq, Dr-Asra Dr- Dina , Dr-Mather Dr- Aws, ,Dr-Hamid Dr.Thame
Week-13 Group A,B,C,D,E	Hemodynamic disorders II	Dr. Thair ,Dr- Shoroq, Dr-Asra Dr- Dina , Dr-Mather Dr- Aws, ,Dr-Hamid Dr.Thame
Week-14 Group A,B,C,D,E	Types of emboli, microscopical pictures, evaluation of clinical history, presentation, outcome	Dr. Thair ,Dr- Shoroq, Dr-Asra Dr- Dina , Dr-Mather Dr- Aws, ,Dr-Hamid Dr.Thame
Week-15 Group A,B,C,D,E	Shock; pathophysiology, presentation& outcome	Dr. Thair ,Dr- Shoroq, Dr-Asra Dr- Dina , Dr-Mather Dr- Aws, ,Dr-Hamid Dr.Thame

## References:

1-Robbins basic of pathology

2-Muris pathology

3-Text book pathology

4- USMLE pathology

Akacerman basic of pathology

Pathology out lines .com

## 7- Democracy:

### Aims of the course:

Students are introduced to the concept of Democracy

Students should know about different democratic political systems

### Learning objectives:

- 1- Knowing the rules and conditions of democracy
- 2- Having an idea about important variants of applications of democratic system in few countries
- 3- Democracy is an important rule when working as part of a team which is a common thing in medical practice

### Teaching methods:

Theoretical lectures

### Assessment methods:

Written exams

### Course contents:

- 1- التعريف بمفهوم الديمقراطية
- 2- أنواع الأنظمة السياسية من حيث ممارسة السلطة
- 3- أنواع وصور الديمقراطية
- 4- التوفيق بين النظام النيابي والحكم الديمقراطي
- 5- صور الاقتراع وشروطه
- 6- مفهوم العلاقة بين السلطات
- 7- النظام البرلماني
- 8- النظام البرلماني في إنكلترا
- 9- النظام الرئاسي
- 10- النظام الرئاسي في الولايات المتحدة الأمريكية
- 11- النظام المختلط
- 12- النظام المختلط في فرنسا
- 13- مفهوم الأحزاب السياسية
- 14- نشأة الأحزاب السياسية
- 15- وظائف الحزب السياسي

Daily schedule of first course weeks (second grade):

2:30-3:30	2:30 -1:30	1:30 -12:30	12:30-11:30	11:30 -10:30	10:30 -9:30	9:30-8:30	اليوم
Democracy	Biochemistry I	Physiology I	Biochemistry I	Biochemistry I	Physiology I	Physiology I	الاحد
	Practical pathology C1+C2+D1+D2 Lab+BPL	Pathology I	C 1 Anatomy D2Physiology C2 Histology D1 Biochemist Lab+BPL	C2 Anatomy D 1Physiology C1 Histology D2 Biochemist Lab+BPL	D1natomy C2Physiology D2 Histology C1 Biochemist Lab+BPL	D2Anotomy C 1Physiology D 1 Histology C 2Biochemist Lab+BPL	الاثنين
نشاطات لاصفية	Practical pathology A1+A2+B1+B2 Lab+BPL	Physiology I	A 1 Anatomy B2Physiology A2 Histology B1 Biochemist Lab+BPL	A2 Anatomy B 1Physiology A1 Histology B2 Biochemist Lab+BPL	B1 Anatomy A2Physiology B2 Histology A1 Biochemist Lab+BPL	B2 Anatomy A 1Physiology B 1 Histology A2 Biochemist Lab+BPL	الثلاثاء
	Anatomy I	Embryology I	Histology 1	Histology 1	Anatomy I	Anatomy I	الاربعاء



**Second year:**

**Second course:**

عدد الوحدات	عدد الساعات		المادة الدراسية	ت
	العملي	النظري		
4	2	3	Anatomy II (تشريح)	.1
5	2	4	Physiology II (الفسلجة)	.2
4	2	3	Biochemistry II (الكيمياء)	.3
3	2	2	Histology II (انسجة)	.4
1	/	1	Embryology II (اجنة)	.5
2	2	1	General pathology II (الامراض)	.6
2	2	1	E- learning (الحاسوب)	.7
21			المجموع	

# 1- Anatomy II

## Aims of the course:

1. Describe the topography of the abdomen and pelvis.
2. Emphasize the clinical significance of anatomical structures and relations facilitating the understanding of a disease process or surgical procedure on anatomical grounds.

## Learning objectives:

### (Knowledge):

1. Provide the anatomy essential to understand clinical procedures in the examination of head and neck structures.
2. Provide surface markings of anatomical structures on the body wall.

### (Skills):

- 1- Direct the anatomical knowledge towards the appearance of structures when they are imaged in radiographs.
- 2- Establish working knowledge of sectional anatomy.

### (Attitudes):

- 1- let think about thinking ability: to estimate the ability of the student to think logically to solve the problems
- 2- critical thinking: study the case problem to solve it using their knowledge.
- 3- to teach the student the limits of responsibilities and freedom.
- 4- the proper way to evaluate the patient's condition to take the appropriate decision.

## Teaching methods:

Attending lectures

Theory lectures using multimedia facilities

Self-education, discussion groups

Training and activities

Directing the student for some medical websites

Analytical and critical thinking

Quiz and examinations

## Assessment methods:

Student activities

Reports

Daily and weekly self-assessments

Course examination

## Course contents:

الأسبوع	الساعات	اسم الوحدة / أو الموضوع	طريقة التعليم	طريقة التقييم
1	2	Anterolateral abdominal wall, planes, inguinal canal, muscles and nerves and blood supply	Theory and practical	Questions and discussion
2	2	Peritoneum and Abdominal viscera, stomach	Theory and practical	Questions and discussion
3	2	Small intestine and large intestine	Theory and practical	Questions and discussion
4	2	Rectum and anal canal PBL	Theory and practical	Questions and discussion
5	2	Liver, gall bladder and spleen	Theory and practical	Questions and discussion
6	2	Posterior abdominal wall, blood vessels, Kidneys and ureter	Theory and practical	Questions and discussion
7	2	Pelvic region and pelvic diaphragm	Theory and practical	Questions and discussion
8	2	Male genital organs, testis, scrotum, spermatic cord.-PBL	Theory and practical	Questions and discussion
9	2	Pelvic viscera, urinary bladder, prostate, seminal vesicles	Theory and practical	Questions and discussion
10	2	Female genital organs, ovaries, Fallopian tubes, uterus and supporting ligaments.	Theory and practical	Questions and discussion
11	2	Vagina, external genital organs-PBL	Theory and practical	Questions and discussion
12	2	Topography and clinical anatomy	Theory and practical	Questions and discussion
13	2	Perineum and related fossae.	Theory and practical	Questions and discussion
14	2	Revision – sectional anatomy- PBL	Theory and practical	Questions and discussion

## References:

Clinical anatomy by regions, Richard S. Snell, 10th ed.,

Lippincott Williams & Wilkins, 2018.

2. Grant's atlas of anatomy, Anne M.R. Agur & Arthur F. Dalley,

14th ed., Lippincott Williams & Wilkins, 2017

Anatomy. The anatomical basis of life

Gray's Anatomy for student

<https://www.biodigital.com>

<http://anatomylearning.com/en>

## **2- Physiology II**

### **Aims of the course:**

1. Determine the functions of all parts of body systems
2. Description of the mechanism of action of body system and the physiological events associated with it
3. Evaluation of reference value of various vital organs under different biological conditions.
4. Discriminations between normal and abnormal functions of the organs
5. Brief description of pathophysiology of systems.
6. Graduate an expert physician in the laboratory investigations

### **Learning objectives:**

#### **(Knowledge):**

1. Make the student oriented in link between clinical symptoms with lab diagnosis or lab investigation
2. Ability of the student to manage the cases depending on the lab diagnosis
3. The necessary information about the physiology of the Respiratory system, GIT, Genitourinary system and Hematology

#### **(Skills):**

1. Be familiar with basic clinical procedures like vital signs measurement
2. Be familiar with normal ranges of different clinical investigations results

#### **(Attitudes):**

1. Make the students familiar with novel medical skills
2. Make the students familiar with continuous medical learning even post graduate to make the physician in touch with updates in medical practice
3. Estimate the ability of the student to think logically to solve the problem
4. Ability of the arrangement of the information and application

5. Critical thinking: study the case problem to solve it using their knowledge

**Teaching methods:**

Theory – lectures

Upload the lectures on the formal website of the college of medicine

Educational movies

Use data show and digital cam

Training courses

Small teaching groups.

**Assessment methods:**

Theory exam

Oral exam

Practical examinations

Problem based learning

Reports and activities

**Course contents:**

Weeks	Lecture number	Topics Covered	Objectives
1	1	Introduction to respiratory system	<ul style="list-style-type: none"> <li>. Answer questions about overview of the respiratory system</li> <li>. Interpret scenarios on lung volumes and capacities</li> </ul>
1	2	Mechanics of respiration	
1	3	Composition of respired air: pulmonary ventilation	
			<ul style="list-style-type: none"> <li>. Solve problems concerning ventilation</li> <li>. Use knowledge of lung mechanics</li> <li>. Answer questions about cardiovascular changes with ventilation. Solve problems concerning positive pressure ventilation. Answer questions about pneumothorax</li> <li>. Use knowledge of lung compliance</li> <li>. Interpret scenarios on airway resistance</li> <li>. Explain information related to pulmonary function testing</li> </ul>
1	4	Exchange of gases in the lungs	<ul style="list-style-type: none"> <li>. Answer questions about the normal lung</li> <li>. Solve problems concerning factors affecting alveolar PCO<sub>2</sub></li> <li>. Use knowledge of factors affecting alveolar PO<sub>2</sub></li> <li>. Interpret scenarios on alveolar blood gas transfer: Fick law of diffusion</li> <li>. Use knowledge of diffusing capacity of the lung</li> </ul>

2	5	Ventilation – perfusion ratio	<ul style="list-style-type: none"> <li>. Demonstrate understanding of ventilation-perfusion differences in the lung</li> <li>. Demonstrate understanding of review of the normal lung. Answer questions about causes of hypoxemia</li> <li>. Use knowledge of left-to-right shunts</li> </ul>
2	6	Pulmonary circulation	<p>Contrast the systemic and pulmonary circulations with respect to pressures, resistance to blood flow, and response to hypoxia.</p>
2	7	Pulmonary circulation	<ul style="list-style-type: none"> <li>. Describe the regional differences in pulmonary blood flow in an upright person. Define zones I, II, and III in the lung, with respect to pulmonary vascular pressure and alveolar</li> </ul>

			<p>pressure.</p> <ul style="list-style-type: none"> <li>. Describe how pulmonary vascular resistance changes with alterations in cardiac output or pulmonary arterial pressure. Explain in terms of distention and recruitment of pulmonary vessels. Identify the zones in which these two mechanisms apply.</li> <li>. Describe how pulmonary vascular resistance changes with lung volume. Explain in terms of alterations in alveolar and extra-alveolar blood vessels.</li> <li>. Describe the consequence of hypoxic pulmonary vasoconstriction on the distribution of pulmonary blood flow.</li> <li>. Describe the effects of inspired nitric oxide on pulmonary vascular resistance and hypoxic vasoconstriction. Explain the development of pulmonary edema by a) increased hydrostatic pressure, b) increased permeability, c) impaired lymphatic outflow or increased central venous pressure, and d) hem dilution (e.g., with saline volume resuscitation). .</li> </ul> <p>Describe the major functions of the bronchial circulation.</p>
2	8	Pulmonary edema. Plural fluid	
3	9	Revision	
3	10	Regulation of Respiration	<ul style="list-style-type: none"> <li>. Identify the regions in the central nervous system that play important roles in the generation and control of cyclic breathing.</li> <li>. Give three examples of reflexes involving pulmonary receptors that influence breathing frequency and tidal volume.</li> </ul>
3	11	Respiratory Insufficiency Pathophysiology, Diagnosis, Oxygen Therapy	
3	12	Artificial respiration	



			<p>Describe the receptors and neural pathways involved. .</p> <p>List the anatomical locations of chemoreceptors sensitive to changes in arterial PO<sub>2</sub>, PCO<sub>2</sub>, and pH that participate in the control of ventilation. Identify the relative importance of each in sensing alterations in blood gases.</p> <p>. Describe how changes in arterial PO<sub>2</sub> and PCO<sub>2</sub> alter alveolar ventilation, including the synergistic effects when PO<sub>2</sub> and PCO<sub>2</sub> both change.</p> <p>. Describe the respiratory drive in a COPD patient, and predict the change in respiratory drive when oxygen is given to a COPD patient.</p> <p>. Describe the mechanisms for the shift in alveolar ventilation that occur immediately upon ascent to high altitude, after remaining at altitude for two weeks, and immediately upon return to sea level.</p>
4	13	<b>Physiology of blood :</b> introduction Functions of plasma proteins	<p><b>Explain</b> the functions of blood.</p> <ul style="list-style-type: none"> <li>• <b>Describe</b> the physical characteristics and principal 1-components of blood</li> <li>2- the structure, functions, life cycle, and production of red blood cells</li> <li>3- the structure, functions, life cycle, and production of white blood cells.</li> <li>4- the structure, function, and origin of platelets.</li> <li>5- the three mechanisms that contribute to hemostasis. - Explain the various factors that promote and inhibit blood clotting.</li> <li>6- Distinguish between the ABO and Rh blood groups.</li> </ul> <p>- Explain why it is so important to match donor and recipient blood types before administering a transfusion</p>
4	14	Principles of hemopoietin	
4	15	Regulation of erythropoiesis	
4	16	.Destruction of red cells: Jaundice	
5	17	Anemia& polycythemia	
5	18	Regulation of WBC production	
5	19	Functions of WBC	
5	20	Functions of platelets	
6	21	Hemostasis	

6	22	. Blood groups	
6	23	regulation of GI function, functional types of movement of GIT	<ul style="list-style-type: none"> <li>. Answer questions about overview of the gastrointestinal tract</li> <li>. Explain information related to motility</li> <li>. Demonstrate understanding of secretions</li> <li>. Demonstrate understanding of digestion</li> <li>. Demonstrate understanding of absorption</li> </ul>
6	24	Digestion : types of digestion Salivary gland	
7	25	Composition of saliva Regulation of salivary secretion	
7	26	Swallowing, Esophagus	
7	27	Stomach regulation of gastric secretion stimulation of acid secretion	
7	28	Digestion of various food : hydrolysis Digestion of CHO	
8	29	Digestion of proteins Digestion of fat	
8	30	Absorption of water & ions Absorption of nutrients	
8	31	Absorption of fat	
8	32	Pancreatic secretion Secretin of HCO <sub>3</sub>	
9	33	Regulation of pancreatic secretion	
9	34	Small intestinal secretion Large intestinal secretion	

	35	Secretion of bile by liver Action & storage of bile , stone formation	
	36	Exam	
	37	Physiology of renal system Renal hemodynamics and glomerular filtration	<ul style="list-style-type: none"> <li>. Use knowledge of overview of the renal system</li> <li>. Demonstrate understanding of nephron hemodynamics</li> <li>. Demonstrate understanding of glomerular filtration</li> <li>. Interpret scenarios on solute transport</li> <li>. Interpret scenarios on quantifying renal processes (mass balance)</li> <li>. Demonstrate understanding of clearance</li> <li>. Answer questions about tm tubular reabsorption</li> <li>. Solve problems concerning tm tubular secretion</li> <li>. Use knowledge of the renal</li> </ul>
10	38	Renal tubular function	
	39	Regulation of renal function	
	40	Physiological basis of renal function tests	
	41	Mechanism of reabsorption and secretion	
	42	Micturition	
11		Acid base balance	
	43		

			<p>handling of some important solutes</p> <ul style="list-style-type: none"> <li>. Use knowledge of clearance as an estimator of GFR</li> <li>. Demonstrate understanding of clearance curves for some characteristic substances</li> <li>. Solve problems concerning free water clearance</li> <li>. Use knowledge of sodium and urea clearance</li> <li>. Interpret scenarios on buffering systems</li> <li>. Explain information related to formulating a diagnosis</li> <li>. Explain information related to 3-question method</li> <li>. Solve problems concerning the 4 primary disturbances. Use knowledge of compensation</li> <li>. Solve problems concerning plasma anion gap diagnosis. Use knowledge of graphical representation (Davenport plot) .</li> <li>. Solve problems concerning supplemental information</li> </ul>
	44	Introduction to reproductive system	<ul style="list-style-type: none"> <li>. Solve problems concerning hypothalamic-pituitary-gonadal axis in males</li> <li>. Solve problems concerning age-related hormonal changes in males</li> <li>. Demonstrate understanding of erection, emission, and ejaculation</li> <li>. Use knowledge of gonadal dysfunction in the male</li> </ul>
	45	Male reproductive physiology	
	46	male reproductive physiology	
12	47	Female reproductive physiology	<p>Interpret scenarios on menstrual cycle</p> <ul style="list-style-type: none"> <li>. Explain information related to female sex steroid metabolism and excretion</li> <li>. Answer questions about menstrual irregularities</li> <li>. Explain information related to pregnancy</li> </ul>
	48	Female reproductive physiology s	
	49	Hypothalamic – pituitary – gonadal axis	
	50	Puberty	
13	51	Pregnancy	
	52	Parturition and lactation	

## ***Small group & Practical physiology***

### **Hematology**

- 1- How do you approach patient with anemia
- 2- RBC count Manual calculation of RBC
- 3- WBC count Manual calculation of WBC
- 4- Diff. WBC Manual calculation of differential WBC
- 5- Hb% Measurement of Hb% by shale's method
- 6- Bleeding time & Assessment of coagulopathies
- 7- clotting time
- 8- Blood group Determination of blood groups

### **Renal system**

- 1- What is the response of the juxtaglomerular cells to decreased extracellular fluid and arterial pressure?
- 2- What are two effects of angiotensin II?
- 3- What are two mechanisms by which autoregulation of renal blood flow occurs
- 4- Where in the renal glomerulus-tubule structure is glucose reabsorbed actively (secondary active transport)?
- 5- What other solutes are reabsorbed by a secondary active process? 3- With what is glucose co transported in the proximal tubule?
- 6- How does a loop diuretic work?
- 7- How do loop diuretics cause hypokalemia?
- 8- What is the effect of aldosterone on sodium and potassium?
- 9- What is the normal effect of decreased plasma volume on sodium balance?
- 10- Why does this patient have significant edema and continued sodium reabsorption?
- 11- In what part of the glomerulus-tubule complex of the kidney is the majority of sodium reabsorbed

### **GIT.**

- 1- The three major fuel sources used by the body are carbohydrates
- 2- The three major fuel sources used by the body are carbohydrate fats, and proteins. Where does digestion of these macromolecules primarily occur?
- 3- What is the primarily function of the stomach?
- 4- How are pancreatic enzymes stored and activated?
- 5- What are the functions of the gastrointestinal hormones?
- 6- What is the definition of diarrhea? Discuss the major mechanisms for diarrhea: osmotic, secretory, inflammatory, and motor

### **References:**

- 1- Guyton and Hall textbook of medical physiology
- 2- Ganong's Review of Medical Physiology

### **3- Biochemistry II**

#### **Aims of the course:**

- 1- Introduce students to the chemical reactions of life molecules and the metabolic processes that occur inside the human body and how they are in normal and pathological conditions
- 2- This course also discusses the role of biochemistry in the clinical diagnosis and diagnostic analyzes of major diseases affecting organs using different methods, and the interpretation of laboratory results.

#### **Learning objectives:**

##### **(Knowledge):**

- 1- Understanding the basics of clinical biochemistry
- 2- Identify the metabolism of biological compounds in disease states in the human body and how to diagnose them.
- 3- Enabling students to obtain knowledge and understanding of practical life chemistry experiments
- 4- Understand the basic chemical aspects of Endocrinology and Genetics

##### **(Skills):**

- 1- Carry out routine laboratory tests and measure the levels of many blood components such as Renal function test, Thyroid function test, serum Electrolytes and serum Calcium and Phosphate.
- 2- Enabling students to obtain knowledge and understanding of practical life chemistry experiments
- 3- Making students able to analyze the results of important biochemical tests and how to relate them to clinical cases

##### **(Attitudes):**

- 1- Promoting professional ethics and dealing with patients among graduates
- 2- Students acquire different therapeutic skills
- 3- Strengthening the principle of lifelong learning in order to continue developing the profession
- 4- Critical thinking skill, which aims to pose a problem, analyze it logically, and reach the desired solution
- 5- The student's awareness of the need for a balance between freedom and responsibility
- 6- The skill of making the right decision for the patient and based on logical thinking

#### **Teaching methods:**

- lectures
- Upload lecture on the college website
- Educational movies
- Use data show and digital cam
- Training courses
- Small group discussion with case study and problem solving.

**Assessment methods:**

- . Written Examination
- . Oral examination
- practical examination
- Small group discussion reports and activities

**Course contents:****Practical Biochemistry II/ Second Course: 30 hrs Practical (15 Units)****(2 hr/week)**

- 1- Blood Urea test
- 2- Serum creatinine test:
- 3- Serum Bilirubin test
- 4- **PBL (Jaundice: : case scenario)**
- 5- Thyroid function tests
- 6- Serum LDH test
- 7- Serum AST and ALT tests
- 8- Serum Creatine kinase test
- 9- **PBL( myocardial infraction: case scenario)**
- 10- Serum Ca test
- 11- Serum Inorganic Phosphate test
- 12- Serum uric acid test
- 13- **PBL(gout: case scenario)**

Assessment	Educational methods	subjects	Outcome	hours	week
General questions & discussion	theory	Hormones	Classification of hormones, Mechanism of action of hormone - Hypothalamic and pituitary hormones, hypothalamic hormones	2	1
General questions & discussion and quiz	theory	Hormones	- Anterior pituitary hormones, Posterior pituitary hormones - Thyroid hormones, hormones of adrenal cortex and medulla	2	2
General questions & discussion	theory	Hormones	- Hormones of gonads (androgens, Estrogens and Progesterone)	2	3
General questions &	theory	Water, electrolyte and acid-base	Water and life, Functions and Distribution of water, water turnover and balance - Electrolyte balance, Osmolarity and osmolality of body fluids - Osmolality of plasma, ECF and ICF, Regulation of electrolyte balance	2	4
General questions & discussion	theory	Water, electrolyte and acid-base	Water and life, Functions and Distribution of water, water turnover and balance - Electrolyte balance, Osmolarity and osmolality of body fluids - Osmolality of plasma, ECF and ICF, Regulation of electrolyte balance	2	5
General questions & discussion	theory	Liver function test	Serum bilirubin: total and conjugated -Urine: bile salts and urobilinogen	2	6



			<ul style="list-style-type: none"> <li>-Total protein, serum albumin and albumin/globulin ratio</li> <li>-Prothrombin Time</li> <li>- Markers of hepatocellular injury</li> <li>-Alanine aminotransferase (ALT)</li> <li>-Aspartate aminotransferase (AST)</li> </ul>		
General questions & discussion	theory	Renal function test	<ul style="list-style-type: none"> <li>Kidney functions</li> <li>-Renal threshold</li> <li>-Causes of kidney functional disorders</li> <li>-Signs and Symptoms of Renal Failure</li> <li>-Biochemical Tests of Renal Function</li> <li>-Measurement of GFR</li> <li>- Renal tubular function tests</li> <li>- Measurement of nonprotein nitrogen-containing compounds</li> </ul>	2	7
General questions & discussion ش General questions & discussion and quiz	theory	Cancer, tumor markers	<ul style="list-style-type: none"> <li>- Chemical carcinogens, Radiation energy, Molecular basis of cancer</li> <li>- Mechanism of action of oncogenes, Antioncogenes</li> </ul>	2	8
General questions & discussion	theory	Cancer, tumor markers s	<ul style="list-style-type: none"> <li>Tumor markers, characteristics of growing tumor cells</li> <li>- Cancer therapy, Prevention of cancer)</li> </ul>	2	9
General questions d	theory	Clinical enzymology	<ul style="list-style-type: none"> <li>plasma enzymes</li> <li>-Measurement of serum enzymes</li> <li>- Non-specific causes of raised plasma enzyme level</li> <li>- isoenzymes</li> <li>-Factors caused increased in rate of release enzyme</li> <li>-Measurement of enzyme activity</li> </ul>	2	10

			<b>-Enzyme in health and diseases</b>		
<b>General questions &amp; discussion</b>	<b>theory</b>	<b>Metabolism of nucleotides</b>	<b>Biosynthesis of purine and pyrimidines ribonucleotides -Regulation of purine and pyrimidines nucleotide biosynthesis</b>	<b>2</b>	<b>11</b>
<b>General questions &amp; discussion</b>	<b>theory</b>	<b>Metabolism of nucleotides</b>	<b>Degradation of purine and pyrimidines nucleotides - Disorders of purine and pyrimidines metabolism.</b>	<b>2</b>	<b>12</b>
<b>General questions &amp; discussion</b>	<b>theory</b>	<b>Nucleic acids and nucleotides</b>	<b>Functions of nucleic acids, Components of nucleic acids -Nucleotides( Structure, Nomenclature) (Sugars, Purines and pyrimidines(</b>	<b>2</b>	<b>13</b>
<b>General questions &amp; discussion</b>	<b>theory</b>	<b>DNA-replication, Transcription, Translation</b>	<b>-. Replication of DNA, Replication in prokaryotes and eukaryotes - Inhibitors of DNA replication, Cell cycle and DNA replication - Recombination, Transcription in prokaryotes and eukaryotes</b>	<b>2</b>	<b>14</b>
<b>exam</b>	<b>theory</b>	<b>Midcourse Examination</b>	<b>Midcourse Examination</b>	<b>2</b>	<b>15</b>

### References:

. Harpers Illustrated Biochemistry

1-Clinical biochemistry, 3ed ed. Gaw A, Cowan R, O'Reilly D, Stewart M. 2004.

2- Medical biochemistry.

www.chemicalprocessing.com

[www.bytoco.com](http://www.bytoco.com)

## **4- Histology II**

### **Aims of the course:**

1. Understanding the features of basic body tissues.
2. Identification of the differences between various body tissues.
3. Correlation between the cellular and functional aspects of tissues.

### **Learning objectives:**

#### **(Knowledge):**

- 3- The characteristics of normal human tissues of the GIT, Genito-Urinary systems and Skin
- 4- The understanding of the structure and function of different tissues

#### **(Skills)**

- 3- The ability to recognize slides of normal tissues of nervous, endocrine, cardiovascular and respiratory systems organs
- 4- The ability to deal with microscopic examinations

#### **(Attitudes):**

- 3- How to be professional and safe doctor
- 4- The right understanding of the rules and principles of team work

### **Teaching methods:**

Theoretical lectures

Practical sessions showing and discussing slides and pictures of slides

Educational movies

### **Assessment methods:**

Written exams

Practical exams

Prepare reports, seminars and presentations

### **Course contents:**

طريقة التقييم	طريقة التعليم	اسم الوحدة / أو الموضوع	الساعات	الأسبوع
Questions and discussion	Theory and practical	Oral Cavity(Introduction ,Lip & Tongue )	2	1
Questions and discussion	Theory and practical	Oral Cavity(Salivary Glands)	2	2
Questions and discussion	Theory and practical	GIT (General Structure ,Esophagus)	2	3
Questions and discussion	Theory and practical	GIT(Stomach)	2	4
Questions and discussion	Theory and practical	GIT(Small &Large Intestine)- PBL	2	5
Questions and discussion	Theory and practical	Digestive Glands (Liver ,Pancreas and Gall Bladder)	2	6
Questions and discussion	Theory and practical	Urinary System(Kidney)	2	7
Questions and discussion	Theory and practical	Urinary System(Ureter & Urinary Bladder)- PBL	2	8
Questions and discussion	Theory and practical	Male Reproductive System(Testis)	2	9
Questions and discussion	Theory and practical	Male Reproductive System(Accessory reproductive sex glands)	2	10
Questions and discussion	Theory and practical	Female Reproductive System(Ovary &Uterus)	2	11
Questions and discussion	Theory and practical	Female Reproductive System(Cervix, Vagina, Placenta& Mammary Glands)-PBL	2	12
Questions and discussion	Theory and practical	Skin and its appendages	2	13
	Revision		2	14
	Second course Examination	Assessment	2	15

#### References:

- 1- Basic histology, Janquira & Carneiro, 13th ed., McGraw-Hill, 2015
- 2- DiFiore's Atlas of Histology with Functional Correlations, Victor P. Eroschenko, 13th ed., Lippincott Williams & Wilkins, 2016
- 3- Histology: a text and atlas with correlated cell and molecular biology, 7th ed, 2016.

## **5- Embryology II**

### **Aims of the course:**

- 1.Introducing the concept of medical embryology.
- 2.Study the features of early development of embryo.
- 3.Understanding the basics of birth defects.
- 4.Mapping the fate of embryonic tissues and organs.

### **Learning objectives:**

#### **(Knowledge)**

- 3- Introduction to the normal development of human fetus
- 4- The understanding of differentiation of organs of the human fetus

#### **(Skills)**

The recognition of the characteristics of the fetal development of Musculoskeletal, CNS, GIT, Urinary and Reproductive systems, Cardiovascular and Respiratory systems and Skin

The recognition of the characteristics of the fetus through different stages of development

#### **(Attitude):**

The appropriate ethical and professional considerations of congenital abnormalities

The respect to intrauterine human life

### **Teaching methods:**

Theoretical lectures

Practical sessions showing samples and pictures of embryos

Small group teaching

### **Assessment methods:**

Written exams

Practical exams

Reports and seminars

## Course contents:

طريقة التقييم	طريقة التعليم	اسم الوحدة / أو الموضوع	الساعات	الأسبوع
Questions and discussion	Theory	Skeletal system: Axial skeleton	2	1
Questions and discussion	Theory	Skeletal system: The limbs	2	2
Questions and discussion	Theory	Ossification centres:	2	3
Questions and discussion	Theory	anatomical review	2	4
Questions and discussion	Theory	Muscular system development	2	5
Questions and discussion	Theory	Body cavities-PBL	2	6
Questions and discussion	Theory	development of the diaphragm	2	7
Questions and discussion	Theory	CVS Respiratory system	2	8
Questions and discussion	Theory	GIT	2	9
Questions and discussion	Theory	Urinary system-PBL	2	10
Questions and discussion	Theory	Genital organs	2	11
Questions and discussion	Theory	Head & neck	2	12
Questions and discussion	Theory	Ear, eye & skin	2	13
Questions and discussion	Theory	CNS-PBL	2	14
	Second course Examination	Assessment	2	15

## References:

Langman's Medical Embryology, T.W. Sadler, 14th ed.,

Lippincott Williams & Wilkins, 2018

The Developing Human: Clinically Oriented Embryology, 10th edition, 2016

## 6- General Pathology II

### Aims of the course:

- The goal of the Pathology Course is to provide students with essential medical knowledge and a broad understanding of human disease
- This course will include gross, microscopic to help the students in understanding the disease processes.
- Practical labs will be directed to create objective knowledge by students about gross and microscopic morphological changes accompanying each disease process.
- Small groups student based learning sessions will help students to communicate and cooperate in order to reduce time needed to build up the required deep and enormous pathologic information and to motivate students toward active process of learning.
- Problem based learning (PBL) sessions are going to include selected common and emergent and critical problems that will be faced by students in their later life of studying and practicing medicine.

### Learning objectives:

#### (knowledge):

- 7- Know basic pathology processes and relate structural and functional changes and the associated clinical manifestations
- 8- Know the general pathological features of inflammation, tissue repair, cell injury and cell death
- 9- Recognize different forms of circulatory disturbances and their underlying pathogenesis
- 10- Recognize types of Tumors, Malignant tumor differentiation, progression and complications
- 11- Identify types, pathogenesis and clinical features of different genetic disorders and Recognize different types of Mutations

#### (Skills):

- 5- Work within a team and communicate ideas and arguments effectively.
- 6- Present scientific presentation.
- 7- Apply knowledge to analyze and understand the alterations of the cellular mechanisms underlying the human pathologies
- 8- Know and translate different techniques used in pathology

**(Attitude):**

- 6- Identify and explain the clinical manifestations of disease and investigation results in terms of underlying pathology.
- 7- Identify different tools in diagnostic pathology including the ancillary techniques such as immunohistochemistry, flow cytometry & molecular techniques.
- 8- Recognize and apply appropriate professional attitudes and problem solving skills.
- 9- Perform scientific research.
- 10- Work and learn within a team and communicate ideas and arguments effectively.

**Teaching methods:**

1. Lectures
2. Practical classes
3. Small group discussion with case study and problem solving
4. formative assessment

**Assessment methods:**

Written Examination: Assessment of knowledge and understanding and intellectual skills. These are usually done as summative assessments at the end of each system

Practical Examination: A. Assessment of practical skills.

B. Intellectual skills: a. Stations, b. Objective Structured Test (OST), c. Report

Second course	Quizzes	10	10 theory and 10 practical quizzes; 0.5 mark for each
	Mid-course II theory	20	<ul style="list-style-type: none"> <li>• 60%-70% Problem based questions in the form of case scenarios with short essay questions and single best answers</li> <li>• 30%-40% Essay questions and MCQs</li> </ul>
	Mid-course II Practical exam	10	Gross specimens and microscopical slides
Final second course	Final course II Theory exam	45	<ul style="list-style-type: none"> <li>• 60%-70% Problem based questions in the form of case scenarios with short essay questions and single best answers</li> <li>• 30%-40% Essay questions and MCQs</li> </ul>
	Final course II ,Practical exam	15	Gross specimens and microscopical slides
<b>Total of second course</b>		<b>100</b>	

**Course contents:**



## Theory lectures

Date	Lecture	Objectives	Lecturer
1 <sup>st</sup> wk.	Neoplasia : Nomenclature	Addressing different terminologies in oncology	Dr.Mather
2 <sup>nd</sup> wk.	Characteristics of benign neoplasms	Benign tumors; microscopical changes, genetic abnormalities,	Dr.Mather
3 <sup>rd</sup> wk.	Characteristics of malignant neoplasms	Malignant tumors; differentiation , anaplaia,	Dr.Mather
4 <sup>th</sup> wk.	Carcinogenesis : molecular basis of cancer	Understanding steps of tumor progression	Dr.Mather
5 <sup>th</sup> wk.	Carcinogenic agents	Addressing etiologies of cancer	Dr.Mather
6 <sup>th</sup> wk.	Tumor immunity	Discussing host defense against tumor	Dr.Mather
7 <sup>th</sup> wk.	Clinical aspects of neoplasia	Addressing effects of tumor on host, grading and staging & laboratory diagnosis of cancer	Dr.Mather
8 <sup>th</sup> wk.	Nature of genetic abnormalities	Alteration in protein coding gene	Dr.shoroq
9 <sup>th</sup> wk.	Diseases caused by single gene defects I	Transmission patterns of single gene disorder	Dr.shoroq
10 <sup>th</sup> wk.	Diseases caused by single gene defects II	Examples of diseases caused by mutation in genes encoding structural protein	Dr.shoroq
11 <sup>th</sup> wk.	Mid course second exam	Mid course second exam	
12 <sup>th</sup> wk.	Cytogenetic disorders I	Numeric, structural abnormalities	Dr.shoroq
13 <sup>th</sup> wk.	Cytogenetic disorders II	General features of chromosomal disorders	Dr.shoroq
14 <sup>th</sup> wk.	Cytogenetic disorders III	Cytogenetic disorders involving autosomes & sex chromosomes	Dr.shoroq
15 <sup>th</sup> wk.	Pediatric diseases	Examples of congenital abnormalities	Dr.shoroq

## Small groups session

Week	Subject	lecturer
Week-1 Group A,B,C,D,E	Introduction to carcinogenesis	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamr
Week-2 Group A,B,C,D,E	Microscopical features of benign tumor	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamr
Week-3 Group A,B,C,D,E	Examples of benign tumor	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamr
Week-4 Group A,B,C,DE,	Microscopical features of malignant tumor	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamr
Week-5 Group A,B,C,D,E	Examples of malignant tumor	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather

		Dr-Aws, ,Dr-Hamid Dr.Thamr
Week-6 Group A,B,C,D,E	Addressing effects of tumor on host, grading and staging	Dr. Thair ,Dr-Shoroq, Dr- Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamr
Week-7 Group A,B,C,D,E	laboratory diagnosis of cancer	Dr. Thair ,Dr-Shoroq, Dr- Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamr
Week-8 Group A,B,C,D,E	Basics of karyotyping & diagnosis of genetic abnormalities	Dr. Thair ,Dr-Shoroq, Dr- Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thame
Week-9 Group A,B,C,D,E	Examples of diseases caused by mutation in genes encoding structural protein	Dr. Thair ,Dr-Shoroq, Dr- Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamr
Week-10 Group A,B,C,D,E	Examples of diseases caused by mutation in genes encoding receptor proteins or channels	Dr. Thair ,Dr-Shoroq, Dr- Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamr
Week-11 Group A,B,C,D,E	Examples of Numeric, structural abnormalities	Dr. Thair ,Dr-Shoroq, Dr- Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamr
Week-12 Group A,B,C,D,E	General features of chromosomal disorders	Dr. Thair ,Dr-Shoroq, Dr- Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamr
Week-13 Group A,B,C,D,E	Cytogenetic disorders involving autosomal chromosomes	Dr. Thair ,Dr-Shoroq, Dr- Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamr
Week-14 Group A,B,C,D,E	Cytogenetic disorders involving sex chromosomes	Dr. Thair ,Dr-Shoroq, Dr- Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamr
Week -15 Group A,B,C,D,E Week-15 Group A,B,C,D,E	Examples of congenital abnormalities	Dr. Thair ,Dr-Shoroq, Dr- Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamr

## References:

**1-Robbins basic of pathology**

**2-Muris pathology**

**3-Text book pathology**

**4- USMLE pathology**

**Akacрман basic of pathology**

**Pathology out lines .com**

## **7- E-learning:**

### **Aims of the course:**

- 3- To improve the electronic abilities of students
- 4- Make students familiar with the most commonly used operating systems (windows) especially the latest versions

### **Learning objectives:**

#### **(Knowledge)**

- 4- Students should have a general idea about the basic rules of Internet use
- 5- They should know how to form an E- mail and how to use it
- 6- The ability to create a Website

#### **(Skills)**

- 3- The ability to professionally use the Internet and E-mail
- 4- The basic electronic skills used for creating and using personal websites

#### **(Attitudes)**

- 3- Encourage the concept of lifelong learning which is an important part of continuous updating in the electronic field
- 4- Teach students the importance of respecting other people privacy and hoe to protect their own.

### **Teaching methods:**

Theoretical lectures

Practical sessions

### **Assessment methods:**

Written exams

Practical exams using computers

Writing reports and using applications

### **Course contents:**

No.	No. of Weeks	Theoretical Hours : 1 hours per week		Practical Hours :2 hours per week	
		Theory Lecture Topics	Hours Per Week	توضيح الأجزاء الأساسية للحاسوب وعرضها على الطلبة	Hours Per Week
1	1 <sup>st</sup> .week	Introduction in Networks Computer	1	تعريف الطلبة على شبكات الحاسوب	2
2	2 <sup>nd</sup> .week	Types of Networks and their Uses	1	أنواع الشبكات والأجهزة القابلة للارتباط والمشاركة	2
3	3 <sup>rd</sup> .week	Introduction to the Internet and its Importance in the Development of Scientific Research	1	الانترنت, تطبيق عملي لكيفية البحث والعمل عليه	2
4	4 <sup>th</sup> .week	Internet Search Engines and their Type	1	التطبيق الفعلي لمحركات البحث بأنواعه	2
5	5 <sup>th</sup> .week	-Advanced Search on the Internet -Translation and its use	1	التطبيق الفعلي للبحث المتقدم	2
6	6 <sup>th</sup> .week	Computer Medical Applications	1	تطبيق عملي لطريقة بولين للبحث الدقيق-تطبيق برامج الترجمة	2
7	7 <sup>th</sup> .week	E-mail : Benefits and how to create it	1	انشاء بريد اليكتروني	2
8	8 <sup>th</sup> .week	Midterm Examination Theory	1	Midterm Examination Practical	2
9	9 <sup>th</sup> .week	Defining Websites and their components and classifying them	1	التعرف على المواقع الإلكترونية	2
10	10 <sup>th</sup> .week	Creating Google Website	1	تصميم موقع اليكتروني مجاني	2
11	11 <sup>th</sup> .week	Creating Google Website	1	تصميم موقع اليكتروني مجاني	2
12	12 <sup>th</sup> .week	Introduction to Malware	1	التعديل على الموقع الإلكتروني المصمم سابقا	2
13	13 <sup>th</sup> .week	Computer Virus Properties	1	التعديل على الموقع الإلكتروني المصمم سابقا	2
14	14 <sup>th</sup> .week	Computer Virus Prevention	P	التعديل على الموقع الإلكتروني المصمم سابقا	2
15	15 <sup>th</sup> .week	Midterm Examination Theory	1	Midterm Examination Practical	2

### References:

كتاب مقدمة في علم الحاسوب والانترنت

كتاب ICDL الرخصة الدولية لقيادة الحاسب الالي

كتاب مراجع تعليم الاوفس والوندوز والانترنت

The daily schedule of second course weeks (second grade):

2:30-3:30	2:30 -1:30	1:30 -12:30	12:30-11:30	11:30 -10:30	10:30 -9:30	9:30-8:30	اليوم
E-Learning	Biochemistry II	Physiology II	Biochemistry II	Biochemistry II	Physiology II	Physiology II	الاحد
	Practical pathology C1+C2+D1+D2 Lab + PBL	Pathology II	C 1 Anatomy D2Physiology C2 Histology D1 Biochemist Lab + PBL	C2 Anatomy D 1Physiology C1 Histology D2 Biochemist Lab + PBL	D1Anatomy C2Physiology D2 Histology C1 Biochemist Lab + PBL	D2 Anatomy C1Physiology D 1 Histology C2 Biochemist Lab + PBL	الاثنين
نشاطات لاصفية	Practical pathology A1+A2+B1+B2 Lab + PBL	Physiology II	A 1 Anatomy B2Physiology A2 Histology B1 Biochemist Lab + PBL	A2 Anatomy B 1Physiology A1 Histology B2 Biochemist Lab + PBL	B1 Anatomy A2Physiology B2 Histology A1 Biochemist Lab + PBL	B2 Anatomy A 1Physiology B 1 Histology A2 Biochemist Lab + PBL	الثلاثاء
	Anatomy II	Embryology II	Histology II	Histology II	Anatomy II	Anatomy II	الاربعاء

**Third year:**

**First course:**

عدد الوحدات	عدد الساعات		المادة الدراسية	ت
	العملي	النظري		
6	2	5	Pathology I (امراض)	.1
4	2	3	Pharmacology I (ادوية)	.2
4	2	3	Microbiology I (الاحياء المجهرية)	.3
3	2	2	Community medicine I (طب المجتمع)	.4
1	/	1	Communication skill I (مهارات تواصل)	.5
2	/	2	Surgery I (جراحة)	.6
3	2	2	Medicine I (باطنية)	.7
2	2	1	Parasitology I (طفيليات)	.8
25			المجموع	

# 1- Pathology I

## **Aims of the course:**

- Each lecture handout will provide specific objectives.
- The course will cover pathological and pathophysiological aspects of disease by organ systems.
- This course will include gross, microscopic, and radiologic material to help the students in understanding the disease processes.
- Lectures will be directed to give a big picture of organization to help students in understanding outlines of pathologic bases within each system.
- Practical labs will be directed to create objective knowledge by students about gross and microscopic morphological changes accompanying each disease process.
- Small groups student based learning sessions will help students to communicate and cooperate in order to reduce time needed to build up the required deep and enormous pathologic information and to motivate students toward active process of learning.
- Problem based learning (PBL) sessions are going to include selected common and emergent and critical problems that will be faced by students in their later life of studying and practicing medicine.

## **Learning objectives:**

### **(Knowledge):**

- 1- Study of the basic pathological processes and special diseases affecting different body systems and understanding their pathogenesis and morphological manifestations at the molecular, cellular, tissue, organs, and whole body levels.
- 2- Explain main clinical problems by the underlying pathological process.
- 3- Study applied pathology (clinico-pathological correlation).
- 4- Examination of pathologic slide, provide a differential diagnosis, and reach the correct diagnosis.
- 5- Basic knowledge and awareness of special staining and immunohistochemistry that help in reaching the correct diagnosis.

### **(Skills):**

- 1- Demonstrate the morphological manifestations of almost all diseases at macroscopic and microscopic level.

- 2- Formulate the basis of morphological and clinical observation in terms of pathological mechanisms occurring at all levels.
- 3- Analyze these observations for formulating differential diagnosis and teach them how to reach the accurate diagnosis by exclusion.

**(Attitudes):**

- 1- Identify and explain the clinical manifestations of disease and investigation results in terms of underlying pathology.
- 2- Identify different tools in diagnostic pathology including the ancillary techniques such as immunohistochemistry, flow cytometry & molecular techniques.
- 3- Recognize and apply appropriate professional attitudes and problem solving skills.
- 4- Perform scientific research.
- 5- Work and learn within a team and communicate ideas and arguments effectively.

**Teaching methods:**

1. Lectures
2. Practical classes
3. Small group discussion with case study and problem solving
4. formative assessment
- 5- by video and skills

**Assessment methods:**

**Written Examination:** Assessment of knowledge and understanding and intellectual skills. These are usually done as summative assessments at the end of each system

**Practical Examination:**

- A. Assessment of practical skills.
- B. Intellectual skills: a. Station b. Objective Structured Test (OST) c. Photos
- d. Report

Time	Activity	Marks	Description
first course	Quizzes	10	10 theory and 10 practical quizzes; 0.5 mark for each
	Mid- course I theory	20	<ul style="list-style-type: none"> <li>• 60%-70% Problem based questions in the form of case scenarios with short essay questions and single best answers</li> <li>• 30%-40% Essay questions and MCQs</li> </ul>
	Mid course I , Practical exam	10	Gross specimens and microscopical slides



Final first course	Final course I ,Theory exam	45	<ul style="list-style-type: none"> <li>60%-70% Problem based questions in the form of case scenarios with short essay questions and single best answers</li> <li>30%-40% Essay questions and MCQs</li> </ul>
	Final course I ,Practical exam	15	Gross specimens and microscopical slides

## Course contents:

### Theory lectures

Week	Date /1hour	Lecture subject	Objectives	lecturer
<b>Week-1</b>	<b>Sunday</b>	CVS: Congenital heart disease	The student will be familiar with: major congenital abnormalities affecting the heart, their clinical presentation, gross features and related complications and differential diagnosis	Dr. Thair Wali Ali
	<b>Monday</b>	CVS: Ischemic heart disease, Angina	The student will be familiar with causes, clinical presentation and pathophysiological consequences of IHD and differential diagnosis	Dr. Thair Wali Ali
	<b>Tuesday</b>	CVS: Myocardial Infarction	The student will be familiar with common types of intracranial hemorrhage and their clinicopathological features , gross and microscopic features and differential diagnosis	Dr. Thair Wali Ali
	<b>Wednesday</b>	CVS: valvular heart disease	The student will be familiar with causes of CVA and their clinicopathological features gross and microscopic features ,diagnostic methods and differential diagnosis	Dr. Thair Wali Ali
	<b>Thursday</b>	CVS: Rheumatic Valvular Disease	The student will be familiar with causes, clinical presentation and pathophysiological, pathogenesis, risk factors, of valvular heart disease and differential diagnosis	Dr. Thair Wali Ali
<b>Week-2</b>	<b>Sunday</b>	CVS : Infective Endocarditis	The student will be familiar with causes, clinical presentation and pathophysiological of infective endocarditis finding and differential diagnosis	Dr. Thair Wali Ali
	<b>Monday</b>	CVS: cardiomyopathies	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and different types of cardiomyopathies	Dr. Thair Wali Ali
	<b>Tuesday</b>	CVS: Myocarditis	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Thair Wali Ali
	<b>Wednesday</b>	CVS: hypertensive vascular disease	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Thair Wali Ali
	<b>Thursday</b>	CVS: vascular disorders	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and differential diagnosis	Dr. Thair Wali Ali
<b>Week-3</b>	<b>Sunday</b>	CVS: Vasculitis	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and differential diagnosis	Dr. Thair Wali Ali

	<b>Monday</b>	CVS tumor	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Thair Wali Ali
	<b>Tuesday</b>	Endocrine: pituitary gland ,Hypopituitarism	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis of hypopituitarism	Dr. Esra ALharis
	<b>Wednesday</b>	Endocrine: pituitary gland Hyperpituitarism	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis of hyperpituitarism	Dr. Esra ALharis
	<b>Thursday</b>	Pituitary tumor	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis of benign & malignant pituitary tumors	Dr. Esra ALharis
<b>Week-4</b>	<b>Sunday</b>	Endocrine: Solitary thyroid nodules, Hypothyroidism	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Esra ALharis
	<b>Monday</b>	Endocrine: Hyperthyroidism, Hypothyroidism	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Esra ALharis
	<b>Tuesday</b>	Endocrine:malignant thyroid	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Esra ALharis
	<b>Wednesday</b>	Endocrine: Hyperparathyroidism	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Esra ALharis
	<b>Thursday</b>	Endocrine: Hypoparathyroidism	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Esra ALharis
<b>Week-5</b>	<b>Sunday</b>	Endocrine: adrenal gland tumor	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Esra ALharis
	<b>Monday</b>	Endocrine : Multiple Endocrine Neoplasia Syndromes (MEN)	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Esra ALharis
	<b>Tuesday</b>	Endocrine hypothalamus I	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Esra ALharis
	<b>Wednesday</b>	Endocrine: endocrine pancreas and pineal gland	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Esra ALharis
	<b>Thursday</b>	Endocrine: Diabetes mellitus I	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Esra ALharis
<b>Week-6</b>		Endocrine: Diabetes mellitus II	The student will be familiar with causes ,types ,clinical presentation, radiological	Dr. Esra ALharis

	<b>Sunday</b>		findings, pathological finding and pathophysiology and differential diagnosis	
	<b>Monday</b>	Respiratory system: approach to respiratory examination	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.shoroq Mohamed
	<b>Tuesday</b>	RS: Congenital abnormalities and atelectasis	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.shoroq Mohamed
	<b>Wednesday</b>	RS: acute lung injury	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.shoroq Mohamed
	<b>Thursday</b>	RS: obstructive lung disease I	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.shoroq Mohamed
<b>Week-7</b>	<b>Sunday</b>	Respiratory system: obstructive lung disease II	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.shoroq Mohamed
	<b>Monday</b>	Respiratory system: Diffuse interstitial lung disorders I	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.shoroq Mohamed
	<b>Tuesday</b>	RS: Diffuse interstitial lung disorders II	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.shoroq Mohamed
	<b>Wednesday</b>	Respiratory system: vascular disorders I	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.shoroq Mohamed
	<b>Thursday</b>	RS: vascular disorders II	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.shoroq Mohamed
<b>Week-8</b>	<b>Sunday</b>	RS: pulmonary edema I	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.shoroq Mohamed
	<b>Monday</b>	RS: pulmonary edema II	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.shoroq Mohamed
	<b>Tuesday</b>	RS: Pulmonary infections(pneumonia)I	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.shoroq Mohamed
	<b>Wednesday</b>	RS: Pulmonary infections: pneumonia II	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.shoroq Mohamed

	<b>Thursday</b>	T.B I	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.shoroq Mohamed
<b>Week-9</b>	<b>Sunday</b>	TB II	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.shoroq Mohamed
	<b>Monday</b>	RS: benign Tumors	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.shoroq Mohamed
	<b>Tuesday</b>	RS: malignant Tumors	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.shoroq Mohamed
	<b>Wednesday</b>	RS: Pleura	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.shoroq Mohamed
	<b>Thursday</b>	RS: Pleural tumor	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.shoroq Mohamed
<b>Week-10</b>	<b>Sunday</b>	RS: Pleural effusion	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.shoroq Mohamed
	<b>Monday</b>	RS: pneumothorax	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.shoroq Mohamed
	<b>Tuesday</b>	Hematology: NR Hemopoiesis	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.hamid
	<b>Wednesday</b>	IDA	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Hamid
	<b>Thursday</b>	Megaloplastic anemia	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Hamid
<b>Week-11</b>	<b>Sunday</b>	Aplastic anemia and sedroplastic anemia	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Hamid
	<b>Monday</b>	Mid course I exam	Mid course I exam	
	<b>Tuesday</b>	Acquired hemolytic anemia	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Hamid

	<b>Wednesday</b>	WBC disorders, acute leukemia	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Hamid
	<b>Thursday</b>	Chronic leukemia	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Hamid
<b>Week-12</b>	<b>Sunday</b>	Blood group and Blood transfusion	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Hamid
	<b>Monday</b>	Coagulopathy , Spleen, Thymus	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Hamid
	<b>Tuesday</b>	GIT /Diseases of oral cavity I	The student will be familiar with: oral inflammatory lesions , major proliferative and neoplastic lesions of oral cavity, their clinical presentation, gross features and related complications and differential diagnosis	Dr.Aws
	<b>Wednesday</b>	GIT /Diseases of oral cavity II	The student will be familiar with diseases of salivary gland ( inflammatory & neoplastic lesions): clinical presentation and differential diagnosis of salivary gland tumors.	Dr.Aws
	<b>Thursday</b>	GIT / Diseases of Esophagus I	The student will be familiar with obstructive & vascular diseases of esophagus, Esophagitis( their common types , clinicopathological features , gross and microscopic features).	Dr.Aws
<b>Week-13</b>	<b>Sunday</b>	GIT / Diseases of Esophagus II	The student will learn about esophageal tumors,( causes , clinicopathological features gross and microscopic features ,diagnostic methods and differential diagnosis	Dr.Aws
	<b>Monday</b>	GIT / Inflammatory diseases of stomach	The student will be familiar with causes, clinical presentation and pathophysiological, , risk factors, and differential diagnosis	Dr.Aws
	<b>Tuesday</b>	GIT / Neoplastic diseases of stomach	The student will be familiar with causes, clinical presentation and pathophysiology , gross and microscopical findings.	Dr.Aws
	<b>Wednesday</b>	GIT / Diseases of small bowel	The student will be familiar with various diseases of small bowel and learn about their clinical presentation, pathological findings and pathophysiology and differential diagnosis	Dr.Aws
	<b>Thursday</b>	GIT / Diseases of large bowel I	The student will be familiar with intestinal obstruction: causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Aws
<b>Week-14</b>	<b>Sunday</b>	GIT / Diseases of large bowel II	The student will be familiar with vascular diseases of large bowel: types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Aws
	<b>Monday</b>	GIT / Diarrheal disease	The student will be familiar with causes ,types ,clinical presentation, pathological finding and differential diagnosis	Dr.Aws
	<b>Tuesday</b>	GIT/ Inflammatory bowel disease	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and differential diagnosis	Dr.Aws

	<b>Wednesday</b>	GIT / Colonic polyps & neoplasia I	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Aws
	<b>Thursday</b>	GIT / Colonic polyps & neoplasia II	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Aws
<b>Week-15</b>	<b>Sunday</b>	GIT / Colonic polyps & neoplasia III	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis y	Dr.Aws
	<b>Monday</b>	GIT / Appendix	The student will be familiar with Appendicitis & tumor of the appendix.	Dr. Deena
	<b>Tuesday</b>	Liver & gall bladder \ jaundice	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Deena
	<b>Wednesday</b>	Liver& gall bladder\ cirrhosis	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Deena
	<b>Thursday</b>	Liver& gall bladder\ tumors	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Deena
<b>Final course Exam</b>		<b>Final course Exam</b>	<b>Final course Exam</b>	

### : Small groups session / Practical sessions and SBL

<b>Week</b>	<b>Subject-practical session /first hour</b>	<b>SBL/Second hour</b>	<b>Lecturer for small group</b>
Week-1 Group A,B,C,D,E	Ischemic heart disease: clinical , gross and microscopical features	Approach examination patient with Ischemic heart disease	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Week-2 Group A,B,C,D,E	Vascular disorders ,gross and microscopical features	Approach examination patient with Vascular disorders	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Week-3 Group A,B,C,D,E	Vascular tumor :radiological, gross and microscopical features	Approach examination patient with Vascular tumor	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Week-4 Group A,B,C,DE,	Pituitary disorders and tumor: radiological, gross and microscopic features	Approach examination patient with pituitary disorders and tumor	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Week-5 Group A,B,C,D,E	Thyroid and parathyroid disorders and tumors: radiological, gross and microscopical features	Approach examination patient with thyroid and parathyroid disorders and tumor	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamer

Week-6 Group A,B,C,D,E	Adrenal gland disorders and tumor : radiological, gross and microscopical features	Approach examination patient with adrenal disorders and tumor	
Week-7 Group A,B,C,D,E	Pneumonia and T.B: radiological, gross and microscopical features	Approach examination patient with pulmonary infection	Dr. Thair ,Dr- Shoroq, Dr-Asra Dr-Dina , Dr- Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Week-8 Group A,B,C,D,E	Obstructive lung diseases: radiological, gross and microscopical features	Approach examination patient with Obstructive lung diseases	Dr. Thair ,Dr- Shoroq, Dr-Asra Dr-Dina , Dr- Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Week-9 Group A,B,C,D,E	Respiratory tumors: gross and microscopical features	Approach examination patient with lung tumor	Dr. Thair ,Dr- Shoroq, Dr-Asra Dr-Dina , Dr- Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Week-10 Group A,B,C,D,E	Anemia types ;, Investigations, causes , findings	Approach examination patient with anemia	Dr. Thair ,Dr- Shoroq, Dr-Asra Dr-Dina , Dr- Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Week-11 Group A,B,C,D,E	leukemia : types and microscopical features	Approach examination patient with leukemia	Dr. Thair ,Dr- Shoroq, Dr-Asra Dr-Dina , Dr- Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Week-12 Group A,B,C,D,E	Diseases of oral cavity + esophagus	Approach examination patient with oral & esophageal diseases	Dr. Thair ,Dr- Shoroq, Dr-Asra Dr-Dina , Dr- Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Week-13 Group A,B,C,D,E	Diseases of stomach	Approach examination patient with different gastric pathologies	Dr. Thair ,Dr- Shoroq, Dr-Asra Dr-Dina , Dr- Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Week-14 Group A,B,C,D,E	Diseases of bowl	Approach examination patient with possible intestinal pathologies	Dr. Thair ,Dr- Shoroq, Dr-Asra Dr-Dina , Dr- Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Week-15 Group A,B,C,D,E	Diseases of liver	Approach to different causes of cirrhosis + liver tumors	Dr. Thair ,Dr- Shoroq, Dr-Asra Dr-Dina , Dr- Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
<b>Final course Exam</b>	<b>Final course Exam</b>		

### **Problem based case scenarios: (15 Classes)**

Small groups problem based learning involves case scenarios provided with questions related to different topics previously taught by theory lectures. The total scenarios cases in first course about (64 cases)

**Tutors:-** Dr-Shoroq, Dr-Dina , Dr-Mather, Dr-Aws, Dr. Thair , Dr-Hamid , Dr-Thamer, Dr-Asra

### **- Lists of problem based case scenarios:**

#### **CVS-PBL ( 12 cases scenarios)**

**1-** A 58-year-old male teacher notices the sudden onset of “chest tightness” when he walks across the parking lot to and from the school. The pain, which is localized over the sternum, goes away when he sits down. He does not experience any pain or discomfort at other times. He has mild hypertension, for which he is on dietary therapy. His cholesterol level is elevated. He does not smoke.

**Q1/** What is the most likely diagnosis? **Q2/** What is the most likely mechanism for these symptoms? **Q3/**Microscopical features? **Q4/** Urgent mandatory investigation ?

**Q5/** What are the complications and prognosis? What is the most likely mechanism for these complications **Q6/**Risk factors of this patient?

**2-** A 53-year-old man presents with recurrent chest pain that has gotten progressively worse over the last several weeks. He says that approximately a year ago the pain would occasionally occur when he was mowing his yard but now the pain sometimes occurs while he is sitting in a chair at night reading a book. The pain, which is localized over the sternum, lasts much longer now than it did a few months ago.

**Q/**What type of angina does this individual have at present?

- A. Atypical angina
- B. Heberden angina
- C. Prinzmetal angina
- D. Stable angina
- E. Unstable angina

**3-** Prinzmetal angina (atypical angina) is characterized clinically by chest pain that occurs at rest rather than with exercise. **Q/**Which of the following is the most likely cause of this type of angina?

- A. Atherosclerosis of a coronary artery
- B. Dissection of a coronary artery
- C. Embolism of a coronary artery
- D. Thrombosis of a coronary artery
- E. Vasospasm of a coronary artery



**4-**Sections of lung tissue obtained during an autopsy of a 66-year-old woman reveal numerous hemosiderin laden macrophages within the alveoli.

**Q/**Which of the following is the basic pathologic cause of this abnormality?

- A. Bacterial infection
- B. Diabetes mellitus
- C. Heart failure
- D. Pulmonary hypertension
- E. Viral infection

**5-** A 50-year-old male alcoholic is seen in the clinic for complaints of difficulty breathing, particularly at night when he is lying down. He has not had chest pain or diaphoresis. Physical examination reveals that the cardiac point of maximal impulse (PMI) is laterally displaced on the lungs. Bilateral basilar rales are heard. A chest radiograph shows an enlarged heart and bilateral pleural effusions. An echocardiogram is performed and reveals a markedly low ejection fraction.

**Q1/** What is the most likely diagnosis? **Q2/** What is the likely underlying cause of this condition?

**Q3/**Most common cause of dilated cardiomyopathy? **Q4/**Investigation for this patient

**6-** A 45-year-old man is admitted to the hospital for symptoms of severe congestive heart failure, including dyspnea on exertion, swelling in the legs, and difficulty lying down flat in bed. Which of the following would be most consistent with chronic alcohol consumption?

- A. Restrictive cardiomyopathy
- B. Valvular stenosis
- C. Pericardial effusion
- D. Dilated cardiomyopathy

**7-** The toxic effect of alcohol is probably mediated through which of the following?

- A. Activation of oncogenes
- B. Production of toxic aldehydes
- C. Deficient fluid intake
- D. Yeast

**8-** A 47-year-old male alcoholic presents with numbness and tingling in his lower legs and feet. Physical examination finds marked peripheral edema and further workup finds changes consistent with a high-output cardiac failure. These symptoms are most consistent with a deficiency of which of the following substances?

- A. Pyridoxine
- B. Riboflavin
- C. Vitamin C
- D. Vitamin D
- E. Thiamine

**9-** A 52-year-old woman develops fatigue and dyspnea that have been worsening over approximately 6 months. She also complains of occasional palpitations. She describes a serious illness she had as a child, with fever, rash, joint pain, and difficulty controlling her movements. She recovered after approximately a month. Cardiac examination reveals a loud S1, an opening snap, and a diastolic rumble. A chest radiograph shows an enlarged left atrium.

**Q1/** What is the most likely diagnosis? **Q2/** What is the underlying mechanism for these findings?

**Q3/**Gross morphology of effected valve? **Q4/** What are the complications and prognosis for this disorder?

**10-** Which of the following types of infection, precedes by several weeks, the development of acute rheumatic fever?

- A. Group A  $\beta$ -hemolytic streptococcal infection of the pharynx
- B. Group D  $\alpha$ -hemolytic streptococcal infection of the heart
- C. Staphylococcus aureus infection of the lungs
- D. Streptococcus pyogenes infection of the skin
- E. Treponema pallidum infection of the abdominal aorta

**11-** 6-year-old boy develops fever, joint pain, and a diffuse skin rash approximately 3 weeks after recovering from a sore throat. Physical examination finds several small skin nodules, and laboratory examination finds an elevated erythrocyte sedimentation rate along with an elevated antistreptolysin O titer.

**Q/**Which of the following abnormalities is most characteristic of this boy's disease?

- A. Anitschkow cells within the epidermis
- B. Aschoff bodies within the myocardium
- C. Langhans giant cells within the dermis
- D. Psammoma bodies within the endocardium
- E. Virchow cells within the nasopharynx

**12-** A 44-year-old woman presents with worsening fatigue and dyspnea. The pertinent medical history is that she had rheumatic fever during childhood. Physical examination finds an early diastolic opening snap with a rumbling late diastolic murmur. A chest radiograph shows an enlarged left atrium.

**Q/**Which of the following is the most likely diagnosis?

- A. Aortic regurgitation
- B. Aortic stenosis
- C. Mitral regurgitation
- D. Mitral stenosis
- E. Pulmonary stenosis

## Endocrine system-PBL (13 cases scenarios)

1- A 42-year-old woman presents with increasing fatigue and occasional headaches. She states that recently she has had to change her shoe size from 39 to 42, and she also thinks that her hands and jaw are now slightly larger. Physical examination reveals a prominent forehead and lower jaw, enlarged tongue, and large hands and feet. Initial laboratory examination reveals increased serum glucose.

**Q/**What is the most likely explanation for this constellation of clinical findings?

2- On computed tomography scan revealed sellar mass with suprasellar extension and involvement of adjacent structures and vessels suggesting pituitary tumor. MRI showed large intense homogeneously enhancing dumbbell shaped sellar and supra-sellar mass lesion with bilateral parasellar extension suggesting the possibility of pituitary tumor.

**Q/** On the basis of clinical examination and radiological investigations, a clinical diagnosis of ?

3- 29 year old Female referred to Head & Neck clinic for evaluation of a thyroid nodule. Patient reports this nodule was found incidentally while she was getting ready for work one morning.

- Causes of Thyroid Nodularity
- Approach History & physical exam. of patients with thyroid gland pathology
- History Questions to Find High Risk Patients
- Investigations.
- What is the Radionuclide Scanning ?

4- A 45 years old female with history of rheumatoid arthritis presented by diffuse painless enlargement of thyroid gland. Biopsy from thyroid revealed The thyroid epithelial cells have granular eosinophilic cytoplasm with lymphocytic infiltrate forming lymphoid follicles with germinal centers.

**Q1/**What is the most likely diagnosis? **Q2/**What is the pathogenesis of this disease?

**Q3/** What do you call this epithelial cells? **Q4/**What is the expected picture of the thyroid function tests (T3,T4, TSH) in this disease? **Q5/**Radioactive iodine scan finding ?

5-A 25 years old female accidentally discovered a small non tender thyroid nodule. By radio-isotopic scan it was proved to be a cold nodule. Biopsy from thyroid showed finger like projections covered by epithelial cells with ground glass nuclei. What is the most likely diagnosis?

**Q1/**How does you reach this diagnosis **Q2/**What is the earliest method of distant spread in this tumor? **Q3/**What are other microscopic features of this tumor? **Q4/**Radioactive iodine scan finding ?

**Q5/**Prognosis **Q6/**way of transmission

6- A 49 years old female has had multiple episodes of lower abdominal pain & she passed a urinary stone during or following the pain episode. X-Ray on her long bones revealed generalized osteoporosis. Laboratory studies show elevated serum calcium and decreased serum phosphorus.

**Q/**What is the possible cause for those disorders?

1. Metastatic carcinoma
2. Parathyroid adenoma

3. Pituitary adenoma

4. Thyroid carcinoma

**Q1/** Mention other causes that can cause the same presentation.

**Q2/** Explain the cause of renal stones in this disease?

**7-** A 26-year-old pregnant woman attended the antenatal clinic regularly. She had no family history of diabetes. At 24 weeks' gestation she was found to have asymptomatic glycosuria. A glucose tolerance test showed that not only was her fasting blood glucose raised but she had poor glucose tolerance. *Gestational diabetes* was diagnosed and the patient was admitted for diabetic control. Nine years later, after yearly checks, the patient developed overt *type two diabetes mellitus*.

**Q1/**What is the Definition of diabetes mellitus? **Q2/**What is the classification of diabetes mellitus?

**Q3/**What is diagnostic approach of diabetes mellitus? **Q4/**What are the short & long term pathological complications.

**8-** A 12-year-old girl presented with vague abdominal discomfort for 6 months. She had noticed occasional diarrhea but had not passed any blood. She admitted to weight loss (6kg) and anorexia. On examination, she was obviously pigmented, although she thought this was sun induced; however, her buccal mucosa and gums were also brown. on examination she was hypotensive , tachycardic with weak pulse and Hypoglycemic.

**Q1/**What is the most common primary site for the origin of a disease that could produce these clinical signs & symptoms , and name it ? **Q2/**What are the major pathological causes of this disease ?

**Q3/**Mention briefly the most common microscopical finding of each one ?

**Q4/**how can differentiate primary or secondary Addison disease ACTH TEST

### **9-PBL**

A 25-year-old woman who has never been pregnant presents with amenorrhea for 3 months and a milky discharge from her nipple. She states that her menstrual cycles have been irregular for the past year. Laboratory tests show that her serum LH and estradiol levels are below normal, and a pregnancy test is negative. Which of the following is the most likely cause of these signs and symptoms?

- a. Craniopharyngioma of the hypothalamus
- b. Germinoma of the pineal gland
- c. Islet cell adenoma of the pancreas
- d. Medullary carcinoma of the thyroid gland
- e. Prolactinoma of the pituitary gland

### **10-PBL**

A 42-year-old man presents with increasing fatigue and occasional headaches. He states that recently he has had to change his shoe size from 9 to 10, and he also thinks that his hands and jaw are now slightly larger. Physical examination reveals a prominent forehead and lower jaw, enlarged tongue, and large hands and feet. Initial laboratory examination reveals increased serum glucose. Which of the following is the most likely explanation for this constellation of clinical findings?

- a. Acromegaly
- b. Apoplexy
- c. Cretinism
- d. Diabetes
- e. Gigantism

### **11-PBL**

A 25-year-old woman presents with problems breast feeding her first child, whom she delivered 6 weeks prior. She reports that she has not menstruated since the delivery. She also says that lately she has been tired and has been “feeling cold” all of the time. Laboratory workup reveals a deficiency of ACTH and other anterior pituitary hormones. Which of the following is the most likely cause of this patient’s signs and symptoms?

- a. Craniopharyngioma
- b. Cushing disease
- c. Empty sella syndrome
- d. Nonsecretory chromophobe adenoma
- e. Sheehan syndrome

### **12-PBL**

An 8-month-old infant is being evaluated for growth and mental retardation. Physical examination reveals a small infant with dry, rough skin; a protuberant abdomen; periorbital edema; a flattened, broad nose; and a large, protuberant tongue. Which of the following disorders is the most likely cause of this infant’s signs and symptoms?

- a. Graves disease
- b. Cretinism
- c. Toxic multinodular goiter
- d. Toxic adenoma

### **13-PBL**

A 29-year-old woman presents with nervousness, heat intolerance, and weight loss. Physical examination reveals the presence of exophthalmos, pretibial myxedema, and diffuse enlargement of the thyroid. Laboratory examination reveals elevated serum thyroxine (T<sub>4</sub>) and triiodothyronine (T<sub>3</sub>) levels, while the level of serum thyroidstimulating hormone (TSH) is decreased. Histologic sections from her thyroid gland reveal increased cellularity with scalloping of the colloid at the margins of the follicles. Which of the following types of autoantibodies is most specific for this individual disease?

- a. Antimicrosomal antibodies
- b. Antithyroglobulin antibodies
- c. Antithyroid peroxidase antibodies
- d. TSH-receptor-blocking antibodies
- e. TSH-receptor-stimulating antibodies

### **Respiratory system-PBL ( 11 cases scenarios)**

1- A 25 y –old men suffered from episodic attack of sever dyspnea with wheezing and cough after ingestion the drug ,patient with –ve family history to allergen and –ve skin test . His temperature ,pulse respiratory rate and blood pressure were nearly normal and in between attaches he is nearly normal . On CXR examination showed mild hyperinflation .

**Q1/**What is the possible diagnosis? Example? **Q2/**Explain its pathogenesis if patient ingest aspirin ?

**Q3/**What are the expected serological finding in this case?

2- A 50-year-old man dies following a severe episode of status asthmaticus .He has positive family history and positive serological test .

**Q1/**What are the histologic examination of the lung at autopsy? **Q2/Serological finding?**

**Q3/Sputum finding? Q4/Other test for asthma? Q5/Key cell for acute phase reaction and key cell for late phase reaction? Q6/Type of hypersensitivity , antibodies ,type of T helper cell .**

**Q7/Pulmonary function test ( FEV1 and FVC and the ratio Q8/Pathogenesis.**

3- Q/A 65y-old man with a 40y history of tobacco use. Now complain from sever dyspnea. On examination, he has barrel-shaped chest and pink puffer. CXR reveals enlarged heart, hyper -lucent lung fields and cystic air spaces projecting from the pleural surface.

**Q1/** What is the most likely diagnosis? **Q2/** Pathogenesis? **Q3/** alpha 1-antitrypsin Level.

**Q4/Gross and microscopic features**

4- A 40-year-old woman is rushed to the emergency room following an automobile accident. She has suffered internal injuries and massive bleeding and appears to be in a state of profound shock. On examination /respirations are 42 per minute, and blood pressure is 80/40 mm Hg.On CXR examination / showing diffuse bilateral infiltration . Also note presence of an endotracheal tube(ET) and Swan–Ganz central venous catheter (for measure RT atrium pressure) .

**Q1/**What is the most appropriate diagnosis? **Q2/-**The characteristic histologic picture of acute stage?

**Q3/-**Pathogenesis? **Q4/**Prognosis?

5- A 70 –year old man had undergone hip replacement and stayed in the hospital for 15 days .Before departure he suddenly complained of fever , cough ,purulent sputum and pleuritic chest pain .CXR revealed RT lower lobe consolidation .

**Q1/**What is most likely diagnosis? **Q2/**What is most common M.O caused this disease?

**Q3 /**List the possible complication. **Q4/**Enumerate the stages of pulmonary infection?

**Q5/Microscopical finding for each stage of pulmonary infection**

6- A 10-year-old boy presents with fever, malaise, headaches, and muscle pain (myalgia). CXR reveals bilateral lung infiltrates with no sign of consolidation.

**Q1/**What is most appropriate diagnosis? **Q2/**What is most common M.O caused this disease ?

**Q3/**What are other possible causative organisms? **Q4/Microscopical finding?**

7-A 22-year-old man with AIDS complains of persistent cough, night sweats, low-grade fever, and general malaise. A chest X-ray reveals an area of consolidation in the lower part of the left upper lobe and L.N enlargement. Sputum cultures show acid-fast bacilli.

**Q1/**What is most likely diagnosis? **Q2/** Microscopical finding?

**Q3/**Which stain can be better for acid-fast bacilli? Why? **Q4/**What is the primary lesion called?

**Q5/** Fate of disease?

**8-** After traveling by air from Romania to New York, a 35-year-old woman develops a sudden onset of chest pain and shortness of breath. She has not experienced anything like this before, but her sister had a similar episode after the delivery of her first child. On examination, the patient appears anxious and tachypnea. Her lungs reveal good air movement bilaterally.

**Q1/** What is the most appropriate diagnosis? **Q2/** What are the possible underlying mechanisms?

**Q3/** What are the risk factors? **Q4/** Microscopical finding?

**9-** A 58y old men has developed cough with blood –streaked sputum and Wight loss. On physical examination he has moon face, obese and purple abdominal striae. A CXR reveals a 5 cm consolidated area near the RT hilum(central) with L.N enlargement. Multiple hepatic nodules by sonar examination. A sputum cytology reveals the presence of clusters of small cells having large hyper- chromatic pleomorphic nuclei with scanty cytoplasm but are larger than lymphocytes.

**Q1/** What is the most appropriate diagnosis? **Q2/**What are the methods of spread?

**Q3/**What is the syndrome that occur with this case. **Q4/**Stage of this case and treatment?

**Q5/**what is the most common gene mutation?

**10-** A 45y old women has developed cough with blood –streaked sputum, weight loss . U/S examination showed renal stone. Bone pain and osteoporosis. A CXR reveals a 6 cm consolidated area at periphery of Lt lung. FNA examination reveals malignant cells.

**Q1/** What are the differential diagnosis? **Q2/** What are the most common differential diagnosis?

**Q3/**Cause of bone pain and osteoporosis? **Q4/**Pathophysiology of renal stone?

**Q5/**Name this syndrome. **Q6/**Microscopical finding of most common Type?

**11-** A 50y old men has developed cough with blood –streaked sputum. On physical examination he has brown to black, hyperpigmentation of the skin of the neck fold and axilla. A CXR reveals a 2 cm consolidated area near the LT hilum without L.N enlargement. Histopathological examination as showed in this figure: -

**Q1/** What is the most likely diagnosis? **Q2/** Grade of this case.

**Q3/**What is the skin lesion and most common cause and pathophysiology. **Q4/**Stage and prognosis?

### **GIT - PBL ( 11 cases scenarios)**

**Q1/** A 45-year-old woman with long-standing rheumatoid arthritis complains of dry eyes and dry mouth. Bilateral painless enlargement of the parotids which is noted on physical examination.

1-What is most likely diagnosis? 2-Risk of malignant transformation

**Q2/** A 47y –old female presented by a slowly growing painless discrete mass at the angle of the jaw .

Grossly , the tumor is encapsulated , firm multinodular with grayish –white cute surface ,showing cystic areas and cartilaginous areas .

1-What is the most likely diagnosis ?

2-What are the histological elements often present in this neoplasm ?

3-What is the cause of recurrence of this tumor after excision and percentage of recurrence ?

**Q3/** A 62y-old man presents with mass at the angle of the jaw .It was excised and appears encapsulated .Section reveals large cystic compartment with papillary projections .

1-What is the most likely diagnosis ?2-What are the microscopical finding in sections prepared ?

3-Recurrence rate ? Why . 4- Risk of malignancy transformation ?why .

**Q4/** A 42-year-old policeman has been seen by his family physician for a 5-year history of “heartburn.” He has been intermittently taking ranitidine, a histamine-2 blocking agent, with some relief. An upper endoscopic examination that was performed recently revealed red velvety gastrointestinal mucosa extending from the gastroesophageal orifice. Note the paler squamous esophageal mucosa. A biopsy of the lower esophagus was performed, and the microscopic examination revealed columnar cells containing goblet cells.

1- What is the most likely diagnosis? 2- What is the most likely mechanism of this process?

3- What is a long-term complication of this process?

**Q5/** A 60-year-old man presents with a 5-week history of difficulty swallowing. Upper endoscopy shows a large polypoid mass in the upper third of the esophagus and biopsy is revealed malignant cells .

1-What is the appropriate histologic diagnosis for this esophageal mass? 2-Risk factors .

3-Microscopic features?

**Q6/** A 30-year-old male banker complains of midepigastic gnawing and boring pain for the last week. The pain is worse after he eats. He has not had any fever, nausea, or vomiting. He takes approximately one 500-mg acetaminophen tablet a week for headaches but does not take any medications. Upper endoscopy reveals a 2-cm mucosal defect in the lesser curvature of the stomach. There is mild edema in the adjacent mucosa, but there is no thickening of the edges of the ulcer.

1-What is the most likely diagnosis? 2- What are complications from this condition?

3- What is the most likely mechanism of this disorder? 4- How confirm the diagnosis?

5-Prognosis? 6-Microscopic features?

**Q7/** A 45-year-old woman presents with a 6-month history of fatigue and swelling in her neck. there is an elevated serum level of TSH and antithyroid antibodies. on biopsy of the thyroid reveals as Hashimoto thyroiditis . A CBC discloses megaloblastic anemia and a normal reticulocyte count.

1-Anemia in this patient is most likely caused by antibodies directed to which of the following targets? 2-Confirm DX 3- What is most likely diagnostic problem in stomach of patient

4-Microscopical finding ?5-Prognosis ?

**Q8/** A 58-year-old woman presents with a 2-month history of abdominal discomfort and dark stools. Physical examination shows pallor but no evidence of jaundice. Laboratory studies disclose a microcytic, hypochromic anemia, with a hemoglobin level of 6.7 g/dl with low serum ferritin . A barium swallow radiograph reveals a “leather bottle” appearance of the stomach. On biopsy



examination reveals “signet ring” cells, in the stomach wall. Further evaluation by abdominal CT imaging shows bilateral ovarian masses .

1-What is the most likely diagnosis? 2-Why bilateral ovarian masses .

3-Prognosis? 4-What is most likely type of microcytic, hypochromic anemia ?

**Q9/** An 8-year old boy complains of a chronic diarrhea. A stool fat collection indicates steatorrhea . Biopsy of the duodenum is reveals with absence of villi ,increased number of plasma cells and T lymphocytes of the lamina propria and hyperplastic appearing elongated crypts .

1-What is the most likely diagnosis ? 2-Pathogenesis ? 3-Serum test? 4-Skin lesion associated disease?

5-Definitive diagnosis for this case .6-Prognosis

**Q10/** A 30-years old man complains for intermittent attacks of diarrhea abdominal pain and weight loss with intervening asymptomatic periods . Gross endoscopic examination shown Segments of the small bowel involved by the disease show granular and dull gray serosa and cobble-stoning of the mucosa with intermiting normal mucosa ( skip lesions) .

1-what is most likely diagnosis? 2-Microscopical pathology 3-Complication ?

**Q11/** An 82 y-old female presents with bleeding per rectum . Pelvic ultrasound reveals enlarged bilateral ovaries. Colonoscopy reveals polypoid fungating mass in the rectum and biopsy reveals malignant cells .

1-What is the most likely diagnosis? 2-Methods of spread

3-Can you explain the right ovarian enlargement ? What is the stage of the disease ?

### [LIVER PBL \( 5 cases scenarios\)](#)

**Q1/**A 30-year-old man presents with a 9-month history of fatigue and recurrent fever. He also complains of yellow skin and sclerae, abdominal tenderness, and dark urine. Physical examination reveals jaundice and mild hepatomegaly. Laboratory studies demonstrate elevated serum bilirubin (3.1 mg/ dL), decreased serum albumin (2.5 g/dL), and prolonged prothrombin time . Serologic tests reveal antibodies to hepatitis B core antigen (IgG anti-HBcAg). The serum is positive for HBsAg .

What is the most likely diagnosis?

(A) Acute hepatitis B

(B) Alcoholic hepatitis

(C) Chronic hepatitis B

(D) Delta virus infection

(E) Subacute hepatic necrosis secondary to hepatitis B

infection

**Q2/** A 20-year-old woman presents with a 2-week history of fever, malaise, and brown-colored urine. Physical examination reveals jaundice, mild hepatomegaly, and tenderness in the right upper quadrant. Serum levels of AST and ALT are markedly elevated .

Serum IgM anti–hepatitis A virus (anti-HAV) is positive . IgG anti–hepatitis B surface antigen (anti-HBsAg) antibodies are positive. Anti–hepatitis C virus antibodies are negative.

What is the most likely diagnosis?

- (A) Acute viral hepatitis A
- (B) Acute viral hepatitis B
- (C) Acute viral hepatitis C
- (D) Autoimmune hepatitis
- (E) Chronic viral hepatitis B

**Q-3/A** 25-year-old heroin addict presents in a disoriented state with a 5-day history of fatigue, malaise, and dark-colored urine. Physical examination reveals jaundice and multiple petechial hemorrhages on the upper extremities. Laboratory studies show serum bilirubin of 15.6 mg/dL, mostly in the conjugated form, 10-fold elevations of serum AST and ALT, high levels of blood ammonia, and increased prothrombin time (15 seconds). The patient’s condition deteriorates and he develops stage 4 hepatic encephalopathy.

Which of the following viruses is most likely responsible for the clinical and pathologic findings in this patient?

- (A) Cytomegalovirus
- (B) Hepatitis A virus
- (C) Hepatitis B virus
- (D) Hepatitis C virus
- (E) Hepatitis E virus

**Q4/A** 60-year-old man is found in a state of disorientation and is brought to the emergency room in a comatose state. He lived alone, ate poorly, and drank large amounts of alcohol. Physical examination reveals jaundice, ascites, and a slightly enlarged spleen with small liver span, and renal failure (oliguria and elevated serum levels of BUN and creatinine), A liver biopsy is shown disruption of the normal hepatic parenchyma by bands of fibrosis and regenerative nodules of hepatocytes.

1-What is the most likely diagnosis? 2-What is the cause of coma? which type of coma?

3-Blood test would confirm a diagnosis of this coma? 4-Pathophysiologic mechanisms is most directly associated with the development of ascites?

5-Pathophysiologic mechanisms is most directly associated with the development of renal failure?

6- what the test is the most accurate method for diagnosis?

**Q5/A** 68-year-old man complains of vague abdominal pain, intermittent fever, and weight loss over the past 6 months. For the past 12 years, he has suffered from chronic hepatitis B. On physical examination, the patient shows diffuse abdominal tenderness, hepatomegaly, and mild jaundice. A CT scan of the abdomen reveals a diffusely nodular liver, with a dominant mass measuring 3 cm in diameter with elevated serum  $\alpha$ -fetoprotein.

1-What is most likely diagnosis? 2-Which of the following serum markers is useful for monitoring the progression of disease in this patient? 3-What the test is the most accurate method for diagnosis?

4-Prognosis of this patient? 5-Causes of liver cirrhosis in this patient? 6-Causes of HCC in this patient?

### Hematology system-PBL ( 12 cases scenarios)

**1-** 18 years old female presented recently with history of recurrent chest infection. She looks pale, no jaundice, no HSM or LAP. The initial investigations show pancytopenia with retic count < 1%. **Bone marrow aspiration was dry.**

**Q1/** What you think about the type of anemia? Is it bone marrow or peripheral in origin? And why?

**Q2/** What we mean by pancytopenia?

**Q3/** Bone marrow biopsy showing hypocellular marrow. What is the most likely diagnosis?

**Q4/** Can you explain the cause of recurrent chest infection in this case?

**Q5/** If you know there is no obvious underlying causes. What is the most likely pathogenesis?

**2-** 2 years old boy presented with history of poor feeding and abdominal swelling. He looks pale, irritable, jaundice and splenomegaly. Family consanguinity is positive. Initial investigations show: **Hb:** 6.8 gm/dl / **MCH:** 17 pg (27-32) / **MCV:** 50fl (80-100) / **Retic count:** 8% , **WBC count:**  $10.2 \times 10^9$  /L / **Platelet count:**  $320 \times 10^9$  /L , **Hb F** 76 % on Hb electrophoresis (normal < 5% to patient age).

**Blood film show anisopoikilocytosis with predominant target cells.**

**Q1/** What is the most likely diagnosis of such type of anemia? **Q2/** How you can prevent such type of anemia? **Q3/** What is the most likely pattern of inheritance?

**Q4/** If you know that bone marrow transplant is not available, what is the main line of treatment and what is the important side effect of this treatment?

**3-** 30 years old female presented with history of SLE. She is presented with insidious onset of palor, jaundice and SM. The laboratory results show high indirect bilirubin. Hb 8.5 g/dl / WBC:  $12.4 \times 10^9$ /L / Platelet:  $510 \times 10^9$ /L / Retic count: 9%.

**Blood film show polychromatic cells with many spherocytic cells.**

**Q1/** What is the most probable diagnosis? **Q2/** How confirm diagnosis?

**Q3/** What do you think about the pathogenesis?

**4-** 6 years old male presented with fever, rhinorrhea and he took aspirin for fever. Suddenly he has pallor, jaundice and dark color urine. He has a history of NNJ. The investigation show: **Hb:** 7 g/dl / **Retic count:** 14% / **WBC:** lymphocytosis / **platelet** is normal . **Blood film show normochromia, polychromasia with some bitten cell .**

**Q1/** What is the most probable diagnosis? **Q2/** What is the accurate way for diagnosis?

**Q3/** What is the type of inheritance of this disease?

5- 18 years old male presented with fever, malaise and sore throat. On examination, he has cervical LAP. The CBC is [ **Hb**: 13gm/dl , **WBC**:  $17.6 \times 10^9/L$  , **Platelet**  $325 \times 10^9/L$ . The differential count (%) is **Neutrophils**: 29, **Lymphocytes**: 68 , **Monocyte**: 2 , **Eosinophils**: 1 , **Basophiles**: 0. **The blood film** shows many atypical reactive lymphocytes.

**Q1/** Comment on CBC. **Q2/** What is the most appropriate diagnosis?

**Q3/** What is the sign you expect to find on examination? **Q4/** What is the most common cause of this condition? How confirm diagnosis?

6- years old male has a history of pallor, recurrent infection, anorexia and LAP. Recently, he presented with headache, vomiting and seizure. The CBC Hb: 9gm/dl, Differential count(%) Platelet:  $100 \times 10^9/L$  ,Neutrophil 42% ,Lymphocyte 25 % ,Monocyte 4% , Eosinophil 3% , Basophil 2% , Myelocyte, promyelocyte 7% ,Blast 17% ,WBC:  $28 \times 10^9/L$  . **BMA is hypercellular and most of the cells are blast.**

**Q1/** What is the most appropriate diagnosis? **Q2/** What is the cause of seizure?

**Q3/** How can confirm diagnosis? **Q4/** What do you expect about organomegaly and why?

7-55 years old man had a history of malaise, weight loss, anorexia, recurrent infection and sometime ecchymosis. On examination he had moderate HSM. The doctor ask him to do investigations but he always refuse. In the last visit, he presented with mark SM and the CBC result was as shown. Hb: 7.6gm/dl, Differential count(%), Platelet:  $620 \times 10^9/L$  , Neutrophil 45% , Lymphocyte 15 % , Monocyte 2% ,Eosinophil 3%, Basophil 2% , Myelocyte 16% , Blast 17%, WBC:  $165 \times 10^9/L$ , High uric acid , High ALP, **The blood film show mark leukocytosis with left shift.**

**Q1/** What is your explanation for this patient and the most appropriate diagnosis?

**Q2/** Is the BMA examination of benefit value for diagnosis?

**Q3/** What is the main pathology of this disease? **Q4/** What about prognosis?

8- 60 years old man presented with malaise, lethargy, anorexia, pallor and bilateral leg odema. He did several investigations and the result is as follow , **Hb**: 10 g/dl and the RBC shows rouleaux on blood film, **WBC**  $4.6 \times 10^9/L$  **Platelets**  $112 \times 10^9/L$ , **Urea** 80 mg/dl **Creatinine** 3.2 mg/dl **ESR** 110 mm/hr , **Calcium** 3.60 mmol/L (N 2.1–2.6 mmol/L) , **Total protein** 120 g/L (N 65–80 g/L) .

**Q1/** What is the most probable diagnosis? **Q2/** What is the cause of bone pain?

**Q3/** What are the causes of renal insufficiency? **Q4/** What do you expect about BT for this patient?

**Q5/** How can confirm diagnosis? **Q6/** What do you expect to see in BM?

# 1- Pharmacology I

## **Aims of the course:**

- 1- To provide the basic knowledge regarding the commonly used groups of drugs that affect human body systems and their implication in therapy of disease and health promotion.
- 2- To enable students understanding the safe use of drugs in respect to adverse effects, contraindications and drug interactions.
- 3- To ensure that students having enough skills and attitude towards selection and use of drugs on rational bases.

## **Learning objectives:**

### **(Knowledge):**

- 1-Describe the pharmacokinetic, pharmacodynamic and pharmacotherapeutic properties of different groups of drugs affecting body systems.
- 2-Describe the adverse and toxic effects, and their management of commonly used groups of drugs.
- 3-Define the limitations to the use of drugs such as contraindications and drug interactions.
- 4-Explain clinically relevant age, sex and genetic related variations that affect response to drugs.
- 5-Describe the pathophysiology of diseases and explain the rational basis for the use of drugs.
- 6-Explain the impact of preventive pharmacology in promoting health and prevent illness.
- 7- Describe the use of life saving drugs.
- 8-Define the principles and applications of gene therapy.
- 9-Recognize the rational and general guidelines of the use of drugs in the proper dose in special population such as pediatrics, geriatrics, pregnancy and lactation and in cases of liver and kidney impairment.

### **(Skills):**

- 1- Work out drug dosage based on patient's criteria and health condition.
- 2- Write safe prescriptions for selected common and important diseases.
- 3- Practice enteral, parenteral, inhalation; including the use of nebulizers; and topical methods for drug administration.

- 4- Design rational therapeutic strategies for both acute and chronic conditions that take into account the various variables that influence these strategies.

**(Attitudes):**

- 1- Respect the patient right to know and share in decision making as regards the choice of drugs.
- 2- Understand and respect the different cultural beliefs and values that affect the use of certain drug groups.
- 2- Respect ethics related to drug prescription and use especially to drugs liable to produce abuse.

**Teaching methods:**

Theoretical lectures

Practical lab

PBL

Educational videos

**Assessment methods**

Written exams

Oral exams

Student activity during labs and PBL

Reports and seminars

**Course contents:**

Week	Sunday	Monday	Tuesday	Wednesday	Thursday
1	10-12 am Lab: Drug classification and nomenclature plus PBL (Dynamics) (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Introduction Dr Laith	10-12 am Lab: Drug classification and nomenclature plus PBL (Dynamics) (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: Dynamics Dr Sinaa 9-10 am Theory: Dynamics Dr Sinaa 10-12 am Lab: Drug classification and nomenclature plus PBL (Dynamics) (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	10-12 am Lab: Drug classification and nomenclature plus PBL (Dynamics) (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: Drug classification and nomenclature plus PBL (Dynamics) (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)
2	10-12 am Lab: Drug Dosage Forms 1 plus PBL (Kinetics) (GC1: Dr Sinaa	10-12 am Lab: Drug Dosage Forms 1 plus PBL (Kinetics) (GD1: Dr Sinaa	8-9 am Theory: Kinetics Dr Laith 9-10 am Theory: Kinetics Dr Laith 10-12 am Lab:	10-12 am Lab: Drug Dosage Forms 1 plus PBL (Kinetics) (GA1: Dr Sinaa	10-12 am Lab: Drug Dosage Forms 1 plus PBL (Kinetics) (GB1: Dr Sinaa GB2: Dr Asmaa

	GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Kinetics Dr Laith	GD2: Dr Asmaa GD3: Dr Laith)	Drug Dosage Forms 1 plus PBL (Kinetics) (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	GA2: Dr Asmaa GA3: Dr Laith)	GB3: Dr Laith)
3	10-12 am Lab: Drug Dosage Forms 2 plus PBL (Cholinergics) (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Cholinergics 1 Dr Asmaa	10-12 am Lab: Drug Dosage Forms 2 plus PBL (Cholinergics) (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: Cholinergics 2 Dr Asmaa 9-10 am Theory: Cholinergics 3 Dr Asmaa 10-12 am Lab: Drug Dosage Forms 2 plus PBL (Cholinergics) (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	10-12 am Lab: Drug Dosage Forms 2 plus PBL (Cholinergics) (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: Drug Dosage Forms 2 plus PBL (Cholinergics) (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)
4	10-12 am Lab: Drug Dosage Forms 3 plus PBL (Adrenergics) (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Adrenergics 1 Dr Laith	10-12 am Lab: Drug Dosage Forms 3 plus PBL (Adrenergics) (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: Adrenergics 2 Dr Laith 9-10 am Theory: Adrenergics 3 Dr Laith 10-12 am Lab: Drug Dosage Forms 3 plus PBL (Adrenergics) (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	10-12 am Lab: Drug Dosage Forms 3 plus PBL (Adrenergics) (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: Drug Dosage Forms 3 plus PBL (Adrenergics) (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)
5	10-12 am Lab: Routes of Drug Administration 1 plus PBL (CNS 1) (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: CNS Stimulants Dr Laith	10-12 am Lab: Routes of Drug Administration 1 plus PBL (CNS 1) (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: Hypnotics Dr Asmaa 9-10 am Theory: Anasthesia Dr Asmaa 10-12 am Lab: Routes of Drug Administration 1 plus PBL (CNS 1) (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	10-12 am Lab: Routes of Drug Administration 1 plus PBL (CNS 1) (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: Routes of Drug Administration 1 plus PBL (CNS 1) (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)
6	10-12 am Lab: Routes of Drug Administration 2 plus PBL (CNS 2) (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Antipsychotics Dr Asmaa	10-12 am Lab: Drug Routes of Drug Administration 2 plus PBL (CNS 2) (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: Epilepsy Dr Sinaa 9-10 am Theory: Parkinson Dr Sinaa 10-12 am Lab: Routes of Drug Administration 2 plus PBL (CNS 2) (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	10-12 am Lab: Routes of Drug Administration 2 plus PBL (CNS 2) (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: Routes of Drug Administration 2 plus PBL (CNS 2) (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)
7	10-12 am Lab: Routes of Drug Administration 3 plus PBL (CNS 3) (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith)	10-12 am Lab: Routes of Drug Administration 3 plus PBL (CNS 3) (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: Sedatives Dr Asmaa 9-10 am Theory: Antidepressants Dr Asmaa 10-12 am Lab: Routes of Drug	10-12 am Lab: Routes of Drug Administration 3 plus PBL (CNS 3) (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: Routes of Drug Administration 3 plus PBL (CNS 3) (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)

	12-1 pm Theory: Narcotics Dr Asmaa		Administration 3 plus PBL (CNS 3) (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)		
8	10-12 am Lab: Prescription 1 plus PBL (CVS 1) (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Heart Failure 1 Dr Asmaa	10-12 am Lab: Prescription 1 plus PBL (CVS 1) (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: Heart Failure 2 Dr Asmaa 9-10 am Theory: Antianginal Dr Sinaa 10-12 am Lab: Prescription 1 plus PBL (CVS 1) (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	10-12 am Lab: Prescription 1 plus PBL (CVS 1) (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: Prescription 1 plus PBL (CVS 1) (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)
9	10-12 am Lab: Prescription 2 plus PBL (CVS 2) (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Hypertension 1 Dr Laith	10-12 am Lab: Prescription 2 plus PBL (CVS 2) (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: Hypertension 2 Dr Laith 9-10 am Theory: Hyperlipidemia Dr Sinaa 10-12 am Lab: Prescription 2 plus PBL (CVS 2) (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	10-12 am Lab: Prescription 2 plus PBL (CVS 2) (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: Prescription 2 plus PBL (CVS 2) (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)
10	10-12 am Lab: Methods in Pharmacology plus PBL (CVS 3) (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Diuretics 1 Dr Laith	10-12 am Lab: Methods in Pharmacology plus PBL (CVS 3) (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: NSAID 1 Dr Sinaa 9-10 am Theory: NSAID 2 Dr Sinaa 10-12 am Lab: Methods in Pharmacology plus PBL (CVS 3) (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	10-12 am Lab: Methods in Pharmacology plus PBL (CVS 3) (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: Methods in Pharmacology plus PBL (CVS 3) (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)
11	10-12 am Lab: Measurements in Pharmacology plus PBL (CVS 4) (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Diuretics 2 Dr Laith	10-12 am Lab: Measurements in Pharmacology plus PBL (CVS 4) (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: NSAID 3 Dr Sinaa 9-10 am Theory: Drugs Used in Disorders of Coagulation 1 Dr Laith 10-12 am Lab:Measurements in Pharmacology plus PBL (CVS 4) (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	10-12 am Lab: Measurements in Pharmacology plus PBL (CVS 4) (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: Measurements in Pharmacology plus PBL (CVS 4) (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)
12	10-12 am Lab: Effects of histamine on skin 1 plus PBL (NSAIDs) (GC1: Dr Sinaa	10-12 am Lab: Effects of histamine on skin 1 plus PBL (NSAIDs)	8-9 am Theory: Autacoids 1 Dr Sinaa 9-10 am Theory: Autacoids 2 Dr Sinaa	10-12 am Lab: Effects of histamine on skin 1 plus PBL (NSAIDs) (GA1: Dr Sinaa	10-12 am Lab: Effects of histamine on skin 1 plus PBL (NSAIDs) (GB1: Dr Sinaa



	GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Drugs Used in Disorders of Coagulation 2 Dr Laith	(GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	10-12 am Lab: Effects of histamine on skin 1 plus PBL (NSAIDs) (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	GA2: Dr Asmaa GA3: Dr Laith)	GB2: Dr Asmaa GB3: Dr Laith)
13	10-12 am Lab: Effects of histamine on skin 2 plus PBL (Autacoids) (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Arrhythmias Dr Asmaa	10-12 am Lab: Effects of histamine on skin 2 plus PBL (Autacoids) (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: Autacoids 3 Dr Sinaa 9-10 am Theory: Autacoids 4 Dr Sinaa 10-12 am Lab: Effects of histamine on skin 2 plus PBL (Autacoids) (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	10-12 am Lab: Effects of histamine on skin 2 plus PBL (Autacoids) (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: Effects of histamine on skin 2 plus PBL (Autacoids) (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)
14	10-12 am Lab: Revision plus PBL (Revision) (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Pharmaco- economics Dr Asmaa	10-12 am Lab: Revision plus PBL (Revision) (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: Autacoids 5 Dr Sinaa 9-10 am Theory: Skin pharmacology Dr Asmaa 10-12 am Lab: Revision plus PBL (Revision) (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	10-12 am Lab: Revision plus PBL (Revision) (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: Revision plus PBL (Revision) (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)
15	10-12 am Lab: Revision plus PBL (Revision) (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Revision Dr Laith	10-12 am Lab: Revision plus PBL (Revision) (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: Revision Dr Sinaa 9-10 am Theory: Revision Dr Asmaa 10-12 am Lab: Revision plus PBL (Revision) (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	10-12 am Lab: Revision plus PBL (Revision) (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: Revision plus PBL (Revision) (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)

### **Lists of problem based case scenarios:**

#### Pharmacokinetics

A) A patient receives a single dose of antibiotic following a prostate needle biopsy. He takes 500 mg of ciprofloxacin intravenous immediately after completion of the procedure. If his blood level of ciprofloxacin after 24 h is 62.5 mg, what is the half-life of the drug?

B) A 29-year-old man presents to his primary care physician complaining of dysuria, urgency, and painful ejaculation. The patient has a past medical history of allergic rhinitis. Physical examination reveals a tender prostate. The patient is given a prescription of sulfamethoxazole to be taken daily (q 12 h) for 30 days. The half-life is

12 h. How long will it take for the medication to reach 90% of its final steady state level?

C) A researcher is studying the bioavailability of commonly used antimuscarinics to treat irritable bowel syndrome. Medication A is administered in a 100 mg daily dose orally and 60 mg of the drug is absorbed from the gastrointestinal tract unchanged. Thus, the bioavailability of Medication A is?

D) A 34-year-old female insists on drinking a cup of grapefruit juice every morning for "body cleansing." Grapefruit juice is known to disrupting levels of certain drugs. How?

E) A 27-year-old female with vulvovaginal candidiasis is given a one-time 100 mg dose of oral fluconazole. She has no other pertinent medical problems and takes no prescription medications. Administration of the medication results in a peak plasma concentration of 20 mg/mL. What is the apparent volume of drug distribution?

F) A 24-year-old woman complains of irritability, restlessness, and trouble sleeping. She says that she worries about everything. The physician prescribes diazepam to help calm her anxiety. Diazepam must cross the blood–brain barrier to be effective. Which of the kinetic characteristics would help a drug molecule cross this barrier?

#### Pharmacodynamics

A) A medical student is doing a summer research project studying five antibiotics to determine potency using the EC<sub>50</sub>. Antibiotics are placed in plated culture wells with 100,000 CFU of *Escherichia coli*. The EC<sub>50</sub> results for the five antibiotics are shown in the following choices. Based on the results, the most potent antibiotic is:

- (A) Antibiotic A EC<sub>50</sub>=100, (B) Antibiotic B EC<sub>50</sub>=2, (C) Antibiotic C EC<sub>50</sub>=80,  
(D) Antibiotic D EC<sub>50</sub>=20, (E) Antibiotic E EC<sub>50</sub>=50.

B) A researcher for a pharmaceutical company is studying a new medication to treat parkinsonism. The medication is dosed at 10 mg and causes improvement in bradykinesia and cogwheel rigidity in 99% of patients. However, 100 mg of this medication causes toxicity manifested as seizures in 1% of the population treated with this medication. What is the standard margin of safety of this medication?

C) Drug A and Drug B are of equal magnitude. If Drug A and Drug B are combined together, this would be an example of which of the following?

- (A) Additive effects, (B) Neutralization, (C) Potentiation, (D) Synergism

D) Which of the following drug equations exemplifies the concepts of potentiation?

- (A) Drug AB > Drug A + Drug B, (B) Drug AB = Drug A = Drug B  
(C) Drug AB < Drug A < Drug B, (D) Drug AB = Drug B > Drug A

## Cholinergic

A) Commonalities of the sympathetic, parasympathetic, and somatic nervous systems involve which of the following neuroeffector transmitters? Why?

(A) Acetylcholine, (B) Dopamine, (C) Epinephrine, (D) Norepinephrine, (E) Serotonin

B) A researcher who is interested in creating an anticholinergic agent that would be useful in patients with irritative bladder symptoms would be interested in targeting which of the following receptors? Why?

(A) M1, (B) M2, (C) M3, (D) M4, (E) M5

C) A 38-year-old woman presents to the ophthalmologist for a routine eye examination. She is given intraocular pilocarpine. She was supposed to be administered two drops in each to dilate the eyes for the examination. Unfortunately, the eye drops were administered by a new technician who inadvertently administered 10 drops of pilocarpine in each eye. Which of the following agents should be immediately given to the patient? Why?

(A) Atropine, (B) Carbachol, (C) Donepezil, (D) Galantamine, (E) Rivastigmine

D) A 58-year-old woman with a history of myasthenia gravis presents to the emergency department complaining of generalized abdominal pain. Her current medication is neostigmine. Her caretaker reports that her bottle of neostigmine is empty but was full earlier in the day. Which of the following findings is likely in this patient? Why?

(A) Bronchodilation, (B) Constipation, (C) Dizziness, (D) Hypotension, (E) Xerostomia

E) A 71-year-old man will undergo a prostate needle biopsy under anesthesia because of his low pain tolerance and high level of anxiety. The procedure is estimated to take approximately 10 min to complete. Which of the following is the most appropriate anesthetic agent for the patient to receive? Why?

(A) Doxacurium, (B) Mivacurium, (C) Pancuronium, (D) Rocuronium, (E) Tubocurarine

F) A medical student is performing a summer research project evaluating the pharmacologic effects of atropine at varying doses. Doses are extrapolated from normal human doses of this agent. Slow infusion of this agent to a steady state dose of 0.5 mg would be expected to produce which of the following effects? Why?

(A) Bradykinesia, (B) Coma, (C) Dilation of the pupils, (D) Dry mouth, (E) Tachycardia

## Adrenergic

A) A medical student is involved in a summer research project evaluating the potencies of the  $\alpha$ -adrenergic agonists at different receptor sites. Which  $\alpha$ -adrenergic agonists would be expected to have the strongest potency at the  $\alpha$ -receptor?

B) A 73-year-old man presents to his primary care physician complaining of a weak stream and nocturia four times at night. He is very sensitive to the medication side effects and is reluctant to take medications for this reason. Physical examination reveals a mildly enlarged prostate. Treatment of this condition may involve the use of which agents to minimize side effects?

C) A 32-year-old man presents to his primary care physician because of a 2-week history of nasal stuffiness, cough, and sinus pain. He is prescribed with phenylephrine. He must be aware of which potential adverse effects?

D) A 58-year-old man with cardiac dysfunction is placed on propranolol. Over the ensuing days, he develops worsening pedal edema, and review of his serum electrolyte reveals a serum sodium of 151 mEq/L. What is the most appropriate treatment for this patient?

## CVS

A 35-year-old female patient presented hypertension to the OPC. A joiner doctor prescribed beta adrenergic blocker (propranolol 40 mg three times daily) to control her high blood pressure. Recently, she has uncontrolled blood pressure and started to develop signs and symptoms of heart failure and cardiac ischemia.

a) Which class of drug propranolol is belonging to? What are its side effects and contra-indications?

b) She reported frequent uses of drops for nasal congestion; do you think this related to her new condition?

c) What are your therapeutics options for the heart failure?

d) Which drugs could treat both conditions (hypertension and heart failure)?

e) If you know that this patient is pregnant, do you still consider angiotensin II receptor blockers?

f) What is the role of diuretics in this patient?

g) What are your therapeutics options for the cardiac ischemia?

h) Do you consider calcium channel blockers?

i) If you decided to add a drug to prevent future ischemic event, which one you are going to choose?

j) When this patient develops irregular rhythm, the doctor prescribes anti-arrhythmic drug which has anti-failure effect. What is the drug? What are its side effects and drug interactions?

## CNS

A- A mom gets a note from her 10-year-old daughter's teacher that the child recently started experiencing numerous albeit brief episodes of "just staring into space" throughout the school day. The mother realizes she's noticed the same in her girl at home. After a trip to the pediatrician and referral to a neurologist, a diagnosis of absence epilepsy is made.

1) What drug is generally considered the preferred starting drug for this type of epilepsy in another wise healthy child? What are its side effects?

2) What are the common mechanisms of action for the anti-epileptic agents?

B- A patient is transported to the emergency department by ambulance after repeated episodes of fainting. The cause was attributed to severe drug-induced orthostatic hypotension due to high dose of an antipsychotic drug.

1) What drug could produce such an effect? Why this happens?

2) If you change the drug to "atypical antipsychotic" like clozapine, however it is associated with more serious side effect. Could discuss this?

C- A patient is transported to your emergency department because of a seizure. A review of his history reveals that he has been treated by different physicians for different medical conditions, and there has been no dialog between them in terms of what they've prescribed. One physician prescribed a drug for short-term management of depression. Another prescribed the very same drug, marketed under a different trade name, to help the patient quit smoking cigarettes.

1) What drug was most likely prescribed by both doctors?

2) Many physicians prescribe by brand-name products and ignore the active generic drug name, discuss this.

D- You have a patient with severe postoperative pain who is not getting adequate analgesia from usually effective doses of morphine. The physician orders an immediate switch to pentazocine (at usually effective analgesic doses).

1) What is the most likely outcome of stopping the morphine and immediately starting the pentazocine?

2) What is the mechanism of action of morphine?

## NSAIDs

A) A patient with multiple medical problems is taking several drugs, including theophylline, warfarin, quinidine, and phenytoin. Despite the likelihood of interactions, dosages of each were adjusted carefully so their plasma concentrations and effects are acceptable. However, the patient suffers some GI distress and starts taking a drug provided by one of his “well-intentioned” friends. He presents with excessive or toxic effects from all his other medications and blood tests reveal that plasma concentrations of all the prescribed drugs are high.

1) Which drug did the patient most likely self-prescribe and take?

2) Which drug can be used as alternative?

B) A 55-year-old male patient with severe arthritis will be placed on long-term therapy with indomethacin. You recognize the risk of NSAID-induced gastrointestinal ulceration, and so want to prescribe another drug for ulcer prophylaxis.

1) Which drug would you most likely choose, as an add-on to indomethacin, assuming that there are no specific contra indications to its use?

2) What is the benefit of celecoxib over the indomethacin?

3) Could acetaminophen be a good alternative to indomethacin for such arthritis?

4) When you consider the DMARDs option?

## Autacoids

A) A 15-year-old female presents to her primary care physician complaining of runny nose and itchy eyes. She said that she first had these symptoms during the spring a few years ago, but each year, they have been bothering her more. You know there are multiple ways to interfere with the signaling that is causing her symptoms. Which drugs would prevent the release of the main chemical mediator in her case?

B) A 48-year-old woman with 2-year history of rheumatoid arthritis has not had sufficient relief with methotrexate alone. Her physician prescribes a biologic TNF- $\alpha$  inhibitor that consists of a recombinant human IgG fused to TNF- $\alpha$  receptor. Which drug is this?

C) A 21-year-old male presents to the clinic with 6 weeks of painful, bloody stools. Flexible sigmoidoscopy reveals erythema and friability with pseudopolyps. Which drug used for ulcerative colitis has both anti-inflammatory and antibacterial properties?

D) An 18-year-old woman presents to her primary care physician after experiencing a one-sided headache for the fourth time in the last 2 years. Her headaches have all been similar in nature. She says the pain is worst right behind her eye and that she feels nauseous and cannot

stand bright lights or loud noises while she is having a headache. The physician prescribes sumatriptan. What is the mechanism of action of this medication?

### References:

- 1- Principle lectures notes and power points presentations provided by staff members of Pharmacology department.
- 2- Recommended books:
  - a- "Lippincott's Illustrated Reviews – Pharmacology", editors Harvey R.A. and Champ R.C.
  - b- "Pharmacology", editors Rang P.A.; et al.
  - c- "Clinical Pharmacology", editors Laurance D.R. and Bennett P.N.
  - d- "Basic & Clinical Pharmacology", editor Katzung G.K.
- 3- Technology and websites:
  - a- C.Ds. prepared by staff members.
  - b- [www.bnf.org](http://www.bnf.org)
  - c- [www.nice.org.uk](http://www.nice.org.uk)
  - d- [www.icp.org.nz/](http://www.icp.org.nz/)
  - e- [www.pharmacology2000.com](http://www.pharmacology2000.com)
  - f- [www.drugs.com](http://www.drugs.com)

### **3- Microbiology I**

#### **Aims of the course:**

- 1.To educate students about the basic features of general bacteriology, virology and mycology and to provide students with an understanding of the immune system, its protective functions and its role in the patho-physiology of infectious and non-infectious diseases
- 2.To familiarize students with the common infections and diseases of medical importance, their microbial causes, as well as laboratory diagnosis, treatment, prevention and control of such diseases.
- 3.To enable the students to practice the principles of sterilization and infection control.

#### **Learning objectives:**

##### **(Knowledge):**

- 1-Illustrate general bacterial morphology, physiology and genetics.
- 2-Understand the host parasite relationship and microbial pathogenesis.
- 3-Explain the physiology of the immune system, its beneficial role, as well as its detrimental role in hypersensitivity, autoimmunity and transplant rejection.
- 4 -Describe the morphology, culture, antigenic structure and virulence factors of microorganisms of medical importance.
- 5-Recognize the most important infectious clinical conditions and outline the diagnosis, treatment, prevention and control of the most likely organisms causing such diseases.
- 6-Describe the most important methods of decontamination and principles of infection control
- 7-Understand the impact of molecular technology in microbiology and immunology.

##### **(Skills):**

- 1.Identify medically important bacteria based on microscopic examination of stained preparations.
- 2.Perform a Gram stain and a Ziehl-Neelsen stain and identify, according to morphology and characteristics, stained preparations.
- 3.Identify culture media and biochemical tests commonly used for bacterial identification and distinguish positive and negative results.
- 4.Perform hand wash and control of steam sterilization

##### **(Attitudes):**

- 1- Interpret results of microbiological, serological and molecular tests.



- 2- Formulate a systematic approach for laboratory diagnosis of common infectious clinical conditions and select the most appropriate and cost-effective tool leading to the identification of the causative organism.
- 3- Evaluate according to evidence the causal relationship of microbes and diseases
- 4- Categorize a microorganism as a bacterium, virus or fungus according to standard taxonomy
- 5- Report and appraise a concise scientific activity according to standard scientific thinking and integrity
- 6- Appreciate the danger of handling and use of infectious agents on community and environment as a part of their ethical heritage

**Teaching methods:**

1. Lecture
2. Practical class
3. Small group discussion with case study and problem solving
4. Quiz

**Assessment methods:**

Written Examination:

Assessment of knowledge and understanding and intellectual skills.

Practical Examination:

- A. Assessment of practical skills.
- B. Intellectual skills: a. Stations, b. Objective Structured Test (OST), c. Photos  
d. Reports

**Course contents:**

Subject	Theory	Hours	Practical	Hours
<b>Total</b>		<b>45</b>		<b>30</b>
<b>General Microbiology</b>  <b>1<sup>st</sup> Week</b>	<b>The science of Microbiology Introduction.</b>	<b>1</b>	<b>Laboratory safety</b>	<b>2</b>
	<b>Host parasite relationship.</b>	<b>1</b>	<b>Laboratory methods for identification of Bacteria and sample collection</b>	<b>2</b>
	<b>Specific and nonspecific immune response</b>	<b>1</b>	<b>SGT Collection and handling of samples.</b>	<b>2</b>

2 <sup>nd</sup> & 3 <sup>rd</sup> Week	General properties and classification of bacteria	2	Sterilization and Disinfection	2
	General properties and classification of viruses	2	Bacterial staining Methods	2
	Bacterial cell wall	2	Bact. culture and Sensitivity	1
4 <sup>th</sup> & 5 <sup>th</sup> Week 6 <sup>th</sup> Week	Bacterial Physiology and Metabolism	2	Bacterial biochemical tests.	2
	Cells of immune response	2	S G T (Traditional and Newer bacterial culture methods)	2
	Replication of viruses	2		
	Bacterial genetics	2	Antigen–antibody Reaction +separation of immune cells	2
	Structure and classes of immunoglobulin	1		
7 <sup>th</sup> & 8 <sup>th</sup> Week	Viral pathogenesis	2	Methods for Viral Diagnosis	2
	Bacterial pathogenesis	4		
9 <sup>th</sup> &10 <sup>th</sup> Week	Humoral immunity - Antibody Mediated immunity and Cell Mediated immunity	2	S G T Bacterial Biofilm	2
	Antimicrobial Agents, antibiotics and resistance.	4		
11 <sup>th</sup> Week	Normal flora.	1	DNA Extraction PCR	2
	Complement System.	2		
12 <sup>th</sup> Week	General properties of Fungi.	3	Antibiotics resistance.	2
13 <sup>th</sup> Week	Viral vaccines.	1		
	Immunity to infections	2	Methods for Fungal diagnosis	2
14 <sup>th</sup> Week	Methods useful for diagnosis of Infections: microbiology, imaging, serology.	3		
15 <sup>th</sup> Week	<b>Mid Term Examination</b>	<b>1.5</b>		

	<b>Practical Examination</b>			<b>2</b>
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### References:

Jawetz, Melnick&Adelberg's Medical Microbiology, Brooks, Butel and Morse. Cal Books/McGraw-Hill Publishers.

### Suggested materials

- 1 . Basic and Clinical Immunology, Stites, Stobo, Fudenberg and Wells. Lange MedicalPublishing.
2. Clinincal Immunology, Brostoff, Scadding, Male and Roitt. Gower Medical Publishing.
3. Immunology, Roitt, Brostoff and Male. Gower Medical Publishing.

### Biology Web Site References:

o [asmnews@asmusa.org](mailto:asmnews@asmusa.org)

o <http://www.phage.org/black09.htm>

[http://www.microbe.org/microbes/virus\\_or\\_bacterium.asp](http://www.microbe.org/microbes/virus_or_bacterium.asp)

<http://www.bact.wisc.edu/Bact330/330Lecturetopics>

o [http://whyfiles.org/012mad\\_cow/7.html](http://whyfiles.org/012mad_cow/7.html)

o <http://www.microbelibrary.org/>

o <http://www.hepnet.com/hepb.htm>

[http://www.tulane.edu/~dmsander/Big\\_Virology/BVHomePage.html](http://www.tulane.edu/~dmsander/Big_Virology/BVHomePage.html)

o <http://www.mic.ki.se/Diseases/c2.html>

o <http://www.med.sc.edu:85/book/welcome.htm>

o [http://www.biology.arizona.edu/immunology/microbiology\\_immunology.html](http://www.biology.arizona.edu/immunology/microbiology_immunology.html)

### **3- Community Medicine I**

#### **Aims of the course:**

- 1.To actively contribute in qualifying doctors who are able to serve the interests of population in promoting, protecting, and restoring health and rehabilitating handicapped.
- 2.To strengthen research capacity both at the level of the Department work territory, the level of College of Medicine, and at the level of the health care system.
- 3.To carry out and supervise research work that assists in supporting the first two objectives and to contribute to the solution of important public health problems
- 4.To provide advisory work to relevant local, national and international NGOs within the context of community medicine domains and in accordance with the Department objectives and national interests
- 5.To enhance, support and evaluate the adoption of family medicine model in Iraq
- 6.To enhance the provision of high quality medical teaching and high quality health care with emphasis on adequacy, effectiveness, efficiency and scientific and technical excellence as important components of quality

#### **Learning objectives:**

##### **(Knowledge):**

- 1- To acquire basic knowledge on main components of community medicine interests
- 2- To develop abilities and competencies in the epidemiology and control of major health problems at population level
- 3- To develop basic principles of scientific research
- 4- To develop understanding of primary health care as strategy and services to the population

##### **(Skills):**

- 1- To develop relevant competencies and skills in epidemiology so as to be able to measure and evaluate health and health care services
- 2- The basic skills of conducting scientific research
- 3- The ability to understand and perform basic statistical analyses

##### **(Attitudes):**

- 1- To contribute to the requirements of graduation of competent doctors to serve national, regional as well as local goals
- 2- To be prepared for postgraduate training in the future
- 3- To be prepared to pursue self-learning towards continuing professional development.

**Teaching methods:**

Theoretical lectures

Small group teachings

Students centered activities like statistical analysis tutorials

Conducting minor research projects

**Assessment methods:**

Written exams

Students activity during tutorials and SBL

Seminars and reports

Statistical problems

**Course contents:**

<b>Medical statistic</b>
<b>Biostatistics and data grouping</b>
<b>Presentation of data mathematical</b>
<b>Presentation of data tubular , graphical and pictorial presentation</b>
<b>Sampling techniques</b>
<b>Probability</b>
<b>Probability distribution</b>
<b>Sampling distribution- Z distribution</b>
<b>Estimation – confidence interval</b>
<b>Student’s T – distribution</b>
<b>Hypothesis testing</b>
<b>Chi square distribution</b>
<b>Correlation &amp; regression</b>
<b>Correlation &amp; regression in diagnosis</b>
<b>Vital statistics</b>

## **5- Communication Skills I**

### **Aims of the course:**

- 1- Introduce students to the importance of communication skills
- 2- To improve the students ability of communicating with patients and with colleagues
- 3- To make students more skillful in history taking and clinical examination

### **Learning objectives:**

#### **(Knowledge):**

- 1- The basic rules of proper doctor patient relationship and patient interviewing
- 2- How to deal with patients in terms of braking bad news, counseling and how to make consultations to improve care
- 3- The basic rules of Evidence Based Medicine and AUDIT
- 4- Dealing with some health issues like the somatizing patient and smoking

#### **(Skills):**

- 1- Effective listening
- 2- How to deal with challenging situations like difficult patient

#### **(Attitudes):**

- 1- How to respect patients and listen well to their problems
- 2- How to communicate well with patients and colleagues to make the health care delivery more optimum
- 3- Avoid having problems with patients when dealing with sensitive subjects like professional handling of clinical examination and touching patients

#### **Teaching methods:**

Theoretical lectures

Educational videos

#### **Assessment methods:**

Written exams

Student activity

**Course contents:**

- 1- Communication skills (initiation of the interview)**
- 2- Skills for information gathering and effective listening**
- 3- Explanation and planning**
- 4- The doctor patient relationship**
- 5- Closing the interview**
- 6- Brief intervention**
- 7- Counselling**
- 8- Breaking bad news**
- 9- Evidence Based Medicine**
- 10- The Consultation**

## **6- Surgery I**

### **Aims of the course:**

- 1- Teach the student the basics of the general surgery.
- 2- the student can know the causes and pathophysiology and headlines of management of the commonest surgical diseases.
- 3- know the basics of surgical work and its requirement.

### **Learning objectives:**

#### **(Knowledge):**

- 1- Introduce students to the basic surgical principles like surgical wounds repair and scar formation
- 2- Study important emergency surgical conditions like Burns and shock
- 3- The diagnosis, pathophysiology, and management of hemorrhage and surgical infections
- 4- Study the metabolic response of surgeries and AIDS

#### **(Skills):**

- 1- Basic rules of history taking
- 2- The clinical presentation of important surgical conditions and how to identify them

#### **(Attitudes):**

- 1- The basic ethical and legal issues of surgery
- 2- The basic rules of patient safety
- 3- How to deal with patients in respectful and professional way

### **Teaching methods:**

- 1- lectures
- 2- Upload lecture on the college website
- 3- Educational movies
- 4- Use data show
- 5- Small group discussion with case study and problem based learning.

### **Assessment methods:**

- 1- Written Examination
- 2- Small group discussion
- 3- reports
- 4- activities



## Course contents:

<b>Item</b>	Lecture 1
<b>Subject</b>	Introduction / basic surgical principles
<b>Learning objectives</b>	To understand : <ul style="list-style-type: none"> <li>• Surgery definition</li> <li>• Surgery history</li> <li>• Surgery pioneers</li> <li>• Surgery types</li> <li>• Surgery strategy</li> </ul>
<b>Content</b>	<ul style="list-style-type: none"> <li>• Definition of surgery and purpose of surgery .</li> <li>• History and origin of surgery</li> <li>• Surgical pioneers and innovators</li> <li>• Types of surgeries and surgical work</li> <li>• Surgical strategy in treating patients</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Ali J. Al-Shammari
<b>Item</b>	Lecture 2
<b>Subject</b>	Wound / tissue repair / scar
<b>Learning objectives</b>	To understand : <ul style="list-style-type: none"> <li>• Normal healing and how it can be adversely affected</li> <li>• How to manage wounds of different types, of different structures and at different sites</li> <li>• Aspects of disordered healing that lead to chronic wounds</li> <li>• The variety of scars and their treatment</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• normal and abnormal wound healing</li> <li>• types of wounds – tidy versus untidy</li> <li>• managing the acute wound</li> <li>•</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Ahmed Meri
<b>Item</b>	Lecture 3
<b>Subject</b>	Continue for Wound / tissue repair / scar
<b>Learning objectives</b>	To understand : <ul style="list-style-type: none"> <li>• Normal healing and how it can be adversely affected</li> <li>• How to manage wounds of different types, of different structures and at different sites</li> <li>• Aspects of disordered healing that lead to chronic wounds</li> <li>• The variety of scars and their treatment</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• some specific wounds</li> <li>• chronic wounds</li> <li>• scars types , factors , avoidance</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Ahmed Meri

<b>Item</b>	Lecture 4
<b>Subject</b>	Burn
<b>Learning objectives</b>	To understand : <ul style="list-style-type: none"> <li>• The area and depth of burns</li> <li>• To understand:</li> <li>• Methods for calculating the rate and quantity of fluids to be given</li> <li>• Techniques for treating burns and the patient</li> <li>• The pathophysiology of electrical and chemical burns</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• definition</li> <li>• the pathophysiology of burn injury</li> <li>• immediate care of the burn patient</li> <li>• assessment of the burn wound</li> <li>• fluid resuscitation</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Ahmed Meri
<b>Item</b>	Lecture 5
<b>Subject</b>	Continue for Burn
<b>Learning objectives</b>	To understand : <ul style="list-style-type: none"> <li>• The area and depth of burns</li> <li>• To understand:</li> <li>• Methods for calculating the rate and quantity of fluids to be given</li> <li>• Techniques for treating burns and the patient</li> <li>• The pathophysiology of electrical and chemical burns</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• treating the burn wound</li> <li>• surgery for the acute burn wound</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Ahmed Meri
<b>Item</b>	Lecture 6
<b>Subject</b>	Surgical infection
<b>Learning objectives</b>	To understand : <ul style="list-style-type: none"> <li>•The factors that determine whether a wound will become infected</li> <li>•The classification of sources of infection and their severity</li> <li>•The indications for and choice of prophylactic antibiotics</li> <li>•The characteristics of the common surgical pathogens and their sensitivities</li> <li>•The spectrum of commonly used antibiotics in surgery and the principles of therapy</li> <li>•The causes of reduced resistance to infection</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• factors inhibit the micro-organisms from causing infection</li> <li>• factors predisposing to wound infection</li> <li>• Sources of infection</li> <li>• Classification of Surgical wounds</li> </ul>

	<ul style="list-style-type: none"> <li>• Classification of Surgical wounds ( types )</li> <li>• Prevention</li> <li>• Management</li> <li>• Prophylactic antibiotics</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Ali J. Al-Shammari
<b>Item</b>	Lecture 7
<b>Subject</b>	Continue for Surgical infection
<b>Learning objectives</b>	<p>To understand :</p> <ul style="list-style-type: none"> <li>•The factors that determine whether a wound will become infected</li> <li>•The classification of sources of infection and their severity</li> <li>•The indications for and choice of prophylactic antibiotics</li> <li>•The characteristics of the common surgical pathogens and their sensitivities</li> <li>•The spectrum of commonly used antibiotics in surgery and the principles of therapy</li> <li>•The causes of reduced resistance to infection</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• Specific ( SSI) wound infections</li> <li>• Synergistic spreading gangrene</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Ali J. Al-Shammari
<b>Item</b>	Lecture 8
<b>Subject</b>	Acquired Immunodeficiency Syndrome
<b>Learning objectives</b>	<ul style="list-style-type: none"> <li>• knowledge about the HIV virus and how it is spread and not spread.</li> <li>• competence to diagnose and manage persons with HIV infection and HIV-related disease.</li> <li>• knowledge of the extent of HIV/AIDS problem –at global and city levels –and its impact on health.</li> <li>• knowledge about psycho-social and behavioural aspects. communication skills and the ability to counsel persons with HIV/AIDS as well as their families to understand the STI and HIV relationship and to manage STI using the syndromic approach.</li> <li>• the ability to plan and execute appropriate preventive measures against HIV infection in the hospital, workplace and community.</li> <li>• An understanding of the importance of team approach and intersectoral cooperation for optimal utilization of resources. compassion for individuals living with HIV/AIDS.</li> <li>• an awareness of medical ethics; human rights issues, and costs of medical care.</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• Definition</li> <li>• Clinical classification</li> <li>• Mode of Transmission</li> <li>• Pathogenesis</li> </ul>

	<ul style="list-style-type: none"> <li>• General clinical Features in HIV</li> <li>• Investigation for HIV</li> <li>• Tumours in HIV Infection</li> <li>• Treatment</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Ali J. Al-Shammari
<b>Item</b>	Lecture 9
<b>Subject</b>	Metabolic response to injury
<b>Learning objectives</b>	<p>To understand:</p> <ul style="list-style-type: none"> <li>• Classical concepts of homeostasis</li> <li>• Mediators of the metabolic response to injury</li> <li>• Physiological and biochemical changes that occur during injury and recovery</li> <li>• Changes in body composition that accompany surgical injury</li> <li>• Avoidable factors that compound the metabolic response to injury</li> <li>• Concepts behind optimal perioperative care</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• factors responsible for systemic responses</li> <li>• mechanism of metabolic response to trauma</li> <li>• changes in body composition following injury</li> <li>• concepts behind optimal perioperative care</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Ali J. Al-Shammari
<b>Item</b>	Lecture 10
<b>Subject</b>	Shock
<b>Learning objectives</b>	<p>To understand:</p> <ul style="list-style-type: none"> <li>• The pathophysiology of shock and ischaemia–reperfusion injury</li> <li>• The different patterns of shock and the principles and priorities of resuscitation</li> <li>• Appropriate monitoring and end points of resuscitation</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• Pathophysiology</li> <li>• Classification of shock</li> <li>• CLINICAL FEATURES OF SHOCK</li> <li>• Severity (degrees ) of shock</li> <li>• INVESTIGATIONS IN SHOCK</li> <li>• TREATMENT OF SHOCK</li> <li>• Septic shock</li> <li>• Complication of poor shock management</li> <li>• Dynamic assessment of shock</li> <li>• Pitfalls or absence of classic signs in shock</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Ali J. Al-Shammari
<b>Item</b>	Lecture 11
<b>Subject</b>	Hemorrhage and blood transfusion

<b>Learning objectives</b>	<ul style="list-style-type: none"> <li>• Demonstrate competency in investigating, evaluating, and interpreting bleeding cases.</li> <li>• selecting appropriate blood products for transfusion and work-ups of positive antibody screens and panels and transfusion reactions.</li> <li>• Demonstrate professional behavior regarding patients, other physicians and all clinical laboratory personnel.</li> <li>• Understand the scientific basis and pathophysiology of Blood Banking, which includes an understanding of immunohematology.</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• Definition</li> <li>• Classification</li> <li>• Pathophysiology</li> <li>• Measurement of blood loss</li> <li>• Clinical features</li> <li>• Management of bleeding</li> <li>•</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Ali J. Al-Shammari
<b>Item</b>	Lecture 12
<b>Subject</b>	Continue lecture Hemorrhage and blood transfusion
<b>Learning objectives</b>	<ul style="list-style-type: none"> <li>• Demonstrate competency in investigating, evaluating, and interpreting bleeding cases.</li> <li>• selecting appropriate blood products for transfusion and work-ups of positive antibody screens and panels and transfusion reactions.</li> <li>• Demonstrate professional behavior regarding patients, other physicians and all clinical laboratory personnel.</li> <li>• Understand the scientific basis and pathophysiology of Blood Banking, which includes an understanding of immunohematology.</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• Blood and blood products</li> <li>• Indications for blood transfusion</li> <li>• Transfusion reactions</li> <li>• Complications of blood transfusion</li> <li>• Blood substitutes</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Ali J. Al-Shammari

### References:

- 1- - Baiely text book of surgery
- 2- -Schwartz text book of surgery

## **7- Medicine I**

### **Aims of the course:**

- 1- Introduce the students to the basic clinical aspects of Enteric Medicine
- 2- Start the clinical training and start contact with patients in hospital wards

### **Learning objectives:**

#### **(Knowledge):**

- 1- Basic knowledge of different medical symptoms and how to assess them clinically
- 2- The identification of important clinical signs
- 3- How to use the clinical signs and symptoms in diagnosing different medical conditions

#### **(Skill):**

- 1- Basic rules of history taking
- 2- How to arrange the information obtained from patients and write a proper case sheet

#### **(Attitude):**

- 1- How to make rapport with the patient
- 2- How to deal with patients in humane and professional manner
- 3- The proper communication skills used in history taking
- 4- How to respect patient's autonomy
- 5- The legal rules of dealing with patients and the basic principles of protecting patient safety and Confidentiality

### **Teaching methods:**

Theoretical lectures

Clinical sessions

Small group discussions

Clinical rounds in medical and emergency wards

Case discussions

### **Assessment methods:**

Written exams

Student activity in clinical sessions

Oral exams

Case sheets and seminars

**Course contents:**

L1: Introduction to internal medicine

L2: Communication skills and the art of history taking

L3: History (pain)

L4: History (chest pain).

L5: Dyspnea.

L6: Haemoptysis

L7: Diarrhea & Vomiting

L8: GIT heamorrhage.

L9: Anemia.

L10: Heamaturia

L11: Headache

L12: Coma.

L13: syncopy.

L14: jaundice.

L15: tremor.

L16: Introduction to General physical examination

L17: Cyanosis

L18: Tachycardia

L19: Clubbing of fingers

L20: Vital signs

L21: Oedeme

L22: Gait disturbances

L23: Cranial nerves

L24: Primitive reflexes

**Clinical sessions**

**1-History taking (personal history & chief complain)**

- 2-History taking (history of present illness)**
- 3-History taking (analysis of chest pain)**
- 4-History taking (analysis of cough)**
- 5-History taking (analysis of dyspnea)**
- 6- History taking (analysis of vomiting)**
- 7- History taking (analysis of diarrhea)**
- 8- History taking (analysis of headache)**
- 9- History taking (analysis of fainting and dizziness)**
- 10- History taking (analysis of abdominal pain)**
- 11- History taking (systematic review and family history)**
- 12- History taking (past medical, past surgical and gynecological history)**
- 13- Drug, alcohol and social history**



## **8- parasitology I**

### **Aims of the course:**

1. Identify the general properties of protozoa.
2. Describe the role of different protozoological pathogenesis in causing diseases.
3. Identify the causing factors of different protozoal diseases.
4. Identify the most important infectious diseases, methods of diagnosis, treatment and prevention of it.
5. Describe the most important methods of sterilization, disinfection and hospital infection control.
6. Identify different types of anti-protozoal treatment and causes of resistance to treatment.

### **Learning objectives:**

#### **(Knowledge):**

1. Demonstrate how to do, understand and reading results of protozoological tests.
2. Operate simple clear work sheet of how to diagnose the most common infectious diseases and how to choose the best, fastest and cheapest method to identify the causative protozoa.

#### **(Skill):**

1. Identify the relation between different protozoa and some diseases.
2. Distinguish of different protozoa and detecting its type.
3. Identify the danger of dealing with protozoa and contaminated samples on surrounding microenvironment.

#### **(Attitudes):**

- 1- Interpret the most important signs and symptoms of important protozoa infections of endemic character (using case study).
- 2- Choose the best-suited laboratory investigations for each protozoa and interpret the clinical and laboratory findings to reach a proper diagnosis.

#### **Teaching methods:**

- Lectures
- Practical classes (laboratory training)
- Problem base learning

- Small student teaching

**Assessment methods:**

Written examination: Assessment of knowledge and understanding. Also intellectual skills

Practical examination: Assessment of knowledge and understanding and professional skills

Report presentation

General relation with lecturer and the activities inside the lecture

Course contents:

اسم الوحدة / أو الموضوع	الساعات	الأسبوع
<i>General parasitology</i>	3	1
<b>SARCODINA</b> <i>Entamoeba histolytica</i> , Non pathogenic amoeba spp.	3	2
<b>Flaellates</b> Intestianial and, <i>Giardia lamblia</i>	3	3
uringenital, <i>Trichomonas</i> spp	3	4
<b>Cilata</b> <i>Balantidim coli</i>	3	5
<i>examination.</i>	3	6
African trypanosomiasis. <i>Trypanosoma gambiense</i> , <i>Trypanosoma rhodeseinse</i> ,	3	7
,Amarican trypanosomiasis. <i>Trypanosoma cruzi</i>	3	8
Kal-azar disease. <i>Leishmania donovani</i> ,	3	9
Coutanouse leishmaniasis. <i>Leishmania tropica</i> , <i>Leishmania braziliensis</i>	3	10
<b>Sporosoa</b> <i>Toxoplasma gondii</i> ,	3	11
<b>Sporosoa</b> <i>Cryptosporidium</i>	3	12
<i>Plasmodium</i> spp	3	13
<b>Vector of medical importance</b> The study of the classification, the methods of identification, the ecology and the control measures of medically important vectors a which act as intermediate hoste, and play an important role in the protozoa transmission .	3	14
<i>examination</i>	3	15

Daily schedule of first course weeks (third grade)

1:30-2:30	12:30-1:30	11:30-12:30	10:30-11:30	9:30-10:30	اليوم
Community Medicine I	Communication skills (I)	Pathology I	Pharmacology I	Microbiology I	الأحد
Surgery I	Pharmacology I	Pharmacology I	Microbiology I	Medicine I	الاثنين
A1- parasitology A2- microbiology B1- pharmacology B2- pathology Lab +PBL	A1- microbiology A2- parasitology B1- pathology B2- pharmacology Lab +PBL	A1- pathology A2- pharmacology B1- parasitology B2- microbiology Lab +PBL	A1- pharmacology A2- pathology B1 microbiology B2 –parasitology Lab +PBL	Practical medicine A+B	الثلاثاء
C1- parasitology C2- microbiology D1- pharmacology D2- pathology Lab +PBL	C1- micro C2- parasitology D1- pathology D2- pharmacology Lab +PBL	C1- pathology C2- pharmacology D1 parasitology D2- microbiology Lab +PBL	C1- pharmacology C2 -pathology D1- microbiology D2- parasitology Lab +PBL	Practical medicine C+D	الأربعاء
Pathology I		Community Medicine I	Parasitology I	Pathology I	الخميس

**Third year:**

**Second course:**

عدد الوحدات	عدد الساعات		المادة الدراسية	ت
	العملي	النظري		
6	2	5	Pathology II (امراض)	.1
4	2	3	Pharmacology II (ادوية)	.2
4	2	3	Microbiology II (الاحياء المجهرية)	.3
3	2	2	Community medicine II (طب المجتمع)	.4
1	/	1	Communication skill II (مهارات تواصل)	.5
2	/	2	Surgery II (جراحة)	.6
3	2	2	Medicine II (باطنية)	.7
2	2	1	Parasitology II (طفيليات)	.8
25			المجموع	

# 1-Pathology II

## Aims of the course:

- Each lecture handout will provide specific objectives.
- The course will cover pathological and pathophysiological aspects of disease by organ systems.
- This course will include gross, microscopic, and radiologic material to help the students in understanding the disease processes.
- Lectures will be directed to give a big picture of organization to help students in understanding outlines of pathologic bases within each system.
- Practical labs will be directed to create objective knowledge by students about gross and microscopic morphological changes accompanying each disease process.
- Small groups student based learning sessions will help students to communicate and cooperate in order to reduce time needed to build up the required deep and enormous pathologic information and to motivate students toward active process of learning.
- Problem based learning (PBL) sessions are going to include selected common and emergent and critical problems that will be faced by students in their later life of studying and practicing medicine.

## Learning objectives:

### (Knowledge):

- 1- Study of the basic pathological processes and special diseases affecting different body systems and understanding their pathogenesis and morphological manifestations at the molecular, cellular, tissue, organs, and whole body levels.
- 2- Explain main clinical problems by the underlying pathological process.
- 3- Study applied pathology (clinico-pathological correlation).
- 4- Examination of pathologic slide, provide a differential diagnosis, and reach the correct diagnosis.
- 5- Basic knowledge and awareness of special staining and immunohistochemistry that help in reaching the correct diagnosis.

### (Skills):

- 1- Demonstrate the morphological manifestations of almost all diseases at macroscopic and microscopic level.
- 2- Formulate the basis of morphological and clinical observation in terms of pathological mechanisms occurring at all levels.

- 3- Analyze these observations for formulating differential diagnosis and teach them how to reach the accurate diagnosis by exclusion.

**(Attitude):**

- 1- Identify and explain the clinical manifestations of disease and investigation results in terms of underlying pathology.
- 2- Identify different tools in diagnostic pathology including the ancillary techniques such as immunohistochemistry, flow cytometry & molecular techniques.
- 3- Recognize and apply appropriate professional attitudes and problem solving skills.
- 4- Perform scientific research.
- 5- Work and learn within a team and communicate ideas and arguments effectively.

**Teaching methods:**

1. Lectures
2. Practical classes
3. Small group discussion with case study and problem solving
4. formative assessment
- 5- by video and skills

**Assessment methods:**

Written Examination: Assessment of knowledge and understanding and intellectual skills. These are usually done as summative assessments at the end of each system

Practical Examination:

- A. Assessment of practical skills.
- B. Intellectual skills: a. Station b. Objective Structured Test (OST) c. Photos d. Report

**Course contents:**

## Theory lectures

Week	Date /1hour	Lecture subject	objectives	lecturer
Week-1	Sunday	CNS: Congenital abnormalities	The student will be familiar with: major congenital abnormalities affecting the nervous, their clinical presentation, gross features and related complications and differential diagnosis	Dr.thair
	Monday	CNS: Raised intracranial pressure	The student will be familiar with causes, clinical presentation and pathophysiological consequences of raised ICP and differential diagnosis	Dr.thair
	Tuesday	CNS: Trauma	The student will be familiar with common types of intracranial hemorrhage and their clinicopathological features , gross and microscopic features and differential diagnosis	Dr.thair
	Wednesday	CNS: CVA	The student will be familiar with causes of CVA and their clinicopathological features gross and microscopic features ,diagnostic methods and differential diagnosis	Dr.thair
	Thursday	CNS:LOS	The student will be familiar with causes, clinical presentation and pathophysiological, pathogenesis, risk factors, Glasgow Coma Scale and differential diagnosis	Dr.thair
Week-2	Sunday	CNS: CNS infections	The student will be familiar with causes, clinical presentation and pathophysiological of bacterial meningitis versus aseptic meningitis, CSF finding and differential diagnosis	Dr.thair
	Monday	CNS: Degenerative disorders	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.thair
	Tuesday	CNS: Demyelinating disorders	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.thair
	Wednesday	CNS: Diseases of peripheral nerves	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.thair
	Thursday	CNS: Benign Tumors	The student will be familiar with causes ,types ,clinical presentation,	Dr.thair

			radiological findings, pathological finding and differential diagnosis	
<b>Week-3</b>	<b>Sunday</b>	CNS:malignant tumor	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and differential diagnosis	Dr.thair
	<b>Monday</b>	CNS: upper airways and ear	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.thair
	<b>Tuesday</b>	CNS: Branchial cyst, paraganglioma	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.thair
	<b>Wednesday</b>	CNS: Eye pathology I ,II	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.thair
	<b>Thursday</b>	CNS:Dementia	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.thair
<b>Week-4</b>	<b>Sunday</b>	Renal / Clinical manifestation of renal diseases	The student will learn about the various spectrum of clinical manifestations associated with renal diseases.	Dr. Dena
	<b>Monday</b>	Renal/ Glomerular diseases I	The student will be familiar with various mechanisms of glomerular injury. They'll learn about nephrotic syndrome: causes ,types ,clinical presentation, pathological finding and pathophysiology and differential diagnosis	Dr. Dena
	<b>Tuesday</b>	Renal/ Glomerular diseases II	The student will be familiar with nephritic syndrome & RPGN: causes ,types ,clinical presentation, pathological finding and pathophysiology and differential diagnosis	Dr. Dena
	<b>Wednesday</b>	Renal/ Diseases affecting tubules & interstitium	The student will be familiar with causes ,types ,clinical presentation, pathological finding and pathophysiology and differential diagnosis	Dr. Dena
	<b>Thursday</b>	Renal system	The student will learn about (1) diseases affecting renal blood vessels ( clinical presentation & complication) , (2) systemic diseases with renal involvement.	Dr. Dena



<b>Week-5</b>	<b>Sunday</b>	Renal / Chronic kidney disease	The student will be familiar with causes ,clinical presentation, pathological finding and pathophysiology and differential diagnosis	Dr. Dena
	<b>Monday</b>	Renal / Cystic diseases of kidney	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Dena
	<b>Tuesday</b>	Renal/ Urinary outflow obstruction	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Dena
	<b>Wednesday</b>	Renal / Tumors of kidney	The student will be familiar with types of kidney tumor ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr. Dena
	<b>Thursday</b>	Diseases of ureter & urinary bladder	The student will be familiar with the different diseases that affects ureter & urinary bladder .	Dr. Dena
<b>Week-6</b>	<b>Sunday</b>	Diseases of female external genitalia	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Maather
	<b>Monday</b>	Diseases of cervix I	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Maather
	<b>Tuesday</b>	Diseases of cervix II	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Maather
	<b>Wednesday</b>	Diseases of cervix III	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Maather
	<b>Thursday</b>	Diseases of uterus I	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Maather
<b>Week-7</b>	<b>Sunday</b>	Diseases of uterus II	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological	Dr.Maather

			finding and pathophysiology and differential diagnosis	
	<b>Monday</b>	Diseases of uterus III	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Maather
	<b>Tuesday</b>	Diseases of ovary I	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Maather
	<b>Wednesday</b>	Diseases of ovary II	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Maather
	<b>Thursday</b>	Diseases of ovary III	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Maather
<b>Week-8</b>	<b>Sunday</b>	Diseases of fallopian tube	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Maather
	<b>Monday</b>	Pregnancy & trophoblastic disorders	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Maather
	<b>Tuesday</b>	Diseases of male external genitalia	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Maather
	<b>Wednesday</b>	Diseases of testis	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Maather
	<b>Thursday</b>	Diseases of prostate	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Maather
<b>Week-9</b>	<b>Sunday</b>	Inflammatory diseases of breast	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Shoroq
	<b>Monday</b>	Fibrocystic changes of breast	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological	Dr.Shoroq

			finding and pathophysiology and differential diagnosis	
	<b>Tuesday</b>	Benign breast tumors	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Shoroq
	<b>Wednesday</b>	Malignant breast tumors I	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Shoroq
	<b>Thursday</b>	Malignant breast tumors II	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Shoroq
<b>Week-10</b>	<b>Sunday</b>	Staging of breast tumors	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Shoroq
	<b>Monday</b>	Breast tumor markers	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Shoroq
	<b>Thursday</b>	Mid second course exam	Mid second course exam	
<b>Week-11</b>	<b>Sunday</b>	Diseases of skin : inflammatory diseases	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Shoroq
	<b>Monday</b>	Diseases of skin: malignant tumors	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Shoroq
	<b>Tuesday</b>	Diseases of muscle I	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Aws
	<b>Wednesday</b>	Diseases of muscle II	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Aws
	<b>Thursday</b>	Diseases of bone : introduction & developmental diseases	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Dena
		Diseases of bone : osteoporosis	The student will be familiar with causes ,types ,clinical presentation,	Dr.Dena

<b>Week-12</b>	<b>Sunday</b>		radiological findings, pathological finding and pathophysiology and differential diagnosis	
	<b>Monday</b>	Diseases of bone : tumor like lesion	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Dena
	<b>Tuesday</b>	Diseases of bone : bone tumor	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Dena
	<b>Wednesday</b>	Diseases of joint I	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Dena
	<b>Thursday</b>	Diseases of joint II	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Dena
<b>Week-15</b>	<b>Sunday</b>	Diseases of joint III	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Dena
	<b>Monday</b>	Diseases of joint IV	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis	Dr.Dena
	<b>Tuesday</b>	Review		
	<b>Wednesday</b>	Review		
	<b>Thursday</b>	Review		
<b>Final Exam of second course</b>	<b>Final Exam of second course</b>	<b>Final Exam of second course</b>	<b>Final Exam of second course</b>	

## Small groups session / Practical sessions and SBL

Week	Subject-practical session	SBL	lecturer
Week-1 Group A,B,C,D,E	Degenerative and demyelinating disorders: radiological, gross and microscopic features	Approach examination patient with Degenerative and demyelinating disorders	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Week-2 Group A,B,C,D,E	CNS infection: radiological, gross and microscopic features	Approach examination patient with meningitis	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Week-3 Group A,B,C,D,E	CNS tumor: radiological, gross and microscopic features	Approach examination patient with brain tumor	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Week-4 Group A,B,C,DE,	Renal : GN; differential diagnosis, microscopical feature	DDx of glomerulopathies	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Week-5 Group A,B,C,D,E	Renal : tubular & interstitial disease	Approach examination of different causes of tubule-interstitial pathology	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Week-6 Group A,B,C,D,E	Renal : renal tumors	DDx of renal mass; microscopical features, staging, prognosis	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Week-7 Group A,B,C,D,E	FGT: vulvar & cervical lesions	Approach examination to patients with cervical lesions, interpretation of	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-

		pap smear	Aws, ,Dr-Hamid Dr.Thamer
Week-8	Uterine pathology	Approach examination :patient with endometrial hyperplasia, endometrial carcinoma	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Week-9 Group A,B,C,D,E	Ovarian pathology	Approach examination & DDx of ovarian tumor	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Week-10 Group A,B,C,D,E	MGT : testicular tumors & prostatic pathology	Approach examination patient with testicular mass, BPH & prostatic cancer	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Week-11 Group A,B,C,D,E	Breast : benign breast diseases	Approach examination patient with breast mass: DDx of benign breast disease	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Week-12 Group A,B,C,D,E	Breast : malignant tumor of breast	Approach examination patient with breast mass	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Week-13 Group A,B,C,D,E	Skin diseases	Approach examination to patient with skin lesion	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Week-14 Group A,B,C,D,E	Joint & Muscle diseases	Approach examination patient with RA , most commonly encountered	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-

		muscular pathologies	Hamid Dr.Thamer
Week-15 Group A,B,C,D,E	Bone disease : tumor & tumor like lesions of bone	DDx of bone lesion, how to approach diagnosis clinically & via histopathological examination	Dr. Thair ,Dr-Shoroq, Dr-Asra Dr-Dina , Dr-Mather Dr-Aws, ,Dr-Hamid Dr.Thamer
Final of second course Exam	Final of second course Exam		

### **Problem based case scenarios: (15 Classes)**

Small groups problem based learning involves case scenarios provided with questions related to different topics previously taught by theory lectures. The total scenarios cases in second course about (42 cases)

**Tutors:** - Dr-Shoroq, Dr-Dina , Dr-Mather, Dr-Aws, Dr. Thair , Dr-Hamid , Dr-Thamer, Dr-Asra

### **Lists of problem based case scenarios:**

#### **RENAL PBL (8 case scenarios)**

**Q1/** A40 years old female notices generalized edema , headache & turbid urine. She seeks medical advice ; her laboratory findings include proteinuria, hypoproteinaemia & hyperlipidaemia .Renal biopsy shows B.M spikes. She told her physician that she had been on NSAID for long period due to Rheumatoid arthritis.

- a. What is the most likely diagnosis?
- b. Describe the pathogenesis for her symptoms.
- c. What is the expected clinical course

**Q2/** An 8 years old boy has a 2 day history of malaise, fever and loin pain. His mother noticed that he had decreased urine output and that his urine is dark & has smoky color. O/E , his BP is slightly elevated with edema of the face and puffiness of eye lids. He has been in good health except for a sore throat 2weeks ago.

- a. What is the most likely diagnosis?
- b. What mechanism is involved?
- c. Describe the microscopic changes in the kidney?
- d. What are the lab. Findings in this case.

**Q3/** A 45 years old male with chronic liver disease which started after receiving blood transfusion. Recently , he developed swelling of his face & lower limbs. Urine analysis revealed 7gm. Proteinuria/24hrs. No RBCs, no glucose & no WBCs. Blood examination revealed normal s. creatinine & BUN , while there was hypoproteinaemia. A renal biopsy was done & revealed diffuse thickening of capillary walls & normocellular glomeruli.

1. Which of the following is the most likely diagnosis?
  - a. Idiopathic membranous GN
  - b. Secondary membranoproliferative GN
  - c. Secondary membranous GN
2. Which of the following serologic tests might be positive in this patient ?
  - a. Serum ANA
  - b. Serum HBs Ag
  - c. Serum ANCA
3. Which of the following electron dense deposits can be found
  - a. Large subendothelial deposits
  - b. Discrete subepithelial humps
  - c. Subepithelial deposits with GBM spikes

**Q4/** A 21 years old male presents with hemoptysis. A few days later, he experiences sudden onset of acute renal failure. Urine analysis reveals mild proteinuria, hematuria & RBC cast. Renal biopsy reveals prominent proliferation of the capsular epithelium.

1. Which of the following is involved in the pathogenesis of glomerular disease ?
  - a. anti-basement membrane antibodies.
  - b. Epithelial cell injury
  - c. Immune complexes
2. What is the immunofluorescence findings?
3. mention the treatment & prognosis .

**Q5/** A 55 years old man presents to his physician complaining of painless hematuria, and right loin pain. Physical examination reveals hypertension, gynecomastia & flank pain. Lab. Findings shows polycythaemia& hypercalcemia. U/S reveals a 6cm well delineated cortical mass at the upper pole of the kidney.

- a. What is the most likely diagnosis?
- b. List the most common types.



- c. What are the methods of spread?
- d. Explain :
  - Gynecomastia
  - Polycythaemia
  - hypercalcemia

**Q6/** A 50 years old man was diagnosed at age 15 with type 1 DM . His disease is poorly controlled, as evidenced by elevated hemoglobin A1C. What are the possible changes that can be found in his kidneys?

**Q7/** A 75 years old female died with normal renal function . Postmortem examination reveals slightly small kidneys with granular surface. Microscopic examination of renal sections reveals scattered hyalinized glomeruli, interstitial fibrosis , focal tubular atrophy and arteriolar thickening. These findings are most strongly suggest:

- a. Malignant nephrosclerosis
- b. Chronic GN
- c. Benign glomerulosclerosis
- d. Analgesic nephropathy

**Q8/** An abdominal CT scan reveals bilateral ureteral dilatation along with bilateral renal pelvic & calyceal enlargement . The patient's serum urea and creatinine are increasing. Which of the following patients is **LEAST** likely to develop these findings if left untreated:

- a. A newborn term male with posterior urethral valve
- b. A 60 years old male with prostatic hyperplasia
- c. An adult with bilharzial cystitis and bladder neck fibrosis
- d. A 25 years old female with large stag horn stone obstructing the pelvis of the RT. Kidney

#### **FGT - PBL(12 cases scenarios)**

**Q1/** A 28-year-old woman attends the colposcopy clinic after an abnormal liquid-based cytology smear test. She is very anxious as she thinks that she might have cervical cancer. The smear is reported as 'severe dyskaryosis'. She had a previous normal result at age 25 years. She has not had any postcoital or intermenstrual bleeding.

Her first sexual relationship started at the age of 14 years and she has had several partners since then. She lives with her current partner who she has been with for 3 years. She was diagnosed with genital herpes several years ago but has not had any attacks for at least 3 years. She smokes 15–20 cigarettes per day and drinks only at the weekends.

She has an intrauterine contraceptive device *in situ*.

## **Examination**

The cervix is macroscopically normal. At colposcopy, acetic acid is applied and an irregular white area is apparent to the left of the os. Lugol's iodine is applied and the same area stains pale while the rest of the cervix stains dark brown. A biopsy is taken.

Cervical biopsy report: the sample received measures 4 × 2 mm and contains enlarged cells with irregular nuclei occupied all thickness of epithelium .

- 1 --- What is your diagnosis and differential diagnosis of her presentation ?
- 2 --- What are other types of this cervical disease ? Classify it.
- 3 --- What are the risk factors in this patient to develop this cervical disease ?
- 4--- What is the risk of your diagnosis to develop cervical malignancy

**Q2/** A 48-year-old woman presents with intermenstrual bleeding for 2 months. Episodes of bleeding occur any time in the cycle. This is usually fresh red blood and much lighter than a normal period. It can last for 1–6 days. There is no associated pain. On bimanual examination the uterus is non-tender and of normal size, axial and mobile. There are no palpable adnexal masses.

Transvaginal ultrasound scan and hydrosalpinx are shown in Fig:-

- 1 --- What is your diagnosis and differential diagnosis of her presentation ?
- 2 -- The excised specimen appears as in the picture :-
  - Describe the picture
  - what is its risk to be malignant ?
  - what is its risk for developing malignancy ?

**Q3/** A 36-year-old woman has noticed abdominal swelling for 10 months. She has to wear larger clothes and people have asked her if she is pregnant, which she finds distressing having been trying to conceive. She has no abdominal pain and her bowel habit is normal. She feels nauseated when she eats large amounts. She has urinary frequency but no dysuria or haematuria.

Her periods are heavy regular, with clots and flooding. She has been with her partner for 7 years and despite not using contraception she has never been pregnant. On Examination

The woman has a very distended abdomen. A smooth firm mass is palpable extending from the symphysis pubis to midway between the umbilicus and the xiphisternum (equivalent to a 32-week size pregnancy). It is non-tender and mobile. It is not fluctuant and it is not possible to palpate beneath the mass. On speculum examination it is not significant.

Bimanual examination reveals a non-tender firm mass occupying the pelvis.

- Diagnosis?
- Risk factor ?
- what are the anatomical types for this tumor??

- after excised the tumor with uterus (by subtotal hysterectomy) , the tumor gross & histology appears as picture ,
- Describe the characteristic features for this tumor

**Q4/** A 65-year-old nulliparous woman awoke with blood on her nightdress, which was bright red but not heavy which is no associated pain. The bleeding has recurred twice since in similar amounts. Her last period was at the age of 55 years while her menarche was at 12 years old. She is sexually active but has noticed vaginal dryness on intercourse recently. She has never used estrogenic hormone-replacement therapy (HRT) fo. She takes hypertensive also. Examination She is overweight. Abdominal examination is normal. The vulva and vagina appear thin and atrophic ( post menopausal changes ) , the cervix is normal & the uterus is small with no palpable adnexal masses. Transvaginal ultrasound scan revealed thickening of endometrium.

*An outpatient endometrial biopsy* is taken at the time of examination and sent for histological examination

1 --- What is your diagnosis and differential diagnosis of her presentation ?

2 --- What are the risk factors in this patient to develop your suspicion & what are the protective factors you suggest ?

3 -- An outpatient endometrial biopsy that is taken at the time of examination revealed this picture :-

What is your diagnosis ? , mention your finding

**Q5/A** 21-year-old student presents with left iliac fossa and lower abdominal pain. The pain is present intermittently with no pattern except that it is generally worse on exercise. The pain started about 6 months before and has gradually become more frequent and severe. It is no worse with her periods .

Examination: The woman is slim and the abdomen is soft with a palpable mass in the left iliac fossa. This is firm and feels mobile. It is moderately tender. Speculum examination is normal. Bimanual examination confirms an 8 cm mass in the left adnexa. The uterus is palpable separately and is mobile and anteverted. The right adnexa is normal.

- Differential diagnosis ?
- Classification of ovarian tumor
- Imaging study is performed :- An abdominal X-ray & Transvaginal ultrasound scan show appearance is of mixed echogenicity with 'acoustic shadowing'
- Cystectomy is performed revealed :-

1-What is your diagnosis for this tumor ? -

2- What is composition & original tissue for this tumor ? Mention other tumora could be derived from the same origin. -

3- What is its risk to be malignant or developing malinancy ? -

4- describe its histological composition -

**Q6/** A 43-year-old female who visited her gynecologist complaining of abdominal pain, pelvic pain, and pain in the small of her back, which had begun to worsen. She also felt bloated and was having frequent problems with indigestion and gas. In addition, she was tired all the time. Her family history is notable for a sister diagnosed with breast cancer at age 45, and a

paternal aunt who died of ovarian cancer at 50. The patient has no children despite of her multiple attempts to be pregnant , she is smoker since she was 21 y. old.

**T or F**

**An ovarian cancer risk factor?**

- A. Family history of breast and ovarian cancer.
- B. Her age
- C. Smoking

**A symptom of ovarian cancer?**

- A. Abdominal or pelvic pain.
- B. Early satiety.
- C. Bloating.
- D. Changes in urination (such as increased frequency).

Her physical exam is non-specific and normal. A transvaginal ultrasound revealed a mass on her right ovary. Additional laboratory work-up, including a CA-125 (cancer antigen 125 ) assay of her blood sample, was very high. On laparotomy , her GYN-ONC find other small solid mass in contralateral ovary with multiple deposit in bladder wall with positive ascitic fluid cytology for malignant cells . He recommended removal of both ovaries (which appears as picture ).

1- what is your diagnosis & d.dx for this patient ??

2- Describe the excised specimen

3 – what is the original tissue for this ovarian tumor?? And what is its classification according to its behavior ??

4 – Describe its ccc microscopical features as shown in this picture .

5 – what is the stage & prognosis of this tumor ??

**Q7/** Pseudomyxoma peritonei is a complication that is most commonly associated with which histologic subtype of ovarian tumor?

- A. Brenner
- B. Clear cell
- C. Endometrioid
- D. Mucinous
- E. Serous

**Q8/** A 4-year-old girl is noted to have breast enlargement and vaginal bleeding. On physical examination, she is noted to have a 9-cm right ovarian mass. ultrasound confirmed this finding.

Laparotomy is done and revealed : Ovarian tumors which is large (>10 cm) and unilateral. The cut surface is soft and yellow-tan with cysts and hemorrhage as in picture •

1- what is your diagnosis for this patient ??

2 – what is the original tissue for this ovarian tumor?? And what are other types of tumor with same origin??

3 – Describe its ccc microscopical features as shown in this picture .

**Q9/** A 55-year-old woman presents with fatigue and malaise that have been worsening over the last 2 months. She has also noticed loss of appetite and early satiety. Evaluation finds an ulcerative mass located along the lesser curvature of the stomach along with bilateral ovarian masses. Laparotomy revealed the ovarian lesions are bilateral and the tumors are characterized by a multinodular outer appearance.

1-what is your diagnosis for this patient ??

2 – what is the original tissue for this ovarian tumor??

3 – Describe its ccc microscopical features as shown in this picture .

**Q10/** A 30-year-old man complains of “heaviness” in the scrotal area, which he has noted for approximately 1 month. On his medical history He denies any trauma to the area , He denies the use of tobacco, He mention that he had undescended tests ( abdominally located ) that treated surgically (orchiopexy) to bring the testicle into the scrotum, since he was 17 years old . On examination, there is a 5-cm firm, nontender area inside the right scrotum. There is no lymphadenopathy.

1-What is the most likely diagnosis?

2- What is the most likely histologic finding? •

3- What is the most important risk factor mention in patients history ? What are the other risk factors for this type of tumor?? •

Orchidectomy is done and revealed The tumor appears as a fairly well circumscribed, pale, • fleshy, homogeneous mass,with Large cells with distinct cell borders, clear cytoplasm, rounded nuclei, prominent nucleoli, and a sparse lymphocytic infiltrate. As in pictures

1- What is the most likely diagnosis?

2- What is the most likely histologic finding?

3- What is the most common rout of spread?

4- What is the tumor marker used to follow this type of tumor ?

5 - What is the definition of stage II of this cancer ??

**Q11/** A 62-year-old man presents with a 4-year progressive history of Increasing lower • urinary tract symptoms ; after exclusion of urinary tract infection , An enlarged prostate gland on rectal examination is identified , that is symmetric and smooth. Ultrasound also confirmed this finding , as in picture:-

1- What is the most likely diagnosis?

2- What is the histologic finding underling this condition?

3- What are the most important risk factors for developing this disease ??

4 - What are the most important complications for this disease ??

The patient refuse surgical treatment , 5 years later he presnted with Anuria ( non passage of urine, & in practice is defined as passage of less than 100 milliliters of urine per day) and haematuria (is the presence of red blood cells in the urine).

An enlarged prostate gland on rectal examination is feels asymmetrical, firm, or nodular.

Prostactomy is done & specimen send for histopathology , revealed a large nodules in both lobes of prostate that confined to its capsule , as show in this pictures :-

1- What is the most likely diagnosis? •

2- What is the most common tumor markers used to follow this type of tumor ? •

3- what are the most common rout of metastasis ? •

4 - What is the stage & prognosis of this tumor? •

**Q12/** Latent prostatic carcinoma is: •

A. Incidental carcinoma prostate found in prostatectomies done for BEH •

B. Small focus of prostate carcinoma found during autopsy

C. Asymptomatic carcinoma of prostate presenting with metastasis on investigation

D. Prostatic carcinoma in-situ

### Breast -PBL (16 case scenarios)

**Q1/** A 24-year-old woman delivers a 3.5-kg baby and begins breastfeeding her infant. The patient presents 2 weeks later with a fever of 38°C . Physical examination shows no abnormal vaginal discharge or evidence of pelvic pain but does reveal redness on the lower side of the left breast. The patient stops nursing the infant temporarily, but the symptoms persist, and the entire breast becomes swollen and painful. As shown in this figure .

1-What is the most likely diagnosis? Treatment .

2- What is the most common cause of this lesion.

3-If neglected this conditions what is new result . FNA finding and treatment

4- If extensive necrosis , what is new result .How can confirm diagnosis?

**Q2/** A 30-year-old woman , obese ,pendolase breast , suffers traumatic injury to her breast while playing soccer. Physical examination reveals a 3-cm area of ecchymosis on the left breast. Two weeks later, the patient palpates a firm lump beneath the area where the bruise had been located.

Microscopical examination as shown in this figure .

1-What is the most likely diagnosis?

2-Microscopical finding (types of giant cell and necrosis ).

3- Enumerate others granulomatous lesions non neoplastic breast lesions . How differentiate between them.

4-How can confirm diagnosis?

**Q3/** A 45-years old woman presents with nipple discharge and nipple retraction in the right breast. Subareolar ill-defined nodule painless. On biopsied examination, it shows cystic ducts filled with inspissated fluid and surrounded by a plasma rich chronic inflammatory infiltrate and fibrosis.

1-What is the most likely diagnosis?

2-Pathogenesis.

3- How can confirm the diagnosis?

**Q4/** During a routine monthly self-examination of her breasts, a 25-year-old woman discovers an ill-defined firm area in the right breast. The patient states that both of her breasts become somewhat tender during menses. Her physician is able to palpate similar areas in both breasts. There is no nipple discharge, skin induration or redness, or axillary lymph node enlargement.

1- What is the most likely diagnosis?

2- What is the clinical significance of these findings?

3-If this patient suffers from dysfunctional uterine bleeding, what is the pathogenesis of both troubles.

**Q5/**A 33-year-old woman presents because during her routine monthly breast self-examination she thought her breasts felt more “lumpy” than usual. Physical examination finds an ill-defined firm area in her right breast. Because of a family history of breast cancer, she is very concerned about this area, and a biopsy is performed. Histologic examination reveals typical fibrocystic changes. Some of the smaller cysts are lined by large polygonal cells with abundant eosinophilic cytoplasm and small, round dark nuclei.

1-What is the most likely diagnosis?

2-Risk of malignancy .

3-In the same disease ,what are other patterns which have risk of malignancy .

**Q6/** A 22-year-old woman presents with a rubbery 1.5-cm mass ,movable ( mouse of breast ) in the upper outer quadrant of her right breast. A biopsy from this mass reveals a well-circumscribed lesion consisting of a mixture of delicate stromal fibrous tissue and glandular. The stromal cells are not increased in number. No mitoses or cellular atypia is seen as shown in this figure.

1-What is the most likely diagnosis?

2- Grad and stage of this case ?

3-Could be precursor to carcinoma .

4-If the age is older, the mass is larger and the stroma is hypercellular ,what would be your diagnosis .**Q7/** A 30-year-old woman with a subareolar intraductal papilloma of the breast most likely would present with which of the following clinical signs?

- A-A bloody nipple discharge
- B. A cystic lesion of the nipple
- C- A milky nipple discharge
- D- A scaly lesion of the nipple
- E- A thick cheesy nipple discharge

**Q8/** A 54-year-old woman complains of bloody discharge from her left nipple. Physical examination reveals a 0.5-cm nodule in the subareolar breast tissue, which is surgically excised. Histologic examination as shown in this figure reveals cuboidal and myoepithelial cell-lined vascular connective tissue cores, which project into the lumen of a major lactiferous duct , with basement membrane intact .

1-What is the most appropriate diagnosis?

2-What are the alarming microscopical features in this case.

**Q9/** A 60-year-old woman presents with a large, mobile breast mass , that she first detected 3 months ago. Mammography reveals a well circumscribed mass measuring 10 cm in diameter. A breast biopsy shows loose fibroconnective tissue with a sarcomatous stroma, abundant mitoses, and phylloid like lined by cuboidal epithelial cells.

1-What is the most likely diagnosis ?

2-How could you estimate the behavior of this tumor.

3- How estimate mitosis perfectly by marker .

**Q10/** A 53-year-old woman discovers a lump in her breast and physical examination confirms a mass in the lower, outer quadrant of the left breast measuring 1.5 cm. Mammography demonstrates an ill-defined, stellate density (speculated rays) measuring 1 cm as shown in this figure Needle aspiration reveals malignant ductal epithelial cells. A modified radical mastectomy is performed. The surgical specimen reveals a firm irregular mass as shown in this figure . No L.N involvement and no distal metastasis .

1-What is the most likely diagnosis ? Stage and prognosis of this case .

2-What is gross features .

3-what are methodes of spread of this tumors.

4-Which of the cellular markers would be the most useful to evaluate before considering therapeutic options for this patient? Why ?

**Q11/** 52-year-old woman presents with a 3-month history of a palpable breast mass. Physical examination confirms a 3-cm nodule in the upper outer quadrant of the right breast ,skin and nipple



retraction with L.N involvement and multiple nodules in the liver by U/S examination . A biopsy reveals malignant small cuboidal cells, with round nuclei and prominent nucleoli. The cells are arranged in single cell columns, between strands of connective tissue as shown in this figure .

1-What is the most likely diagnosis?

2- Microscopical characteristic features of this tumors .

3- Precursor lesions of this disease .

4- Stage and prognosis of this case .

5-What is the recommendation giving by the pathologist to the surgeon in this situation ?

**Q12/** A 45-year-old woman on mammography screening test , mammography demonstrates focal calcification, with a linear configuration (micro calcification) in the region of the breast mass.

A breast biopsy (shown in this figure) reveals large, pleomorphic epithelial cells confined to dilated ducts, with central zones of necrosis.

1-What is the most likely diagnosis?

2- Gross features after simple mastectomy .

3-What is stage of this case .

4- Prognosis of this case

**Q13/** A 60-year-old man presents with painless, bilateral enlargement of both breasts. The patient has a history of nodular prostatic hyperplasia and is taking medication for hypercholesterolemia. Physical examination reveals no discrete breast masses or axillary lymph node enlargement.

1-What is the most likely diagnosis ?

2-What are the most likely underlying causes of breast enlargement in this patient?.

3-If this patient present with breast cancer ,what is the prognosis .

**Q14/** 20-year-old woman asks for your advice regarding her risk of developing breast cancer. Her mother, maternal aunt, and maternal grandmother all developed breast cancer. She would like to know if she has a genetic predisposition.

1- What is risk factors has the strongest association with this patient's tumor?

2-Laboratory tests for mutations genes would be most likely to answer your patient's question?

**Q15/** Upon self-examination, a 53-year-old woman discovers a lump in her left breast. Physical examination reveals a palpable lump about 1 cm in diameter in the upper outer quadrant of the left breast. No palpable lymph nodes are found in the axilla. Mammography reveals an ill-defined, stellate density (speculated rays )measuring 1 cm in the left breast. Fine-needle aspiration of the mass discloses malignant epithelial cells. mastectomy is performed and shows invasive ductal adenocarcinoma .

Which of the following is the most important prognostic factor for this patient?

- (A) Estrogen receptor status of the tumor tissue
- (B) Histologic grade of the tumor
- (C) Inherited BRCA1 gene mutation
- (D) Somatic mutation of the p53 tumor suppressor gene
- (E) Status of the axillary lymph nodes

**Q16/** A 60-year-old woman seeks medical attention for soreness and oozing from the nipple of her left breast. She denies trauma to the breast. On physical examination, there is fissuring and ulceration of the areola and nipple. Biopsy of the breast is performed, and the skin of the nipple is shown in Figure .

1- What is the most likely diagnosis?

2- What is the clinical significance of this finding?

3-What is microscopical finding .

4-What is the most common location for extramammary Paget disease and what are the difference between them .

### [CNS-PBL \(6 case scenarios\)](#)

**1-** A 22 year old man was riding a motorcycle unlimited when he was involved in a crash at 55 mph. He was found unconscious and breathing spontaneously with a blood pressure of 110/70 and pulse of 100. After twenty minutes the patient become conscious and then complains of a severe headache and blurred vision and later in the emergency room, he does not open his eyes to verbal or noxious stimuli, there is no verbal response . Noxious stimuli result in withdraw both limbs and arms . Both pupils react to light and are normal in size .

**Q1/**Approach to examination and investigation Pt with LOC **Q2/** Glasgow coma scale?

**Q3/**Level of consciousness? **Q4/** If this pt. was completely normal before the accident, what is the most common cause of LOC? **Q5/**CT finding of this pt as shown. What is most likely cause of LOC .

**Q6/** Prognosis of this pt? **Q7/**Pathophysiology of LOC ?

**2-** A 57-year-old man is found in an unconscious state at home. He was in bed when his wife left at 7.00 a.m. that morning to go to work. On her return home at 3.45 p.m., he was still in the same position in bed, un reusable, incontinent of urine, and the cup of tea she had left for him was untouched. He has been unwell recently, and prescribed a course of antibiotics and co-codamol from his General Practitioner for a discharging ear infection. He suffers from hypertension, type 2 diabetes mellitus and longstanding depression. His medication list shows that he has been prescribed gliclazide 80 mg twice daily, atenolol 25 mg once daily, ramipril 5 mg once daily and amitriptyline 25 mg once daily. He has no known allergies. His wife informs you that he has had bad headaches recently, but that no-one else at home has been unwell.

**Q1/**What is the new presentation for this case?

**Q2/**What differential diagnosis would you consider from this case?

**Q3** /Approach to examination and investigation Pt with LOC?

**3-** 86-year-old man has dementia, which is impaired cognitive function with slow progression, as represented by forgetfulness, disorientation, alterations in mood, and difficulty with speech. He has wandered from his home, which is a common behavior among patients with dementia. On examination/He does not have a history of head trauma or neurologic symptoms, which may indicate a brain tumor, a subarachnoid hemorrhage, or an infection such as syphilis.

**Q1**/What is the most likely cause of this patient's symptoms?

**Q2**/What are the distinctive pathologic findings in these disorders?

**4-A** 62-year-old man is found to have a shuffling gait, a stooped posture, slowness of movement, muscle rigidity, and a pill-rolling tremor at rest. On physical examination finds that he has a "mask-like" facial expression.

**Q1**/What is most likely diagnosis ?

**Q2**/Cause of this disease ?

**Q3**/The disorder this individual most likely has is associated with the formation of intracytoplasmic eosinophilic inclusions within neurons that are located in which of the following areas of the nervous system?

**Q4**/ Macroscopical and microscopical finding .

**5-** 32-year-old woman presents with a 2-day history of headache, vomiting, and fever. Physical examination reveals cervical rigidity and knee pain with hip flexion. Lumbar puncture demonstrates an abundance of neutrophils and decreased levels of glucose. Which of the following diseases is most likely associated with these clinical laboratory findings?

**(A)** Meningococcal meningitis **(B)** Fungal meningitis **(C)** Staphylococcal meningitis

**(D)** Tuberculous meningitis **(E)** Viral meningitis

**6-** A 3-day-old infant presents with a fever of 38.7°C (103°F) and convulsions. The infant is started on broad-spectrum antibiotics and antiviral medications but slips into a coma and expires. At autopsy, the brain shows a purulent exudate in the subarachnoid space at the base of the brain (shown in the image). What was the most likely cause of suppurative meningitis in this neonate?

**(A)** Candida albicans **(B)** Cryptococcus neoformans **(C)** Escherichia coli

**(D)** Haemophilus influenza **(E)** Neisseria meningitidis

## **2- Pharmacology II**

### **Aims of the course:**

- 1- To provide the basic knowledge regarding the commonly used groups of drugs that affect human body systems and their implication in therapy of disease and health promotion.
- 2- To enable students understanding the safe use of drugs in respect to adverse effects, contraindications and drug interactions.
- 3- To ensure that students having enough skills and attitude towards selection and use of drugs on rational bases.

### **Learning objectives:**

#### **(Knowledge):**

- 1-Describe the pharmacokinetic, pharmacodynamic and pharmacotherapeutic properties of different groups of drugs affecting body systems.
- 2-Describe the adverse and toxic effects, and their management of commonly used groups of drugs.
- 3-Define the limitations to the use of drugs such as contraindications and drug interactions.
- 4-Explain clinically relevant age, sex and genetic related variations that affect response to drugs.
- 5-Describe the pathophysiology of diseases and explain the rational basis for the use of drugs.
- 6-Explain the impact of preventive pharmacology in promoting health and prevent illness.
- 7- Describe the use of life saving drugs.
- 8-Define the principles and applications of gene therapy.
- 9-Recognize the rational and general guidelines of the use of drugs in the proper dose in special population such as pediatrics, geriatrics, pregnancy and lactation and in cases of liver and kidney impairment

#### **(Skills):**

- 1- Work out drug dosage based on patient's criteria and health condition.
- 2- Write safe prescriptions for selected common and important diseases.
- 3- Practice enteral, parenteral, inhalation; including the use of nebulizers; and topical methods for drug administration.

4- Design rational therapeutic strategies for both acute and chronic conditions that take into account the various variables that influence these strategies.

**(Attitudes):**

1- Respect the patient right to know and share in decision making as regards the choice of drugs.

2- Understand and respect the different cultural beliefs and values that affect the use of certain drug groups.

3- Respect ethics related to drug prescription and use especially to drugs liable to produce abuse.

**Teaching methods:**

1.Lectures.

2.Case scenarios (small group teaching).

3.Seminars presented by students (Students based learning SBL).

**Assessment methods:**

1-Written examination

2- Oral examination

3- Practical examination

4- Assignment

**Course contents:**

Week	Sunday	Monday	Tuesday	Wednesday	Thursday
1	10-12 am Lab: SBL (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Introduction to Antibiotics Dr Laith	10-12 am Lab: SBL (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: GIT 1 Dr Sinaa 9-10 am Theory: GIT 2 Dr Sinaa 10-12 am Lab: SBL (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	10-12 am Lab: SBL (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: SBL (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)
2	10-12 am Lab: SBL (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Penicillins Dr Laith	10-12 am Lab: SBL (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: GIT 3 Dr Sinaa 9-10 am Theory: GIT 4 Dr Sinaa 10-12 am Lab: SBL (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	10-12 am Lab: SBL (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: SBL (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)
3	10-12 am Lab: SBL (GC1: Dr Sinaa	10-12 am Lab: SBL (GD1: Dr Sinaa	8-9 am Theory: Respiratory 1 Dr Asmaa	10-12 am Lab: SBL (GA1: Dr Sinaa	10-12 am Lab: SBL (GB1: Dr Sinaa GB2: Dr Asmaa

	GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Cephalosporins and beta lactam Dr Laith	GD2: Dr Asmaa GD3: Dr Laith)	9-10 am Theory: Respiratory 2 Dr Asmaa 10-12 am Lab: SBL (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	GA2: Dr Asmaa GA3: Dr Laith)	GB3: Dr Laith)
4	10-12 am Lab: SBL (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Macrolids Dr Laith	10-12 am Lab: SBL (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: Respiratory 3 Dr Asmaa 9-10 am Theory: Respiratory 4 Dr Asmaa 10-12 am Lab: SBL (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	10-12 am Lab: SBL (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: SBL (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)
5	10-12 am Lab: SBL (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Tetracyclines Dr Laith	10-12 am Lab: SBL (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: DM 1 Dr Sinaa 9-10 am Theory: DM 2 Dr Asmaa 10-12 am Lab: SBL (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	10-12 am Lab: SBL (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: SBL (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)
6	10-12 am Lab: SBL (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Aminoglycosides Dr Laith	10-12 am Lab: SBL (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: Corticosteroids 1 Dr Asmaa 9-10 am Theory: Corticosteroids 2 Dr Asmaa 10-12 am Lab: SBL (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	10-12 am Lab: SBL (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: SBL (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)
7	10-12 am Lab: SBL (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Quinolones Dr Laith	10-12 am Lab: SBL (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: Thyroids 1 Dr Sinaa 9-10 am Theory: Thyroids 2 Dr Sinaa 10-12 am Lab: SBL (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	10-12 am Lab: SBL (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: SBL (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)
8	10-12 am Lab: SBL (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Antifolates Dr Laith	10-12 am Lab: SBL (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: Antivirals Dr Asmaa 9-10 am Theory: Antiparasitics Dr Asmaa 10-12 am Lab: SBL (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	10-12 am Lab: SBL (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: SBL (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)
9	10-12 am Lab: SBL	10-12 am Lab: SBL	8-9 am Theory:	10-12 am Lab: SBL	10-12 am Lab: SBL (GB1: Dr Sinaa

	(GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Chemotherapy 1 Dr Laith	(GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	Antifungals Dr Asmaa 9-10 am Theory: Antimalarials Dr Asmaa 10-12 am Lab: SBL (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	(GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	GB2: Dr Asmaa GB3: Dr Laith)
10	10-12 am Lab: SBL (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Revision Chemotherapy 2 Dr Laith	10-12 am Lab: SBL (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: Anti TB 1 Dr Asmaa 9-10 am Theory: Anti TB 2 Dr Asmaa 10-12 am Lab: SBL (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	10-12 am Lab: SBL (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: SBL (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)
11	10-12 am Lab: SBL (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Sex hormones 1 Dr Laith	10-12 am Lab: SBL (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: Blood and blood forming drugs Dr Sinaa 9-10 am Theory: Vitamins and tonics Dr Sinaa 10-12 am Lab: SBL (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	10-12 am Lab: SBL (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: SBL (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)
12	10-12 am Lab: SBL (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Sex hormones 2 Dr Laith	10-12 am Lab: SBL (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: Pharmacogenetics 1 Dr Asmaa 9-10 am Theory: Pharmacogenetics 2 Dr Asmaa 10-12 am Lab: SBL (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	10-12 am Lab: SBL (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: SBL (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)
13	10-12 am Lab: SBL (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Disinfectants Dr Laith	10-12 am Lab: SBL (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: Immuno- pharmacology 1 Dr Sinaa 9-10 am Theory: Immuno- pharmacology 2 Dr Sinaa 10-12 am Lab: SBL (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	10-12 am Lab: SBL (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: SBL (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)
14	10-12 am Lab: SBL	10-12 am Lab: SBL	8-9 am Theory:	10-12 am Lab: SBL	10-12 am Lab: SBL (GB1: Dr Sinaa

	(GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Pituitary +Ca metabolism Dr Laith	(GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	Toxicology 1 Dr Sinaa 9-10 am Theory: Toxicology 2 Dr Sinaa 10-12 am Lab: SBL (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	(GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	GB2: Dr Asmaa GB3: Dr Laith)
15	10-12 am Lab: SBL (GC1: Dr Sinaa GC2: Dr Asmaa GC3: Dr Laith) 12-1 pm Theory: Revision Dr Laith	10-12 am Lab: SBL (GD1: Dr Sinaa GD2: Dr Asmaa GD3: Dr Laith)	8-9 am Theory: Revision Dr Sinaa 9-10 am Theory: Revision Dr Asmaa 10-12 am Lab: SBL (GE1: Dr Sinaa GE2: Dr Asmaa GE3: Dr Laith)	10-12 am Lab: SBL (GA1: Dr Sinaa GA2: Dr Asmaa GA3: Dr Laith)	10-12 am Lab: SBL (GB1: Dr Sinaa GB2: Dr Asmaa GB3: Dr Laith)

### References:

- 1- "Lippincott's Illustrated Reviews – Pharmacology", editors Harvey R.A. and Champ R.C.
- 2-"Pharmacology", editors Rang P.A.; et al.
- 3-"Clinical Pharmacology", editors Laurance D.R. and Bennett P.N.
- 4-"Basic & Clinical Pharmacology", editor Katzung G.K.



### **3- Microbiology II**

#### **Aims of the course:**

- 1.To educate students about the basic features of general bacteriology, virology and mycology and to provide students with an understanding of the immune system, its protective functions and its role in the patho-physiology of infectious and non-infectious diseases
- 2.To familiarize students with the common infections and diseases of medical importance, their microbial causes, as well as laboratory diagnosis, treatment, prevention and control of such diseases.
- 3.To enable the students to practice the principles of sterilization and infection control.

#### **Learning objectives:**

##### **(Knowledge):**

- 1-Illustrate general bacterial morphology, physiology and genetics.
- 2-Understand the host parasite relationship and microbial pathogenesis.
- 3-Explain the physiology of the immune system, its beneficial role, as well as its detrimental role in hypersensitivity, autoimmunity and transplant rejection.
- 4 -Describe the morphology, culture, antigenic structure and virulence factors of microorganisms of medical importance.
- 5-Recognize the most important infectious clinical conditions and outline the diagnosis, treatment, prevention and control of the most likely organisms causing such diseases.
- 6-Describe the most important methods of decontamination and principles of infection control Understand the impact of molecular technology in microbiology and immunology.

##### **(Skills):**

- 1.Identify medically important bacteria based on microscopic examination of stained preparations.
- 2.Perform a Gram stain and a Ziehl-Neelsen stain and identify, according to morphology and characteristics, stained preparations.
- 3.Identify culture media and biochemical tests commonly used for bacterial identification and distinguish positive and negative results.
- 4.Perform hand wash and control of steam sterilization.

**(Attitudes):**

- 1- Interpret results of microbiological, serological and molecular tests.
- 2- Formulate a systematic approach for laboratory diagnosis of common infectious clinical conditions and select the most appropriate and cost-effective tool leading to the identification of the causative organism.
- 3- Evaluate according to evidence the causal relationship of microbes and diseases
- 4- Categorize a microorganism as a bacterium, virus or fungus according to standard taxonomy
- 5- Report and appraise a concise scientific activity according to standard scientific thinking and integrity
- 6- Appreciate the danger of handling and use of infectious agents on community and environment as a part of their ethical heritage

**Teaching methods:**

1. Lecture
2. Practical class
3. Small group discussion with case study and problem solving
4. Quiz

**Assessment methods:**

Written Examination: Assessment of knowledge and understanding and intellectual skills.

Practical Examination:

- A. Assessment of practical skills.
- B. Intellectual skills: a. Station b. Objective Structured Test (OST) c. Photos d. Report

**Course contents:**

<b>Bacteriology</b>	<b>Pyogenic cocci</b> Staphylococcal Streptococcal Neisseria		<b>4</b>	<b>Pyogenic cocci</b>	<b>4</b>
	Corynae bacterium		<b>2</b>		<b>2</b>
	<b>Enteric bact. Part I</b> <b>(E.coli,Klb.,prot.,pseud o.)</b>		<b>2</b>	Enteric bact. Part I <b>Practical</b>	<b>2</b>
	<b>Enterobacteriace Part II</b> <b>Salmonella , shigella, brucella, Cholera</b>		<b>2</b>	<b>Enterobacteriace Part II Practical</b>	<b>2</b>
	<b>Mycobacterium</b>		<b>2</b>	<b>Cholera workshop</b>	<b>2</b>
	<b>Genus bacillus</b>		<b>2</b>		
	<b>Chlamydia, Mycoplasma</b> <b>Spirocheats</b>		<b>3</b>	<b>Hospital acquired infections(Nosocomial Infections)</b>  <b>Workshop</b>	<b>2</b>
<b>Immunology</b>	<b>hypersensitivity actions I</b> <b>hypersensitivity reactions II</b> <b>hypersensitivity reactions III</b> <b>hypersensitivity reactions IV</b>	<b>Allergy</b>	<b>2</b>		
	<b>Immune tolerance &amp; autoimmunity</b>		<b>2</b>	<b>SGT</b>	<b>2</b>

	<b>Immune deficiency states: congenital and acquired</b>		<b>1</b>			
	<b>Cytokins</b>		<b>1</b>			
	<b>HLA</b>		<b>1</b>			
	<b>Tumor immunity</b>	<b>Tumor marker</b>	<b>2</b>			
<b>Virology</b>	<b>Influenza viruses</b>	<b>Antiviral drugs</b>	<b>2</b>			
	<b>paramyxoviruses</b>		<b>1</b>	<b>SGT</b> <b>URTI/LRTI</b>	<b>2</b>	
	<b>Enteric viruses &amp; Rhinovirus group</b>		<b>1</b>			
	<b>Herpes viruses</b>		<b>2</b>	<b>SGT</b> <b>Viral gastroenteritis</b>	<b>2</b>	
	<b>Hepatitis viruses A &amp; E</b>		<b>1</b>			
	<b>Hepatitis viruses B, C &amp; D</b>		<b>1</b>			
	<b>Retro virus ; (AIDS)</b>		<b>1</b>	<b>SGT</b> <b>HIV infection</b>	<b>2</b>	
	<b>Rabies &amp; other neurotropic viruses</b>		<b>1</b>			
	<b>HPV ,Pox &amp; Parvo virus</b>		<b>1</b>			
		<b>Covid 19 infection</b>		<b>2</b>		
	<b>Mycology</b>	<b>Practical Examination</b>				<b>4</b>
		<b>Actinomyces Nocardia</b>	<b>Antifungal drugs</b>	<b>2</b>		
<b>Candidiasis &amp; Cryptococcosis</b>		<b>1</b>	<b>Laboratory diagnosis of Candida</b>	<b>2</b>		
<b>Dermatophytes</b>		<b>1</b>				
<b>Miscellaneous fungi : Aspergillosis ,Mucor ,Rhizopus</b>		<b>1</b>				
<b>systemic mycosis; Histoplasmosis</b>		<b>1</b>				

### References:

Jawetz, Melnick & Adelberg's Medical Microbiology, Brooks, Butel and Morse. Cal Books/McGraw-Hill Publishers.

# Community Medicine II

## **Aims of the course:**

- 1.To actively contribute in qualifying doctors who are able to serve the interests of population in promoting, protecting, and restoring health and rehabilitating handicapped.
- 2.To strengthen research capacity both at the level of the Department work territory, the level of College of Medicine, and at the level of the health care system.
- 3.To carry out and supervise research work that assists in supporting the first two objectives and to contribute to the solution of important public health problems
- 4.To provide advisory work to relevant local, national and international NGOs within the context of community medicine domains and in accordance with the Department objectives and national interests
- 5.To enhance, support and evaluate the adoption of family medicine model in Iraq
- 6.To enhance the provision of high quality medical teaching and high quality health care with emphasis on adequacy, effectiveness, efficiency and scientific and technical excellence as important components of quality

## **Learning objectives:**

### **(Knowledge):**

- 5- To acquire basic knowledge on main components of community medicine interests
- 6- To develop abilities and competencies in the epidemiology and control of major health problems at population level
- 7- To develop basic principles of scientific research
- 8- To develop understanding of nutrition and diet

### **(Skills):**

- 4- To develop relevant competencies and skills in epidemiology so as to be able to measure and evaluate health and health care services
- 5- The basic skills of conducting scientific research
- 6- The ability to understand and perform basic statistical analyses

### **(Attitudes):**

- 1- To contribute to the requirements of graduation of competent doctors to serve national, regional as well as local goals
- 2- To be prepared for postgraduate training in the future
- 3- To be prepared to pursue self-learning towards continuing professional development.

**Teaching methods:**

Theoretical lectures

Small group teachings

Students centered activities like statistical analysis tutorials

Conducting minor research projects

**Assessment methods:**

Written exams

Students activity during tutorials and SBL

Seminars and reports

Statistical problems

**Course contents:**

Public health nutrition

Definition of relevant terms

Nutrient metabolism

Nutritional requirement

Nutrition of specific groups of population

Nutrition and infections

Nutritional surveys

assessment of the nutritional status of the population

Nutritional diseases

Diet therapy and nutritional rehabilitation

Vital statistics

## **5- Communication Skills and Psychology**

### **Aims of the course:**

- 1- Introduce students to the importance of communication skills
- 2-To improve the students ability of communicating with patients and with colleagues
- 3- To make students more skillful in history taking and clinical examination

### **Learning objectives:**

#### **(Knowledge):**

- 1- The basic rules of proper doctor patient relationship and patient interviewing
- 2- How to deal with patients in specific situations
- 3-The basic rules of Psychology and Critical thinking
- 4-Dealing with some health issues like patient confidentiality and personality

#### **(Skills):**

- 1-Using Critical thinking in dealing with clinical cases
- 2-How to deal with patients on the basis of human Psychology
- 3-How to perform Risk Assessment

#### **(Attitudes):**

- 1-How to respect patients personal differences, backgrounds and personalities
- 2- How to communicate well with patients and colleagues to make the health care delivery more optimum
- 3-Avoid having problems with patients when dealing with sensitive matters like keeping confidentiality and risk assessment

#### **Teaching methods:**

Theoretical lectures

Educational videos

#### **Assessment methods:**

Written exams

Student activity

**Course contents:**

**1- Important Psychological theories**

**2- Human development**

**3-Thinking and Critical Appraisal**

**4- Perception and Emotion**

**5-Memory and Learning**

**6- Personality and Defense mechanisms**

**7- Social Psychology**

**8- The Somatizing patient**

**9- Smoking**

**10-AUDIT**



## **6- Surgery II**

### **Aims of the course:**

- 1- Teach the student the basics of the general surgery.
- 2- The student can know the causes and pathophysiology and headlines of management of the commonest surgical diseases.
- 3- know the basics of surgical work and its requirement.

### **Learning objectives:**

#### **(Knowledge):**

- 1- Introduce students to the rules of safe surgical practice like sterile precautions
- 2- Study important subjects like fluid and electrolyte disturbances and oncology
- 3- The diagnosis, pathophysiology, and management of different vascular disorders
- 4- Study the basic legal and ethical laws of surgery and the importance of patient safety

#### **(Skills):**

- 3- Basic rules of aseptic techniques
- 4- How to keep patient's safety

#### **(Attitudes):**

- 4- The basic ethical and legal issues of surgery
- 5- The basic rules of patient safety
- 6- How to deal with patients in respectful and professional way

### **Teaching methods:**

- 1- lectures
- 2- Upload lecture on the college website
- 3- Educational movies
- 4- Use data show
- 5- Small group discussion with case study and problem based learning.

### **Assessment methods:**

- 1- Written Examination
- 2- Small group discussion
- 3- reports
- 4- activities

## Course contents:

<b>Item</b>	Lecture 1
<b>Subject</b>	Sterile precaution
<b>Learning objectives</b>	<ul style="list-style-type: none"> <li>• Describe the principles and practice of asepsis</li> <li>• Understand hand hygiene</li> <li>• Know what is dirty and clean surgical instruments.</li> <li>• Know what is sterile</li> <li>•</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• definitions</li> <li>• Decontamination</li> <li>• Manual cleaning</li> <li>• Disinfection</li> <li>• Sterilization</li> <li>• Theater protocol</li> <li>• Oreoperative preparations</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr . Husain al-Baaj
<b>Item</b>	Lecture 2
<b>Subject</b>	Fluid and electrolyte
<b>Learning objectives</b>	<ul style="list-style-type: none"> <li>• Describe variables that influence fluid and electrolyte balance</li> <li>• Identify factors related to fluid/electrolyte balance</li> <li>• Assess a patient’s nutritional and fluid/electrolyte status</li> <li>• Outline specific nursing interventions to promote fluid and electrolyte balance</li> <li>• Base decisions on the signs and symptoms of fluid volume excess and fluid volume deficit</li> <li>• Base decisions on the interpretation of diagnostic tests and lab values indicative of a disturbance in fluid and electrolyte balance</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• normal physiology</li> <li>• normal water balance</li> <li>• abnormal water balance</li> <li>• fluid therapy</li> <li>• types of fluid</li> <li>• fluid calculation</li> <li>• monitoring fluid therapy</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Ali J Al-Shammari
<b>Item</b>	Lecture 3
<b>Subject</b>	Continue of lecture Fluid and electrolyte
<b>Learning objectives</b>	<ul style="list-style-type: none"> <li>• Describe variables that influence fluid and electrolyte balance</li> <li>• Identify factors related to fluid/electrolyte balance</li> <li>• Assess a patient’s nutritional and fluid/electrolyte status</li> <li>• Outline specific nursing interventions to promote fluid and electrolyte balance</li> <li>• Base decisions on the signs and symptoms of fluid volume excess and fluid volume deficit</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• normal electrolyte balance</li> <li>• sodium balance</li> </ul>

	<ul style="list-style-type: none"> <li>• potassium balance</li> <li>• calcium balance</li> <li>• magnesium balance</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Ali J Al-Shammari
<b>Item</b>	Lecture 4
<b>Subject</b>	Oncology principles
<b>Learning objectives</b>	<p>To understand:</p> <ul style="list-style-type: none"> <li>• The biological nature of cancer</li> <li>• The principles of cancer prevention and early detection</li> <li>• The principles of cancer etiology and the major known causative factors</li> <li>• The likely shape of future developments in cancer management</li> <li>• The multidisciplinary management</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• Definition of neoplasm</li> <li>• Markers of neoplasm</li> <li>• Genomic stability</li> <li>• Malignant transformation</li> <li>• The growth of tumor</li> <li>• Principle of cancer surgery</li> <li>• Investigation and staging</li> <li>• Management</li> <li>• Prevention</li> <li>•</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Husain Al-Baaj
<b>Item</b>	Lecture 5
<b>Subject</b>	Arterial disorders
<b>Learning objectives</b>	<p>To understand:</p> <ul style="list-style-type: none"> <li>• The nature and associated features of occlusive arterial disease</li> <li>• The investigation and treatment options for occlusive arterial disease</li> <li>• The principles of management of the severely ischaemic limb</li> <li>• The nature and presentation of aneurysmal disease, particularly of the abdominal aorta</li> <li>• The investigation and treatment options for aneurysmal disease</li> <li>• The arteritides and vasospastic disorders</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• arterial stenosis and occlusion</li> <li>• gangrene</li> <li>• acute arterial occlusion</li> <li>• compartment syndrome</li> <li>• aneurysm</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Adel shaker Al-Tamimi
<b>Item</b>	Lecture 6

<b>Subject</b>	Venous disorders
<b>Learning objectives</b>	To understand: <ul style="list-style-type: none"> <li>•Venous anatomy and the physiology of venous return</li> <li>•The pathophysiology of venous disease</li> <li>•The clinical significance and management of varicose veins</li> <li>•Deep venous thrombosis</li> <li>•Venous insufficiency and venous ulceration</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• venous pathophysiology</li> <li>• varicose veins</li> <li>• venous thrombosis</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Adel shaker Al-Tamimi
<b>Item</b>	Lecture 7
<b>Subject</b>	Lymphatic disorders
<b>Learning objectives</b>	To understand: <ul style="list-style-type: none"> <li>•The main functions of the lymphatic system</li> <li>•The development of the lymphatic system</li> <li>•The various causes of limb swelling</li> <li>•The aetiology, clinical features, investigations and treatment of lymphedema</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• lymphatic pathophysiology</li> <li>• acute inflammation of the lymphatics</li> <li>• lymphedema</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Adel shaker Al-Tamimi
<b>Item</b>	Lecture 8
<b>Subject</b>	Surgical ethics and law
<b>Learning objectives</b>	To understand: <ul style="list-style-type: none"> <li>• The importance of autonomy in good surgical practice</li> <li>• The moral and legal boundaries and practical difficulties of informed consent</li> <li>• Good practice in making decisions about the withdrawal of life-sustaining treatment</li> <li>• The importance and boundaries of confidentiality in surgical practice</li> <li>• The importance of appropriate regulation in surgical research</li> <li>• The importance of rigorous training and maintenance of good practice standards</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• respect for autonomy</li> <li>• informed consent</li> <li>• practical application</li> <li>• matters of life and death</li> <li>• confidentiality</li> </ul>
<b>Time</b>	1 hour

<b>Lecturer</b>	Dr . Rami sabah
<b>Item</b>	Lecture 9
<b>Subject</b>	Patient safety
<b>Learning objectives</b>	<p>To learn:</p> <ul style="list-style-type: none"> <li>• The importance of patient safety and the scale of the problem</li> <li>• Medical errors, their range and definition</li> <li>• Models for understanding how adverse events and near misses occur</li> <li>• Patient safety strategies and solutions</li> <li>• Applying the science of patient safety to practice</li> <li>• Patient safety principles that are specific to the surgeon</li> <li>• Dealing with the ‘second victim’ of a medical error</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• the prevalence of adverse healthcare events</li> <li>• common causes of adverse healthcare events</li> <li>• understanding patient safety incidents</li> <li>• strategies for patient safety</li> <li>• patient safety at the coalface</li> <li>• patient safety and the surgeon</li> <li>• caring for the second victim</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr . Rami sabah

## **7- Medicine II**

### **Aims of the course:**

### **Aims of the course:**

- 1- Introduce the students to the basic clinical aspects of Enteric Medicine
- 2-Start the clinical training and start contact with patients in hospital wards

### **Learning objectives:**

#### **(Knowledge):**

- 1-Basic knowledge of infectious diseases
- 2-How to diagnose and manage different infections

#### **(Skill):**

- 1-Basic rules of history taking
- 2-How to arrange the information obtained from patients and write a proper case sheet
- 3- how to perform General clinical examination and accurate measurement of vital signs

#### **(Attitude):**

- 1-How to make rapport with the patient
- 2-How to deal with patients in humane and professional manner
- 3-The proper communication skills used in history taking
- 4-How to respect patient's autonomy
- 5-The legal rules of dealing with patients and the basic principles of protecting patient safety and Confidentiality

### **Teaching methods:**

- Theoretical lectures
- Clinical sessions
- Small group discussions
- Clinical rounds in medical and emergency wards
- Case discussions

### **Assessment methods:**

- Written exams

Student activity in clinical sessions

Oral exams

Case sheets and seminars

**Course contents:**

**Theory lectures**

1- L1 &2: Introduction(Approach to infectious diseases)

2- L3: Infection in immune compromised patients.

3-L4: Nosocomial infection.

4-L5,6 & 7: Parasitic diseases: (Amoebiasis, Giardiasis, Toxoplasmosis,, Leishmaniasis Malaria & Cryptosporidiosis).

5-L8,9 &10: Helminthic infections:

(Enterobiasis, Ascariasis, Ancylostomiasis, Trichuriasis, Strongyloidiasis), (schistosomiasis) ,( Taeniasis; Saginata & Solium) & (hydatid disease).

6-L11: Chlamydial infection.

7-L12: Systemic fungal infection.

8- L13: Covid 19 infection

**Clinical sessions:**

1-Physical examination (General look)

2-How to demonstrate pallor, jaundice and cyanosis.

3-Signs of weight loss and muscle wasting

4-How to demonstrate different types of tremor

5-Skin lesions, scars and normal hair distribution.

6-How to demonstrate presence of edema

7-Examination of neck mass

8-Vital signs (how to measure body temperature)

9-Vital signs (respiratory rate)

10-Vital signs (pulse rate)

11-Vital signs (blood pressure)

12-How to assess peripheral pulses

## **8- Parasitology II**

### **Aims of the course:**

1. Define general characteristic of protozoa.
2. List different types of protozoal infection, lab methods of diagnosis, mode of infection and pathogenicity and pathology of protozoal disease.
3. Treatment and prevention.
4. Define methods of sterilization, disinfection and methods of hospital infection control

### **Learning objectives:**

#### **(Knowledge):**

1. Identify the general properties of protozoa.
2. Describe the role of different protozoological pathogenesis in causing diseases.
3. Identify the causing factors of different protozoal diseases.
4. Identify the most important infectious diseases, methods of diagnosis, treatment and prevention of it.
5. Describe the most important methods of sterilization, disinfection and hospital infection control.
6. Identify different types of anti-protozoal treatment and causes of resistance to treatment.
7. Interpret different methods of diagnosis of zoonotic protozoa and its basis.

#### **(Skills):**

1. Demonstrate how to do, understand and reading results of protozoological tests.
2. Operate simple clear work sheet of how to diagnose the most common infectious diseases and how to choose the best, fastest and cheapest method to identify the causative protozoa.
3. Identify the relation between different protozoa and some diseases.
4. Distinguish of different protozoa and detecting its type.
5. Identify the danger of dealing with protozoa and contaminated samples on surrounding microenvironment.

#### **(Attitudes):**

- 1- Interpret the most important signs and symptoms of important helminthes infections of endemic character (using case study).



2- Choose the best-suited laboratory investigations for each helminthes and interpret the clinical and laboratory findings to reach a proper diagnosis.

### Teaching methods:

1- Lectures

2-practical classes with data show

3-group discussion with case study and problem solving.

4-Seminars

### Assessment methods:

Written examination: Assessment of knowledge and understanding. Also intellectual skills

Practical examination: Assessment of knowledge and understanding and professional skills

### Course contents:

مفردات المادة الدراسية	المرحلة الدراسية	اسم المادة الدراسية	الاسبوع الدراسي
Interdiction of helminthology	المرحلة الثالثة	الطفيليات الطبية	1
Phylum : platyhelminthes ( Introduction; General characteristics)	المرحلة الثالثة	الطفيليات الطبية	2
Class 1 : Trematoda : Liver Flukes : (Human liver Flukes : <i>Chlonorchis sinensis</i> . & Sheep liver Flukes: <i>Fasciola hepatica</i> ) Technique of collection preparation and examination of samples ( stool samples)	المرحلة الثالثة	الطفيليات الطبية	3
Lung flukes : <i>Pragonimus westerman</i>	المرحلة الثالثة	الطفيليات الطبية	4
Intestinal Flukes : ( <i>Heterophyes heterophyes</i> & <i>Fasciola buski</i>	المرحلة الثالثة	الطفيليات الطبية	5
blood flukes:( <i>Schistosoma Spp.</i> ) Technique of collection preparation and examination of samples ( urine samples)	المرحلة الثالثة	الطفيليات الطبية	6
Class : 2 : Cestoda: (Tapeworm) Introduction ..... Order : Pseudophyllidae...(	المرحلة الثالثة	الطفيليات الطبية	7

<i>Diphyllobothrium latum</i> ) Technique of collection preparation and examination of samples ( stool samples) <i>Echinococcus granulosus</i>			
( <i>Taenia solium</i> ) & ( <i>Taenia saginata</i> ) Technique of collection preparation and examination of samples (stool samples)	المرحلة الثالثة	الطفيليات الطبية	8
<i>Ascaris lumbricoides</i> & <i>Toxocara canis</i> <i>T. cat</i> <i>Trichuris trichiura</i> & <i>Trichenella spiralis</i>	المرحلة الثالثة	الطفيليات الطبية	9
امتحان الفصل الدراسي الثاني	المرحلة الثالثة	الطفيليات الطبية	10
<i>Enterobius vermicularis</i> & <i>Strongyloides stercoralis</i> Technique of collection preparation and examination of samples (stool samples)	المرحلة الثالثة	الطفيليات الطبية	11
<i>Hook worms</i>	المرحلة الثالثة	الطفيليات الطبية	12
<b>Tissue nematode</b> <i>wucheraria bancrofti</i> as agroup Technique of collection preparation and examination of samples (urine samples)	المرحلة الثالثة	الطفيليات الطبية	13
<i>Dracunculus medinensis</i> Technique of collection preparation and examination of samples (tissue samples)	المرحلة الثالثة	الطفيليات الطبية	14
<i>Onchocerca volvulus</i> & <i>Loa loa</i> Technique of collection preparation and examination of samples (tissue samples)	المرحلة الثالثة	الطفيليات الطبية	15

Daily schedule of second course weeks (Third grade)

1:30-2:30	12:30-1:30	11:30-12:30	10:30-11:30	9:30-10:30	اليوم
Community Medicine II	Communication skills (II)	Pathology II	Pharmacology II	Microbiology II	الأحد
Surgery II	Pharmacology II	Pharmacology II	Microbiology II	Medicine II	الاثنين
A1- parasitology A2- microbiology B1- pharmacology B2- pathology Lab +PBL	A1- microbiology A2- parasitology B1- pathology B2- pharmacology Lab +PBL	A1- pathology A2- pharmacology B1- parasitology B2- microbiology Lab +PBL	A1- pharmacology A2- pathology B1 microbiology B2 –parasitology Lab +PBL	Practical medicine A+B	الثلاثاء
C1- parasitology C2- microbiology D1- pharmacology D2- pathology Lab +PBL	C1- micro C2- parasitology D1- pathology D2- pharmacology Lab +PBL	C1- pathology C2- pharmacology D1 parasitology D2- microbiology Lab +PBL	C1- pharmacology C2 -pathology D1- microbiology D2- parasitology Lab +PBL	Practical medicine C+D	الأربعاء
Pathology II		Community Medicine II	Parasitology II	Pathology II	الخميس

## Fourth year:

## First course

عدد الوحدات	عدد الساعات		المادة الدراسية	ت
	العملي	النظري		
4	2	3	Medicine I (باطنية)	.1
3	2	2	Gynecology I (نسائية)	.2
4	2	3	Surgery I (جراحة)	.3
3	2	2	Pediatrics I (اطفال)	.4
5	2	4	Community Medicine I (طب مجتمع)	.5
3	2	2	Forensic medicine I (الطب العدلي)	.6
1	/	1	Medical ethics I (اخلاق طبية)	.7
23			المجموع	

# **1- Medicine I**

## **Aims of the course:**

1-To introduce medical students to the fields of General Medical sciences and to make them familiar with Medical sciences and the medical pharmacology.

2-Make the students able to diagnose different Medical disorders when presented to them in the future.

3-Teach the students how to manage patients with Medical health problems in different health settings

## **Learning objectives:**

### **(Knowledge):**

1- How to diagnose and manage patients with Cardiovascular, Respiratory and Endocrine disorders

2- How to recognize patients with medical emergencies and the ABCs of management of those cases

3- The basic rules of drug prescription

### **(Skills):**

1- The mastering of history taking with handling of different patients in medical wards, CCU and emergency ward

2- The basic rules of systemic examination of the chest and abdomen

3- How to arrange information to write the proper case sheet

4- Case presentation and clinical discussion

### **(Attitudes):**

1-Students should have an idea about the burden of medical health issues on society

2-Be able to sympathize with patients in order to offer the optimum help for them

3- How to respect patients and behave in a professional and a humane way

## **Teaching methods:**

i. Formal lectures.

ii. Clinical sessions.

iii. Problem Based Learning

## **Assessment methods:**

-Theoretical exams which include essay questions in the form of clinical cases in addition to single choice questions.

-Clinical exam in the form of long case and oral exam.

- Student's activity recorded in Log Book

### Course contents:

#### Theory

No. of lecture	system	Name of lecture	Learning objectives
1	CVS	ECG 1	1- normal ECG 2-non cardiac causes for abnormal ECG 3- Ischemic Heart Disease IHD
2	CVS	ECG2	1- ECG findings of Pericarditis 2- findings of ventricular hypertrophy 3- findings in Heart Block
3	CVS	ECG3	Recognition of different types of Arrhythmias
4	CVS	Rheumatic fever and Atherosclerosis	1- definition, diagnosis and clinical features of Rheumatic fever 2- definition, pathophysiology, diagnosis and consequences of Atherosclerosis
5	CVS	Ischemic Heart Disease	1- coronary circulation 2- coronary endothelial function 3- common causes of chest pain 4- clinical features of Chronic Stable Angina
6	CVS	Chronic Stable Angina (CSA) and Acute Coronary Syndrome (ACS)	1- management of CSA 2- drugs used and invasive treatment methods 3- prognosis of CSA 4- prevention 5- diagnosis and clinical features of Acute MI
7	CVS	Management of ACS	1- Immediate treatment (drugs and invasive methods) 2- complications 3- later management 4- prevention 5- prognosis
8	CVS	Silent Ischemia	1-silent ischemia 2- angina with normal coronary arteries 3- cardiac risk of non-cardiac surgery 4- peripheral arterial disease
9	CVS	Vascular disorders	1- Raynaud's phenomenon 2- Acute limb ischemia 3- Renal vascular disease 4- Aortic disease
10	CVS	Refractory Angina	1-Treatment of chronic IHD 2- alternative treatment of refractory angina

11	CVS	Hypertension	1- definition and diagnosis 2- causes 3- investigations 4- treatment (pharma logical and non-pharma logical )
12	CVS	Acute Myocarditis and Cardiomyopathy	1- definition 2- types 3- diagnosis 4- risk factors 5- treatment
13-	CVS	Pulmonary Edema (PE)	1-definition 2- etiology 3- clinical features and diagnosis
14	CVS	Heart Failure (HF)	1-management of PE 2- Types of HF 3- management of Chronic HF
15	CVS	Cardiac signs	1-Inspection 2-Palpation 3- Auscultation
16	CVS	Diseases of the Pericardium	1-Acute Pericarditis 2- Pericardial Tamponade 3-Tuberculous Pericarditis 4- Chronic Constrictive Pericarditis
17	CVS	Approaching emergencies in Cardiology 1	1-Cardiac Tamponade 2-A STEMI 3- VT/V Flutter/VF/ Torsade de points 4- SVT/AF/A tachycardia/A Flutter
18	CVS	Approaching emergencies in Cardiology 2	1-Complete Heart Block 2- Acute Endocarditis 3- Pulmonary Embolism 4- Limb Ischemia 5- DVT
19	CVS	Diseases of Heart Valves	1-Mitral Stenosis 2-Mitral Regurgitation 3- Aortic Stenosis 4-Aortic Regurgitaion
20	CVS	Congenital Heart Disease	1-Coarctation of Aorta 2- ASD 3-VSD 4- Tetralogy of Fallot
21	CVS	Infective Endocarditis	1-Definition 2- diagnosis 3- causes 4- treatment
22	CVS	Angiography- Arteriography	1-Types of stents and balloons 2- types of Arterial accesses 3- PCI 4- indications of Catheterization 5- complications of Cath
23	Respiratory	Introduction to respiratory system	Anatomy and Physiology of Respiratory system
24	Respiratory	Presentation of Resp. diseases	1-Dyspnea 2- Cough 3- Hemoptysis 4- Chest pain
25	Respiratory	Pulmonary Function Test	1-Obstruction 2-Restriction 3- Interpretation of results
26	Respiratory	COPD	1-Types (Emphysema and Chronic Bronchitis)2- Epidemiology 3-risk factors 4- clinical features 5- management (drugs and O2 therapy)
27	Respiratory	Asthma	1-Definition 2- Epidemiology 3- Etiology 4- Pathogenesis 5- Diagnosis 6- Treatment
28	Respiratory	Bronchiectasis	1-Definition 2- causes 3- diagnosis 4- treatment

29	Respiratory	Interstitial Lung Disease	1-Definition 2- causes 3- diagnosis 4- treatment
30	Respiratory	Pulmonary Embolism	1-Definition 2- causes 3- diagnosis 4- treatment
31	Respiratory	Pulmonary Neoplasms	1-Types 2- clinical features 3- Assessment and staging 4- treatment
32	Respiratory	Pleural Effusion	1-Definition 2- causes 3- diagnosis 4- treatment
33	Respiratory	Pneumonia	1-Definition 2- causes 3- diagnosis 4- treatment
34	Endocrine	Diabetes Mellitus (DM) 1	1-Definition 2- types 3- risk factors 4- pathogenesis
35	Endocrine	DM2	1-investigations 2- clinical features 3- complications 4- prognosis
36	Endocrine	Diabetic Keto-Acidosis (DKA)	1- definition 2- pathogenesis 3- clinical features 4- management
37	Endocrine	Hyperglycemic Hyperosmolar state	1- definition 2- pathogenesis 3- clinical features 4- management
38	Endocrine	Hypoglycemia	1- definition 2- pathogenesis 3- clinical features 4- management
39	Endocrine	DM in pregnancy	1- definition 2- pathogenesis 3- clinical features 4- management
40	Endocrine	Diabetic Nephropathy	1- definition 2- pathogenesis 3- clinical features 4- management
41	Endocrine	Drugs used in Hyperglycemia	1- Metformin 2- Sulphonylureas 3- Incretin based therapies 4- Insulin therapy
42	Endocrine	Thyroid gland	1-Anatomy 2-Embryology 3-Physiology 4- Thyroid hormone synthesis, regulation and function
43	Endocrine	Hypothyroidism	1- types 2- causes 3- clinical features and diagnosis 4- treatment
44	Endocrine	Hyperthyroidism	Graves' disease definition, diagnosis and treatment Graves' disease in pregnancy
45	Endocrine	Adrenal gland Addison disease and Cushing disease	1- types 2- causes 3- clinical features and diagnosis 4- treatment



## **Clinical sessions**

1- Cardio-Vascular System: Inspection, Palpation, Auscultation of the heart, Peripheral pulses, JVP, Blood pressure

2- Respiratory system: inspection, Trachea, Palpation, Percussion, Auscultation

3- Diagnostic and Therapeutic skills:

Cardiopulmonary resuscitation (with the use of DC shock), Administer Oxygen  
Performing ECG, Measure blood glucose using finger prick sample and Stix, IM & subcutaneous injection (using Insulin syringes)

## **Seminars:**

1- Bronchial asthma

2- Diabetic Keto Acidosis (DKA)

3- Chronic Obstructive Pulmonary Disease (COPD)

4- CHF

5- Drugs used in Hypertention

6- Drugs used in Diabetes Mellitus

7- Drugs used in Ischemic Heart Disease

8- Corticosteroids

## **References:**

**Davidson s textbook**

**Macleod's clinical examination**

## **2- Gynecology I**

### **Aims of the course:**

To provide students with essential knowledge, skills and attitude about obstetrics.

### **Learning objectives:**

#### **Knowledge:**

1. Describe the basic physiological background of fertilization, implantation and early development of the fetus, placenta, and cord.
2. Recognize the basic physiological changes produced by pregnancy occurring in each trimester.
3. Recognize the basic principles of antenatal care.
4. Recognize the normal fetal development and growth.
5. Describe clinical applications of ultrasound in the obstetrics.
6. Illustrate the different methods of assessment of fetal well-being.
7. Describe the types, indications, procedures and complications of prenatal diagnostics methods.
8. Discuss sites of production, functional roles and abnormalities of amniotic fluid.
9. Explain the types, causes, complications with antenatal and intrapartum management of multiple pregnancies.
10. Discuss the definition, pathophysiology, complications and management of hypertensive disorders of pregnancy.
11. Explain the types, causes and management of abnormal fetal growth.
12. Explain the definition, causes, complication and management of intrauterine fetal death.
13. Illustrate the basic anatomy of the female pelvis and fetal skull.
14. Explain the physiology, mechanism, stages & management of normal labor.
15. Explain types, causes and management of abnormal labor.
16. Explain types, causes, complications and management of abnormal presentations and positions.
17. Discuss post term pregnancy.

- 18-Discuss different medical disorders occurring during pregnancies and their management (e.g.: hypertension, pyelitis, hyperemesis, diabetes, anemia...).
- 19.Understand the common infections seen in pregnancy and have implications on mother, fetus and infant and describe the main principle of their managements.
- 20.Discuss causes of bleeding in late pregnancies (placenta Previa, placenta abruption, vasa Previa) and their management.
- 21.Describe the obstetrics emergencies with their management (Sepsis, Obstetric hemorrhage, Eclampsia, Amniotic fluid embolism, Umbilical cord prolapse, Shoulder dystocia, Uterine inversion, Uterine rupture).
- 22.List types and the causes of complications of third stage of labor and outline their management.
- 23.Describe the physiological changes during puerperium and abnormalities occurring in puerperium and their management.
- 24.Discuss operative delivery (C/S, instrumental vaginal delivery).

**(Skills):**

- 1.Assess the gestational age of a pregnant lady through history taking, focused clinical examination, beta-HCG level, and ultrasound assessment
- 2.Explain the principle of taking obstetrics history
- 3.Explain the key points in obstetrics examination
- 4.Illustrate how to perform obstetrics examination
- 5.Obtain obstetrics history, perform physical examination, plan approach for diagnosis and management.
- 6.Determine fundal level, symphysio-fundal height, lie, presentation and engagement by proper obstetrics examination
- 7.Clinically differentiate between normal pregnancies and high risk pregnancies from long cases history taking.
- 8.Distinguish between different causes of major obstetrics hemorrhage with judgment of life threatening conditions like hypovolemic shock through vital signs, general, abdominal and pelvic examinations.
- 9.Evaluate the risk of bleeding in late pregnancy and how to start management with emphasis on NOT doing vaginal examination
- 10.Appraise different methods of assessment of fetal wellbeing with proper use of Sonic aide, CTG, US to evaluate fetal wellbeing, and distressed fetuses which need immediate intervention.

**(Attitudes):**

1- Communicate with the patient as a person, not as a disease, and understand that the patient is a person with beliefs, values, goals, and concerns, which must be respected in addition to respecting the patient's dignity, privacy, information confidentiality and autonomy.

2-Counsel the patient before doing any intervention and in different situations with respect to her wish whenever this is possible.

3-Maintain the atmosphere of cooperation, peer relationships, and mutual respect in the university society.

**Teaching methods:**

Lectures

Clinical and small group sessions:

(Clinical demonstrations, practice of skills, lectures and discussions)

General obstetrics and gynecological in patient teaching ward

Outpatient clinic (obstetrics and gynecology)

Emergency department demonstration

OR theatres.

**Assessment methods:**

<b>Marks allocated</b>	<b>Examination</b>	<b>Marks</b>	<b>Parameters</b>
<b>1<sup>st</sup> course</b>			
<b>20%</b>	<b>Written exam</b>	<b>60%</b> <b>40%</b>	<b>lectures cases MCQ , most appropriate answers , matching short assay ( 2 hours )</b>
<b>60%</b>	<b>Final written exam</b>		<b>At mid year</b>
<b>20% M</b>	<b>clinical exam held at the end of 10 days of clinical attachment</b>	<b>2 18</b>	<b>Attendance Long obstetriccases oral examination</b>

## Course contents:

### Theory

Lec.No	Topics
1	History taking \ Obs Examination
2	Maternal physiology Explain all the physiological changes in pregnancy
3	Development of female reproductive organs Blood supply and nerves supply and congenital malformation
4	Mechanism of labour , Stages of labour ,Management of labour
5	Maternal pelvis – Types of pelvis Pelvic measurement ,Fetal skull measurement
6	Antenatal care , booklet – Assessment of fetal well being
7	Endocrinology of pregnancy
8	Normal presentation and position in pregnancy and labour
9	Diagnosis of pregnancy and excessive vomiting in early pregnancy- Clinical presentation and management
10	Normal puerparium Birth injuries to mother
11	Placenta , Amniotic fluid , Umbilical cord and fetal circulation
12	Clinical presentation of pregnant patient with hypertensive disease Various presentation .Essential hypertension , Preeclampsia , Eclampsia
13	Prolong labour , Obstructed labour Clinical presentation with partogram and management
14	Complications of pregnancy –Antipartum Hg
15	Anemia in pregnancy
16	Bronchial asthma and respiratory disease in pregnancy
17	Liver disease in pregnancy
18	Multiple pregnancy

### Seminars:

Every week four student are given topics to prepare and present in front of the class . There will be discussion ,question , and sessions . Teacher will evaluate the presentation of the student and explain the subject if students have any difficulty to understand the subject .

- 1.Mechanism of labour and stages of labour
- 2.Antepartum and postpartum Hg
- 3.Episiotomy and perineal tears
- 4.Preterm labour and PROM
- 5.Multiple pregnancy
- 6.Diabetes in pregnancy
- 7.Hypertensive disease in pregnancy

**References:**

- 1.Obstetric by ten teachers. Arnold
- 2.Evidence based medicine in obstetrics & gynecology
- 3.Dewhurst's textbook for obstetrics & gynecology
- 4.Essential of obstetrics & gynecology
- 5.Jeff coat's principles of gynecology
- 6.William's obstetrics Appleton century croft

### **3- Surgery I**

#### **Aims of the course:**

- 1- To provide the student with the knowledge, and skills which enable him/her to identify, analyze, manage clinical surgical problems in order to provide efficient, cost effective and humane patient care.
- 2-To provide the student with an appropriate background covering the common and/or important surgical conditions in a systematic way.
- 3-To enable students to take a skillful logic and organized patient history
- 4-To enable the student to perform a clinical bedside examination in a systematic way
- 5-To enable the student to observe and detect the common clinical signs associated with surgical conditions.
- 6-To enable the development and application of appropriate professional attitudes, ethical principles and communication skills.

#### **Learning objectives:**

##### **(Knowledge):**

1. Describe the anatomy of surgically important structures, organs and regions.
2. Describe the histology of surgically important tissues.
3. Describe the physiology of surgically important organs and systems.
4. Describe the principles of molecular biology and wound healing.
5. Describe the microbiology and parasitology of surgically important pathogens and their treatment..
6. Describe the epidemiology, etiology, pathophysiology, pathology, complications and prognosis of the various common and important surgical diseases and disorders.
7. Describe the clinical picture, investigations and differential diagnosis of the various common and important surgical diseases and disorders.
8. Describe the pharmacological basis of surgically important medications.
9. Describe the procedures and minimally-invasive techniques used in the treatment of surgical diseases.
10. Describe palliative care for untreatable surgical conditions.
11. Define principles of clinical audit.

**(Skills):**

1. Present a well-constructed detailed patient history.
2. Perform full physical examination appropriate to age and gender in acute and chronic clinical conditions
3. Take and record a structured patient-centered history in acute and chronic conditions.
4. Construct appropriate management plan for patients with common and important surgical diseases.
5. Order appropriate investigations.

**Procedures and technical skills** acquired under appropriate supervision during undergraduate training : By the end of the program, the graduate will acquire the model-based skills ( using manikin and simulators) required to:

1. Perform venepuncture and collect blood samples.
2. Insert a cannula into peripheral veins.
3. Practice enteral, parenteral, inhalational and topical methods for drug administration.
4. Administer basic oxygen therapy.
5. Insert a nasogastric tube.
6. Perform bladder catheterization.
7. Interpret basic bedside laboratory tests.
8. Adopt suitable measures for safety and infection control.

**(Attitudes):**

1. Adopt an empathic and holistic approach to patients and their problems, taking into consideration beliefs values, goals and concerns.
2. Respect the patient's right to know and share in decision making as well as dignity, privacy, information confidentiality and autonomy.
3. Understand and respect the different cultural beliefs and values regardless of their disabilities in the community they serve.
4. Recognize the important role played by other health care professions in patients' management, respecting their contributions in patient's management regardless of degree or occupation.



## **Communication Skills:**

By the end of the program, the graduate will be able to:

1. Communicate clearly, sensitively and effectively with patients and their relatives and colleagues from a variety of health and social care professions.
2. Communicate effectively with individuals regardless of their social, cultural, ethnic backgrounds, or their disabilities.
3. Cope with situations where communication is difficult including breaking bad news.
4. Show compassion to patients and their relatives in situations of stress and grief.
5. Honor and respect patients and their relatives, superiors, colleagues and any other member of the health profession.

## **Intellectual Skills**

By the end of the program, the graduate will acquire the skills required to:

1. Recognize patients with life/organ-threatening surgical conditions and perform appropriate initial therapy.
2. Determine the different strategies for risk management of disease and injury.
3. Identify surgically important structures and organs.
4. Identify surgical pathology specimens.
5. Integrate basic anatomical, physiological and pathological facts with clinical data.
6. Integrate the results obtained from history, clinical examination and investigational data into meaningful diagnostic formulation.
7. Combine clinical and investigational data with evidence based knowledge and skill of deductive reasoning for clinical problem solving.
8. Identify problems, prioritize them, and generate a list of differential diagnosis for each problem.
9. Select the most appropriate and cost-effective diagnostic and therapeutic procedure for each problem.
10. Use the results of all the tests ordered to modify the problem list and the differential diagnosis accordingly.
11. Identify and outline management of patients with surgical emergencies and common surgical diseases requiring long-term follow-up, rehabilitation and pain relief.

12. Recognize and cope with uncertainty by accepting and reacting to uncertain situations through proper counseling, consultation and referral.

**Teaching methods:**

1. Clinical classes
2. Lectures
3. Illustrated lecture
4. skill laps
5. Emergency rounds

**Assessment methods:**

Written exams which are mainly clinical case scenarios with single choice questions

Clinical exams: oral exams, long case, short case and OSCE exams

Student's Log Book

**Course contents:**

**Theory**

<b>1 esophagus</b>	<b>3</b>
learning objectives to understand the anatomy and physiology of the oesophagus and their relationship to disease the clinical features, investigations and treatment of benign and malignant disease with particular reference to the common adult disorders	
surgical anatomy, physiology, symptoms, investigations, foreign bodies in the oesophagus	Lecture 1
perforation, mallory–weiss syndrome, corrosive injury, gastro- oesophageal reflux disease, barrett’s oesophagus	Lecture 2
hiatal hernia , neoplasms of the oesophagus, motility disorders and diverticula, achalasia, plummer–vinson syndrome	Lecture 3
<b>2 stomach and duodenum</b>	<b>5</b>
learning objectives <ul style="list-style-type: none"> <li>•• to understand the gross and microscopic anatomy and pathophysiology of the stomach in relation to disease</li> <li>•• to be able to decide on the most appropriate techniques to use in the investigation of patients with complaints relating to the stomach and duodenum</li> <li>•• to understand the critical importance of gastritis and <i>helicobacter pylori</i> in upper gastrointestinal disease</li> </ul>	

<p>to be able to investigate and treat peptic ulcer disease and its complications</p> <ul style="list-style-type: none"> <li>•• to be able to recognise the presentation of gastric cancer and understand the principles involved in its treatment</li> <li>•• to know about the causes of duodenal obstruction and the presentation of duodenal tumours</li> </ul>	
gross anatomy of the stomach and duodenum, microscopic anatomy of the stomach and duodenum, physiology of the stomach and duodenum, investigations of stomach and duodenum, helicobacter pylori	1
gastritis, peptic ulcer	2
the complications of peptic ulceration, perforated peptic ulcer , upper gastrointestinal bleeding	3
gastric outlet obstruction , gastric cancer,	4
gastrointestinal stromal tumours, gastric lymphoma, duodenal tumours, zollinger–ellison syndrome, duodenal obstruction, acute gastric dilatation	5
<b>3 small intestine</b>	<b>3</b>
<p>learning objectives</p> <p>to appreciate:</p> <ul style="list-style-type: none"> <li>•• the basic anatomy and physiology of the small intestine</li> <li>•• the range of conditions that may affect the small intestine</li> </ul> <p>to understand:</p> <ul style="list-style-type: none"> <li>•• the aetiology and pathology of common small intestinal conditions</li> <li>•• the principles of investigation of small intestinal symptoms</li> <li>•• the importance of non-surgical management of small intestinal problems</li> <li>•• the principles of small intestinal surgery</li> <li>•• that complex intestinal problems are best managed by a multidisciplinary team</li> <li>•• the management of acute surgical problems of the intestines</li> </ul>	
anatomy of the small intestine, physiology of the small intestine, inflammatory bowel disease, crohn’s disease (regional enteritis), tuberculosis of the intestine	1
tumours of the small intestine, <i>peutz–jehgers syndrome, adenocarcinoma, carcinoid tumours, lymphoma, gastrointestinal stromal tumours, intestinal diverticulae, meckel’s diverticulum, mesenteric ischaemia</i>	2
stomas, types of ileostomy, indications , complications , enterocutaneous fistula, short bowel syndrome	3
<b>4 large intestine</b>	<b>4</b>
learning objectives	

<p>to appreciate:</p> <ul style="list-style-type: none"> <li>• the basic anatomy and physiology of the large intestine</li> <li>• the range of conditions that may affect the large intestine</li> </ul> <p>to understand:</p> <ul style="list-style-type: none"> <li>• the aetiology and pathology of common large intestinal conditions</li> <li>• the principles of investigation of large intestinal symptoms</li> <li>• the importance of non-surgical management of large intestinal problems</li> <li>• the principles of colonic surgery</li> <li>• that complex intestinal problems are best managed by a multidisciplinary team</li> <li>• the management of acute surgical problems of the intestines</li> </ul>	
<p>anatomy of the large intestine, physiology of the large intestine, tumours of the large intestine benign, malignant,</p>	1
<p>ulcerative colitis, crohn's disease of the colon, infections of the large intestine</p>	2
<p>colonic diverticula, vascular anomalies of the intestine angiodysplasia, ischaemic colitis,</p>	3
<p>colostomies , approach and management of lower git bleeding</p>	4
<p><b>5 intestinal obstruction</b></p>	<b>2</b>
<p>learning objectives to understand:</p> <ul style="list-style-type: none"> <li>• the pathophysiology of dynamic and adynamic intestinal obstruction</li> <li>• the cardinal features on history and examination</li> <li>• the causes of small and large bowel obstruction</li> <li>• the indications for surgery and other treatment options in bowel obstruction</li> </ul>	
<p>classification, pathophysiology, strangulation, closed-loop obstruction, mechanical intestinal obstruction, obstruction by adhesions and bands, acute intussusceptions, volvulus,</p>	1
<p>clinical features of intestinal obstruction dynamic obstruction, clinical features of strangulation, treatment of acute intestinal obstruction ,,, adynamic obstruction paralytic ileus, pseudo-obstruction</p>	2

<b>6 the liver</b>	<b>4</b>
<p>learning objectives to understand:</p> <ul style="list-style-type: none"> <li>•• the anatomy of the liver</li> <li>•• the signs of acute and chronic liver disease</li> <li>•• the investigation of liver disease</li> <li>•• the management of liver trauma</li> <li>•• the management of liver infections</li> <li>•• the management of colorectal liver metastases</li> <li>•• the management of hepatocellular carcinoma</li> </ul>	
<p>anatomy of the liver ligaments and peritoneal reflections, liver blood supply, structures in the hilum of the liver, division of structures at the hilum, venous drainage of the liver, segmental anatomy of the liver, acute and chronic liver disease</p> <p>liver function and tests, clinical signs of impaired liver function, acute liver failure, chronic liver disease,</p>	1
<p>imaging the liver, liver trauma, portal hypertension</p>	2
<p>ascites, budd–chiari syndrome, primary sclerosing cholangitis, primary biliary cirrhosis, cystic disease of the liver, liver infections</p> <p>ascending cholangitis pyogenic liver abscess</p>	3
<p>amoebic liver abscess, hydatid liver disease, liver tumours , hepatocellular carcinoma</p>	4
<b>7 biliary system and obstruction jaundice</b>	<b>5</b>
<p>learning objectives</p> <ul style="list-style-type: none"> <li>•• to understand the anatomy and physiology of the gallbladder and bile ducts</li> <li>•• to be familiar with the pathophysiology and management of gallstones</li> <li>•• to be aware of unusual disorders of the biliary tree</li> <li>•• to be aware of malignant disease of the gallbladder and bile ducts</li> </ul>	
<p>surgical anatomy and physiology, surgical physiology, functions of the gallbladder, radiological investigation of the biliary tract, intraoperative imaging techniques,</p>	1
<p>congenital abnormalities of the gallbladder and bile ducts, congenital dilatation of the intrahepatic ducts (caroli’s disease) , choledochal cyst</p>	2
<p>, gallstones diseases, acalculous cholecystitis, the cholecystoses (cholesterosis, polyposis, adenomyomatosis and cholecystitis glandularis</p>	3

proliferans, cholecystectomy complications of cholecystectomy, , post-cholecystectomy choledocholithiasis, choledochotomy,	
stricture of the bile duct primary sclerosing cholangitis, tumours of the bile duct, cancer of the gallbladder	4
portal hypertension , obstructive jaundice	5
<b>8 the spleen</b>	<b>3</b>
learning objectives to understand: •• the function of the spleen •• the common pathologies involving the spleen •• the principles and potential complications of splenectomy •• the potential advantages of laparoscopic splenectomy •• the benefits of splenic conservation •• the importance of prophylaxis against infection following splenectomy	
embryology, anatomy and physiology, functions of the spleen, investigation of the spleen, congenital abnormalities of the spleen, splenic artery aneurysm, splenic infarction	1
splenic rupture, rupture of a malarial spleen, splenomegaly and hypersplenism,	2
idiopathic thrombocytopenic purpura, hemolytic anemias, neoplasms, splenectomy indications , complications , types	3
<b>9 appendix</b>	<b>2</b>
learning objectives to understand: •• the etiology and surgical anatomy of acute appendicitis •• the clinical signs and differential diagnoses of appendicitis •• the investigation of suspected appendicitis •• evolving concepts in management of acute appendicitis •• basic surgical techniques, both open and laparoscopic •• the management of postoperative problems •• tumors of the appendix and pseudomyxoma peritonei	
introduction, anatomy, microscopic anatomy, acute appendicitis etiology pathology clinical diagnosis, special features, according to position of the appendix, special features, according to age,	1
differential diagnosis, investigation, the alvarado score, treatment, <i>appendicectomy, appendix abscess, pelvic abscess, management of an appendix mass</i> , postoperative complications, neoplasms of the appendix and pseudomyxoma peritonei	2
<b>10 the pancreas</b>	<b>3</b>

<p>learning objectives to understand:</p> <ul style="list-style-type: none"> <li>• the anatomy and physiology of the pancreas</li> <li>• investigations of the pancreas</li> <li>• congenital abnormalities of the pancreas</li> <li>• assessment and management of pancreatitis</li> <li>• diagnosis and treatment of pancreatic cancer</li> </ul>	
<p>anatomy and physiology, investigations, estimation of pancreatic enzymes in body fluids, pancreatic function tests, imaging investigations,</p>	1
<p>acute pancreatitis etiology , clinical presentation , investigations , assessment of severity , management , <i>systemic complications, local complications and their management</i>pseudocyst</p>	2
<p>chronic pancreatitis, carcinoma of the pancreas</p>	3
<p><b>11 rectum</b></p>	<b>3</b>
<p>learning objectives to understand:</p> <ul style="list-style-type: none"> <li>• the anatomy of the rectum and its relationship to surgical disease and its treatment</li> <li>• the pathology, clinical presentation, investigation, differential diagnosis and treatment of diseases that affect the rectum</li> </ul> <p>to appreciate:</p> <ul style="list-style-type: none"> <li>• that carcinoma of the rectum is common and can present with symptoms similar to benign disease. careful evaluation is required</li> <li>• the principles involved in the management of rectal pathologies</li> </ul>	
<p>surgical anatomy, clinical features of rectal disease, symptom and signs , <i>digital examination, proctoscopy, sigmoidoscopy</i>, injuries, foreign bodies in the rectum, prolapse,</p>	1
<p>proctitis, radiation proctitis, proctitis due to specific infections, lymphogranuloma venereum, rectal polyps, benign rectal lesions,</p>	2
<p>rectal carcinoma</p>	3
<p><b>12 anus and anal canal</b></p>	<b>3</b>
<p>learning objectives to understand</p> <ul style="list-style-type: none"> <li>• the anatomy of the anus and anal canal and their relationship to surgical disease and its treatment</li> <li>• the pathology, clinical presentation, investigation, differential diagnosis and treatment of diseases that affect the anus and anal canal</li> <li>• that anal disease is common and its treatment tends to be conservative, although surgery may be required</li> <li>• that any damage to the anus, including too aggressive or inappropriate surgery, may render the patient permanently disabled</li> </ul>	

surgical anatomy, the epithelium and sub epithelial structures, blood supply, venous drainage, lymphatic drainage, the anal glands, examination of the anus, physiological aspects of the anal sphincters and pelvic floor, and special investigations, congenital abnormalities	1
pilonidal sinus, anal incontinence, anal fissure, proctalgia fugax, hemorrhoids	2
pruritus ani, anorectal abscesses, fistula- <i>in-ano</i> , malignant tumors malignant lesions of the anus and anal canal	3
<b>13 abdominal wall hernias &amp; umbilicus</b>	<b>4</b>
learning objectives to know and understand: <ul style="list-style-type: none"> <li>•• basic anatomy of the abdominal wall and its weaknesses</li> <li>•• causes of abdominal hernia</li> <li>•• types of hernia and classifications</li> <li>•• clinical history and examination findings in hernia</li> <li>•• complications of abdominal hernia</li> <li>•• non-surgical and surgical management of hernia – including mesh</li> <li>•• complications of hernia surgery</li> <li>•• other abdominal wall conditions</li> </ul>	
the abdominal wall basic anatomy and function related to pathology, abdominal pressure, abdominal hernia, anatomical causes of abdominal wall herniation, common principles in abdominal hernia, clinical history and diagnosis in hernia cases, examination for hernia, investigations for hernia,	1
management principles, surgical approaches to hernia, mesh in hernia repair, specific hernia types, inguinal hernia,	2
femoral hernia, ventral hernia, umbilical hernia, epigastric hernia, incisional hernia, spigelian hernia, lumbar hernia, parastomal hernia, divercation of recti, rare external hernias	3
umbilical conditions in the adult, chronic fistula, patent urachus, general infection of the abdominal wall, synergistic gangrene, cutaneous fistula, abdominal compartment syndrome, neoplasms of the abdominal wall,	4
<b>14 .The peritoneum, omentum, mesentery and retroperitoneal space</b>	<b>3</b>
learning objectives to recognize and understand: <ul style="list-style-type: none"> <li>•• the causes and complications of localized and generalized peritonitis</li> <li>•• the clinical features of peritonitis and intraperitoneal abscess</li> </ul>	



<ul style="list-style-type: none"> <li>•• the principles of surgical management in patients with peritonitis and intraperitoneal abscess</li> <li>•• the causes and pathophysiology of ascites</li> <li>•• the pathophysiology and complications of adhesion formation</li> <li>•• the spectrum of mesenteric and retroperitoneal conditions</li> </ul>	
anatomy and physiology embryology, adult arrangement and functions, peritonitis, localized peritonitis, diffuse (generalized) peritonitis, diagnostic aids, management	1
special forms of peritonitis, intraperitoneal abscess, ascites, tumors of the peritoneum	2
adhesions, diseases of omentum, the mesentery, inflammation, mesenteric cysts , the retroperitoneal space	3

### **Courses topics in practical sessions**

The student should fulfill the followings

History taking and presentation

General examination, head and neck examination

Abdominal examination

Examination of peripheral vascular system

Chest examination

The student should be able to write a well-constructed history and systemic examination for the following topics

1 Abdominal pain

2 Abdominal swelling

3 Change in bowel habit / rectal bleeding

4 upper gastrointestinal bleeding

5 Difficulty swallowing / dyspepsia /dysphagia

Sings of peritonitis

6 Jaundice

7 Lumps in groin regions

## **References:**

Essential books (text books):

Bailey and Love's Short Textbook of Surgery,

Norman Browse clinical surgery

Recommended books:

Schwartz Textbook of Surgery

Current Surgical therapy

Internet

## **4- Pediatrics I**

### **Aims of the course:**

- To provide the students with basic knowledge of normal and abnormal growth and development (physical, physiologic, psychosocial) and its clinical application from birth till adolescence.
- To enable students to provide basic health care for Pediatric age group(neonates, infants, children and adolescents).
- To provide students with appropriate knowledge and skills needed for management of the common and important pediatrics emergencies and diseases.
- To provide the students with appropriate professional attitude and communication and problem solving skills.
- To enable the students to acquire lifelong learning competencies necessary for continuous professional development.
- Describe preventive strategies for common infectious disorders, malnutrition, genetic and metabolic disorders, poisoning, accidents and child abuse.
- Outline national programs relating to child health including immunization programs.

### **Learning objectives:**

#### **(Knowledge):**

- 1-Describe normal growth and development during infancy, childhood and adolescence.
- 2-Identify abnormalities of growth and development during infancy and childhood.
- 3-Describe appropriate management for abnormalities affecting growth and development.
- 4-Identify common genetic diseases and their impact on children and families.
- 5-Determine the nutritional requirements and the most common nutritional disorders affecting infants and children.
- 6-Describe appropriate management of nutritional disorder.
- 8-Recognize the most important behavioral and social issues during childhood and adolescence.
- 9-Describe appropriate measures for health promotion as well as prevention of diseases and injury in infants, children and adolescents.
- 10-Describe the causes, pathogenesis, clinical symptoms, signs, investigations, treatment and prognosis of the most important neonatal and pediatric problems.

11-Set the management priorities for different neonatal and pediatric emergency.

12-Describe the theoretical basis of professional practical skills and evidence based medicine (EBM).

13-Recognize basis of ethics, medico legal aspects of health, problems malpractice and common medical errors.

14-Recognize basics of health and patient's safety and safety procedures during practical and clinical years.

**(Skills):**

1-take and record a structured patient-centered medical history.

2-check vital signs in neonates, infants, children and adolescents.

3-asses physical and mental development in neonates, infants, children and adolescents according to standard milestones and recognize abnormalities.

4-perform appropriate clinical and anthropometric assessment of the nutritional status of infants and children.

5-perform an adequate clinical examination for a patient in the pediatric age group and identify deviations from normal.

**(Attitudes):**

1-adopt an empathic and holistic approach to the patients and their problems taking into consideration beliefs, values, goals and concerns.

2-respect the patients, families right to know and share in decision making as well as dignity, privacy, information confidentiality and autonomy.

3-understand and respect the different cultural beliefs and values regardless of their disabilities in the community they serve.

4-recognise the important role played by other health care professions in patients, management regardless of degree or occupation.

5-counsel patients suffering from different conditions as well as their families.

6-recognize one's own limitations of knowledge and skills referring patients to appropriate health facility at the appropriate stage.

**Teaching methods:**

Theoretical lectures

Clinical sessions: case discussions

Seminars and small group teachings

## Assessment methods:

Marks allocated	examination	parameters
1 st course		
20 degree	Mid written exam	Short essay, MCQ, Matching, most appropriate
20 degree	Clinical exam	Long case, OSCE, slides, oral
60 degree	Final course Written exam	Short essay, MCQ , Matching, most appropriate

## Course contents:

عنوان المحاضرة	عدد الساعات	OBJECTIVE اسم التدريسي/
1.The normal newborn baby 2.prematurity,IUGR 3.assesment of the gestational age &care of newborn 4.RDS 5.TTN,apnea,IVH 6.NEC,meconium aspiration 7.hemorrahegic disease of newborn 8.birth asphyxia 9.neonatal seizure 10.birth injuries 11.Neonatal sepsis	11ساعات	ا.م.د.عادل جبار Causes, epidemiology, clinical manifestation, diagnosis, treatment, prevention
1.bilirubin metabolism 2.causes and treatment of neonatal jaundice 3.Rh-isoimmunization 4.ABO incompatibility 5.epilepsy (definition, classification) 6.approaches treatment of epilepsy 7.cerebral palsy :causes and classification 8.approaches and treatment of cerebral palsy	8ساعات	ا.م.د.قحطان الياسري Causes, epidemiology, clinical manifestation, diagnosis, treatment, prevention
1.fluid therapy (2) 2.electrolyte disorder 3.acid base disorder 4.Diabetes Mellitus 5.Daibetic ketoacidosis 6.mal nutrition 7.chronic diarrhea 8.mal absorption 9.Rickets (Nutritional rickets, Secondary rickets)	11ساعات	ا.م.د. سوزان صبار Causes, epidemiology, clinical manifestation, diagnosis, treatment, prevention

## **Clinical sessions**

Students divided for small group teaching, they learn history taking skills (from pediatrics patients and their families in pediatrics ward) for different clinical cases.

Also general examination for patients, vital signs (pulse, blood pressure, temperature, heart rate),

Measurement (length, weight, OFC) and how to use growth chart

## **References:**

**1-Nelson-Essentials of Pediatrics.**

**2-Pediatric Secrets.**

**3-Nelson Textbook of Pediatrics.**

**4-Hutchison,s Clinical Methods.**

**5-Pediatric Clinical Exam Made Easy.**

**6-Macload,s Clinical Examination.**

## **5- Community Medicine I**

### **Aims of the course:**

1-Teaching undergraduates medical students the principles and methods of epidemiology, medical statistics, basic epidemiology and control of communicable and non-communicable diseases. This is in addition to

2-Teaching of primary health care concepts and practical programs in Iraq. Health care administration (planning management and evaluation techniques) as well as medical sociology and demography are also taught by the Department.

3-Brief sessions are also given on topics related to health economics, health information and utilization of health care services.

4-A short course is also arranged to tackle problems of environmental and occupational health.

### **Learning objectives:**

#### **(Knowledge):**

- 1.To acquire basic knowledge on main components of community medicine interests
- 2.To develop relevant competencies and skills in epidemiology and statistics so as to be able to measure and evaluate health and health care services
- 3.To develop abilities and competencies in the epidemiology and control of major health problems at population level
- 4.To develop basic principles of scientific research
- 5.To develop understanding of primary health care as strategy and services to the population
- 6.To contribute to the requirements of graduation of competent doctors to serve national, regional as well as local goals
- 7.To be prepared for postgraduate training in the future
- 8.To be prepared to pursue self-learning towards continuing professional development.

#### **(Skills):**

- 1.Interpret the distribution of disease in a population in terms of person, place and time
- 2.Describe the components of a rate, ratio and proportion
- 3.List, define and compute common rates used to measure fertility, morbidity and mortality in community

4. Define absolute risk, relative risk and attributable risk. Interpret their use in epidemiological situations
5. Distinguish between association and causation and list causal criteria
6. Describe major epidemiological studies (cross-sectional, longitudinal, case-control and cohort)
7. Make a simple design of an epidemiological study to describe the distribution of disease in population
8. Make a simple design of an epidemiological study to identify risk factors for a given disease
9. Analyze and interpret results obtained from relevant epidemiological studies

**(Attitudes):**

- 1- The proper ethical approach when dealing with patients in the field of primary health care centers
- 2- The proper communication skills needed when giving important advice necessary for health promotion and disease prevention
- 3- The ethical and legal codes used for conducting health related research and the proper way of acquiring patient's consent and respect autonomy
- 4- The importance of keeping patient's information confidential

**Teaching methods:**

Theoretical lectures

Small groups research projects

Regular visits to Primary Health Care Centers and students active involvement in patients care

**Assessment methods**

Written exams

Evaluation of research projects

Reports and seminars

Students activity during small group sessions and visits

**Course contents:**

**Theory**



مخرجات التعلم المطلوبة	الساعات	الأسبوع
Introduction	3	الأول
Definition of epidemiology, epidemiological uses and approach ,concept of health and disease	3	الثاني
Epidemiological data	3	الثالث
Types of epidemiological data , sources and its limitations	3	الرابع
Epidemiological measurement	3	الخامس
Descriptive epidemiology	3	السادس
Epidemiological studies	3	السابع
Cross – section study , case control , cohort , longitudinal and interventional	3	الثامن
The concept of association	3	التاسع
Designing epidemiology studies	3	العاشر
Screening and quality control of screening , diagnostic tests and clinical epidemiology	3	الحادي عشر
The iceberg phenomena	3	الثاني عشر
The concept and investigation of epidemics	3	الثالث عشر
Primary health care and maternal & child health care (MCH)	3	الرابع عشر

### The practical

consists of epidemiological desk exercises. These are quantitative practical classes handling specific epidemiological issues covering demographic, vital and health topics. Fourth year students are divided into subgroups of 15-25 students each. The groups are supervised by faculty members in rotation. Exercises are designed to further development of the knowledge and skills.

## **6- Forensic medicine I**

### **Aims of the course:**

- Each lecture handout will provide specific objectives.
- The course will familiarize students with the bases of forensic medical concepts, and the art of dealing with cases referred by investigative authorities to health institutions.
- This course will include gross, microscopic, and radiologic material to help the students in understanding the theoretical information.
- Lectures will be directed to clarify forensic medical vocabulary related to various diseases and injuries leading to damage or death.
- Practical labs will be directed to facilitate the acquisition of the basic practical skills in the field of forensic medicine that are necessary in the daily professional life of a newly graduated doctors.
- Small groups student based learning sessions will help students to communicate and cooperate in order to reduce time needed to build up the required deep and enormous forensic medical information and to motivate students toward active process of learning.

### **Learning objectives:**

#### **(Knowledge):**

- 1-Study and define the meaning of forensic medicine in general, its global systems, the local system, its divisions ( living and autopsy departments)
- 2-Definition of death, signs and causes.
- 3-Description of all types of violent injuries.(vocabulary of the initial medical forensic report)
- 4-Description of etymology .
- 5-Study sexual offences, virginity test, sterility and impotence.
- 6-DNA testing applications in forensic medicine.

#### **(Skills):**

- 1-Demonstrate the probable and confirmed signs of death, diagnose its occurrence, timing and death certificate edition.
- 2-Description of trauma and the methods of editing all kinds of forensic medical reports.
- 3-Examination of hymen .

4-Age estimation, clinically and by x-ray.

**(Attitudes):**

1-The development of the dialectic of doubt and scientific certainty in forensic medical field.

2-Stimulating the sense of preserving and developing scientific gains by clarifying the rights and duties of a newly graduated doctor.

3-Recognize and apply appropriate professional attitudes and problem solving skills.

4-Perform scientific research.

5-Work and learn within a team and communicate ideas and arguments effectively.

**Teaching methods:**

1. Lectures

2. Practical classes

3. Small group discussion with case study and problem solving

4. formative assessment

**Assessment methods:**

Written Examination: Assessment of knowledge and understanding and intellectual skills. These are usually done as summative assessments at the end of each system

Practical Examination: A. Assessment of practical skills.

B. Intellectual skills: a. Station b. Objective Structured Test (OST)c. Photos d. Report

**Course contents:**

**Theory**

Week	Date /1hour	Lecture subject	Objectives
Week-1	Sunday		.
	Monday		
	Tuesday		
	Wednesday	Introduction to forensic medicine	View definitions of forensic medicine and fields.
	Thursday	History of forensic medicine	A historical account of the stages of development of forensic science.
Week-2	Sunday		
	Monday		
	Tuesday		

	<b>Wednesday</b>	Systems of the forensic medicine	The student will be familiar with the global forensic medicine systems that oversee the workflow of forensic medicine.
	<b>Thursday</b>	The examiner and the examined.	The student will be familiar with official administrative assets to receive those required to be examined.
<b>Week-3</b>	<b>Sunday</b>		
	<b>Monday</b>		
	<b>Tuesday</b>		
	<b>Wednesday</b>	Forensic medical work: daily police facts, forensic medical issues, , forensic laboratory tests.	The students learned about the duties of a doctor in the emergency ward, how to write the initial forensic medical reports. Dealing with rape cases, cases of drugs and alcohol abuse.
	<b>Thursday</b>	Autopsy, blood tests, urine test, forensic radiological tests, visiting crime scene, exhuming graves.	The student will be taught the purpose of autopsy, meaning of the direct cause of death, mechanism of death, manner of death, the role of radiographic examination in the autopsy of decomposing corpses.
<b>Week-4</b>	<b>Sunday</b>		
	<b>Monday</b>		
	<b>Tuesday</b>		
	<b>Wednesday</b>	Death: definition, the importance of diagnosing, somatic death, cellular death,	Understanding scientific definition of death, importance of death diagnosis, in avoiding early burial, inheritance, and organ transplant.
	<b>Thursday</b>	Signs of death: probable signs, cardiovascular signs, respiratory signs and central nervous system signs.	Learning to avoid relying on probabilistic signs of death in daily professional life.
<b>Week-5</b>	<b>Sunday</b>		
	<b>Monday</b>		
	<b>Tuesday</b>		
	<b>Wednesday</b>	Signs of death: confirmed signs, equalization of body temperature with environment, postmortem lividity,	The student will be familiar with confirmed signs of death to rely on diagnosing death.
	<b>Thursday</b>	Confirmed signs: postmortem rigidity, decomposition, mummification, adipocer.	The student will be familiar with postmortem changes of the corpse that occur in special circumstances,
<b>Week-6</b>	<b>Sunday</b>	Endocrine: Diabetes mellitus II	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis

	<b>Monday</b>	Respiratory system: approach to respiratory examination	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis
	<b>Tuesday</b>	RS: Congenital abnormalities and atelectasis	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis
	<b>Wednesday</b>	Trauma: abrasions, pressure abrasion, sliding abrasion. Bruises,	The student will be able to diagnose and describe all types of trauma according to the Iraqi forensic medicine curriculum.
	<b>Thursday</b>	Lacerated wounds.	The student will be familiar with describing trauma and determining the tool used.
<b>Week-7</b>	<b>Sunday</b>		
	<b>Monday</b>	I	
	<b>Tuesday</b>		
	<b>Wednesday</b>	Wounds: in legal point of view, simple wounds, dangerous wounds, fatal wounds.,	The student will be familiar with describing wounds from legal point of view and editing in medical reports
	<b>Thursday</b>	In forensic point of view: incised wounds, penetrating wounds: stabbing, punctured wounds. Traumatic incisional wounds.	The student will be able to diagnose and describe the different types of wounds and edit them in forensic medical reports.
<b>Week-8</b>	<b>Sunday</b>		
	<b>Monday</b>		
	<b>Tuesday</b>		
	<b>Wednesday</b>	Road traffic accidents: causes of R.T.A., goals of autopsy,	The student will be familiar with the major cause of trauma to deal with in the emergency ward.
	<b>Thursday</b>	Pedestrians: primary impact, secondary impact, post-throwing phase	The student will be familiar with such trauma and to determine the most common cause of death in this group.
<b>Week-9</b>	<b>Sunday</b>		
	<b>Monday</b>		
	<b>Tuesday</b>		
	<b>Wednesday</b>	The same direction vehicle accidents, opposite direction vehicle accidents,	The student will be familiar with trauma caused by accelerating and decelerating forces.

	<b>Thursday</b>	Trauma of front occupants: drivers, rear compartment passengers, train accidents, airplane accidents.	The student will be able to distinguish the driver and front, rear compartment passengers by the pattern of injuries.
<b>Week-10</b>	<b>Sunday</b>		
	<b>Monday</b>		
	<b>Tuesday</b>		
	<b>Wednesday</b>	Firearm injuries: firearm assembly and components, the goals of autopsy, is this a firearm wound? characteristics,	The student will be able to distinguish firearm injuries from other types of injuries.
	<b>Thursday</b>	The range and distance, the manner of death	The student will learn to diagnose the firearm injuries, distance and range by the shape of the wound, then the manner of death.
<b>Week-11</b>	<b>Sunday</b>	Aplastic anemia and sedroplastic anemia	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis
	<b>Monday</b>	Hereditary hemolytic anemia ,	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis
	<b>Tuesday</b>	Acquired hemolytic anemia	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis
	<b>Wednesday</b>	Determination of the crime weapon, ,	Inform students about the procedures and the work of Criminal Evidence Department in determining weapons used in the crime.
	<b>Thursday</b>	Did more than one person participate in the launch?, wounds by hunting rifles, wounds of explosions.	The student are awarded of typical answers that the forensic investigator finds to solve the crime riddles.
<b>Week-12</b>	<b>Sunday</b>		
	<b>Monday</b>		
	<b>Tuesday</b>		
	<b>Wednesday</b>	Burns: definition, classification, according to depth,.	The student will be familiar with the six stages of burn,
	<b>Thursday</b>	according to percentage, causes of death	The student will be able to estimate roughly the percent of burn by the role of nines.
	<b>Sunday</b>		

Week-13	Monday		
	Tuesday		
	Wednesday	Electrocution: factors affecting	The student will be familiar with the signs of electrocution, inlet and exit of electricity
	Thursday	Causes of death in electrocution,	. The student will be familiar with the most common causes of death by electrocution
Week-14	Sunday		.
	Monday		
	Tuesday		
	Wednesday	Sudden natural death: definition, classification, expected sudden death, unexpected sudden death, enigmatic death.	The student will be familiar with definition of sudden natural death and the classification.
	Thursday	Goals of the autopsy, causes of death according to body systems: cardio vascular system	The student will be familiar with the common causes of the sudden death related to the heart and blood vessels, myocardial infarction.
Week-15	Sunday		
	Monday		.
	Tuesday		
	Wednesday	Complication of myocardial infarction, myocarditis, mitral stenosis, aortic stenosis,	The student will be familiar with myocardial infarction as a common cause of death, autopsy findings
	Thursday	Aneurysms, cardiac tamponade, respiratory causes, pneumonia, asthma, pulmonary embolism, T.B.	The student will be familiar with aneurysms, types and autopsy findings. Pneumonia, asthma, pulmonary embolism, tuberculosis,
Midyear Exam			

### Small groups session / Practical sessions and SBL

Week	Subject-practical session /first hour	SBL/Second hour
Week-1 Group A,B,C,D	Autopsy in forensic medicine	Types and methods
Week-2 Group A,B,C,D,	Goals of autopsy	

Week-3 Group A,B,C,D,	Signs of death	
Week-4 Group A,B,C,D,	Signs of death	Approach examination
Week-5 Group A,B,C,D,	Pattern of trauma	Approach examination
Week-6 Group A,B,C,D	Pattern of wounds	Approach examination
Week-7 Group A,B,C,D,E	Pneumonia and T.B: radiological, gross and microscopical features	Approach examination patient with pulmonary infection
Week-8	Road traffic accidents, pattern of injuries of pedestrians	Approach examination
Week-9 Group A,B,C,D,	Patterns of injuries in vehicles accidents	Approach examination
Week-10 Group A,B,C,D,	Pattern of firearm injuries	Approach examination
Week-11 Group A,B,C,D	The trajectory and launch distance, and manner of death.	Approach examination
Week-12 Group A,B,C,D	Burns, vital and non-vital.	Approach examination
Week-13 Group A,B,C,D,	Electrocution, inlet and exit.	Approach examination
Week-14 Group A,B,C,D,	Diagnosis of sudden death, myocardial infarction	Approach examination
Week-15 Group A,B,C,D,	Sudden death, aneurysms	Approach to different
Midyear Exam		

## References:

الطب القضائي وآداب المهنة الطبية

Text book of Forensic Medicine and Toxicology



## **7- Medical ethics I**

### **Aims of the course:**

Students will be familiar with the important ethical and legal regulations that rule the clinical practice

### **Learning objectives:**

#### **(Knowledge):**

- 1- what is meant by Medical Ethics and why study them
- 2-What are the important Medical Ethical declarations
- 3- The important ethical and legal regulations that rule the clinical practice
- 4- The ethical code of patient doctor relationship
- 5- The ethical code of the doctor relationship with colleagues

#### **(Skills):**

How to deal with different types of patients and how to follow the ethical rules in different situations

#### **(Attitudes):**

- 1- Remember that doctors are providers of health care
- 2-Respect patient autonomy at all times
- 3-Following the ethical rules protect the doctor as well as the patient
- 4-What to do when there is Personal involvement with patients

### **Teaching methods:**

Theoretical lectures with case scenarios and discussion

Role play and video lectures

### **Assessment methods:**

Written exams

Students attendance and activity

## Course contents:

- 1- تعريف الاخلاق الطبية ولماذا يجب دراستها
- 2- مصادر علم الاخلاق الطبية ومذاهبها الفلسفية المختلفة
- 3- الاخلاق الطبية والسلوك المهني في الطب
- 4- تعليمات السلوك المهني في الطب
- 5- المواثيق الدولية الخاصة بالأخلاق الطبية
- 6- العلاقة بين الطبيب والمريض كعلاقة اجتماعية
- 7- مميزات العلاقة بين الطبيب والمريض
- 8- أنماط شخصية المريض
- 9- علاقة الطبيب مع زملائه

## Daily schedule of first course weeks (Fourth grade)

2:30-1:30	1:30-12:30	12:30-10:30	10:00-8:00	اليوم
	طب مجتمع نظري (قاعة بن رشد)	توليد (قاعة بن رشد) نظري	B سريري توليد D سريري اطفال A سريري جراحة C سريري باطنية	الاحد
	اطفال نظري (بن النفيس 2)	طب مجتمع نظري (قاعة بن النفيس 2)	C سريري باطنية D سريري اطفال A سريري جراحة B سريري توليد	الاثنين
اخلاق طبية (قاعة بن النفيس 2)	جراحة نظري (قاعة بن النفيس 2)	جراحة نظري (قاعة بن النفيس 2)	C سريري باطنية D سريري اطفال A سريري توليد B سريري جراحة	الثلاثاء
A+B طب مجتمع عملي		طب عدلي عملي A+B	B سريري توليد C سريري باطنية	الاربعاء
C+D طب عدلي عملي		c+D طب مجتمع عملي	D سريري اطفال A سريري جراحة	
طب عدلي نظري (قاعة بن النفيس 2)		باطنية نظري (قاعة بن النفيس 2)	باطنية نظري (قاعة بن النفيس 2)	الخميس

## Fourth year

### Second course:

عدد الوحدات	عدد الساعات		المادة الدراسية	ت
	العملي	النظري		
5	2	4	Medicine II (باطنية)	.8
3	2	2	Gynecology II (نسائية)	.9
3	2	2	Surgery II (جراحة)	.10
3	2	2	Pediatrics II (اطفال)	.11
5	2	4	Community Medicine II (طب مجتمع)	.12
3	2	2	Forensic medicine II (الطب العدلي)	.13
1	/	1	Medical ethics II (اخلاق طبية)	.14
23			المجموع	

# **1- Medicine II**

## **Aims of the course:**

1-To introduce medical students to the fields of General Medical sciences and to make them familiar with Medical sciences and the medical pharmacology.

2-Make the students able to diagnose different Medical disorders when presented to them in the future.

3-Teach the students how to manage patients with Medical health problems in different health settings

## **Learning objectives:**

### **(Knowledge):**

1- How to diagnose and manage patients with Gastro-Intestinal and liver diseases an addition to disorders of the Nephrological system

2- How to recognize patients with medical emergencies and the ABCs of management of those cases

3- The basic rules of drug prescription

### **(Skills):**

1- The mastering of history taking with handling of different patients in medical wards, CCU and emergency ward

2- The basic rules of systemic examination of the chest and abdomen

3- How to arrange information to write the proper case sheet

4- Case presentation and clinical discussion

### **(Attitudes):**

1-Students should have an idea about the burden of medical health issues on society

2-Be able to sympathize with patients in order to offer the optimum help for them

3- How to respect patients and behave in a professional and a humane way

## **Teaching methods:**

i. Formal lectures.

ii. Clinical sessions.

iii. Problem Based Learning

## Assessment methods:

-Theoretical exams which include essay questions in the form of clinical cases in addition to single choice questions.

-Clinical exam in the form of long case and oral exam.

- Student's activity recorded in Log Book

## Course contents:

### Theory

No. of lecture	system	Name of lecture	Learning objectives
1	GIT Diseases of the Esophagus	Gastro-Esophageal Reflux disease	Pathophysiology, Risk factors, etiology, clinical features, complications and management
2	GIT Diseases of the Esophagus	Motility disorders	1- Achalasia (pathogenesis, clinical features and management) 2- other motility disorders
3	GIT Diseases of the Esophagus	Tumors of the Esophagus	Squamous Carcinoma (pathogenesis, clinical features and management)
4	GIT diseases of the Stomach and Duodenum	Gastritis	1- Acute gastritis 2- Chronic nonspecific gastritis 3- Chronic gastritis due to Helicobacter Pylori infection 4- Autoimmune chronic gastritis 5- Menetrier's disease
5	GIT diseases of the Stomach and Duodenum	Peptic Ulcer disease I	1- etiology and risk factors 2- diagnosis 3- pathogenesis
6	GIT diseases of the Stomach and Duodenum	Peptic Ulcer disease II	1- clinical features 2- investigations 3- complications 4- management

7	GIT diseases of the Stomach and Duodenum	Surgical treatment of Peptic Ulcer	1- indications of surgery 2- complications of surgery 3- Zollinger Ellison syndrome
8	GIT diseases of the Stomach and Duodenum	Functional disorders	1-functional causes of vomiting 2- Gastroparesis
9	GIT diseases of the Stomach and Duodenum	Tumors of the Stomach	Gastric Carcinoma( etiology and risk factors, pathology, clinical features, management
10	GIT diseases of the Stomach and Duodenum	Other tumors of the stomach	1-Gastric Lymphoma 2- other tumors
11	GIT diseases of Small Intestine	Coeliac disease	1- clinical features 2- investigations 3- management
12	GIT diseases of Small Intestine	Small bowel bacterial overgrowth	1- causes and clinical features of bacterial overgrowth 2- Whipple's disease 3- Short bowel syndrome 4- radiation enteritis
13-	GIT diseases of Small Intestine	Other disorders	1-Motility disorders 2- Protein losing enteropathy 3- Lactose intolerance
14	GIT diseases of Small Intestine	Tumors of the Small Intestine	1-Carcinoid tumor 2- Lymphoma 3- Malabsorption
15	GIT diseases of Large Intestine	Inflammatory Bowel disease I	1-risk factors 2- pathology 3- clinical features

16	GIT diseases of Large Intestine	Inflammatory Bowel disease II	1- complications 2- investigations 3- management 4- Sever Ulcerative Colitis
17	GIT diseases of Large Intestine	Irritable Bowel Syndrome	1- causes 2- clinical features and diagnosis 3- management
18	GIT diseases of Large Intestine	Tumors of the Colon I	1-Polyps 2- Tubular adenoma 3- Villous adenoma
19	GIT diseases of Large Intestine	Tumors of the Colon II	1-Gastro intestinal polyposis syndromes 2- Familial adenomatous polyposis 3- Peutz-Jegher's syndrome
20	GIT diseases of Large Intestine	Colo-Rectal Carcinoma	1-etiology 2- pathology 3- clinical features 4- investigations 5- management
21	GIT diseases of the Liver	Introduction to Liver diseases	Anatomy and physiology of the liver Investigations of liver Types of Jaundice
22	GIT diseases of the Liver	Liver Cirrhosis	1-acute and chronic liver injury 2- liver Cirrhosis ( definition, causes, clinical features (stigmata), management, complications)
23	GIT diseases of the Liver	Portal Hypertension	1- definition 2- causes 3-clinical features 4- management 5- complications 6- prevention of variceal bleeding
24	GIT diseases of the Liver	Ascites	1- definition 2- causes 3-investigations 4- management
25	GIT diseases of the Liver	Liver failure	1-liver failure (definition, types, causes, clinical features and management) 2- Hepatic Encephalopathy
26	GIT diseases of the Liver	Viral Hepatitis	1-Types (A,B,C,D,E) 2- diagnosis, management, complications
27	GIT diseases of the Liver	Alcoholic Liver	1-types 2- clinical features 3- investigations 4- management

28	GIT diseases of the Liver	Drug induced liver injury	1-causes 2- Gilbert's syndrome
29	GIT diseases of the Liver	Inherited Liver disease	1-Hereditary haemochromatosis 2- Wilson's disease
30	GIT diseases of the Liver	Autoimmune liver and biliary disease	1-Autoimmune hepatitis 2-Primary biliary cirrhosis 3-Primary sclerosing cholangitis.
31	GIT diseases of the Liver	Liver tumor	1-Hepatocellular carcinoma 2-Secondary malignant tumours 3-Benign tumours
32	GIT diseases of the Liver	Liver disease during Pregnancy	1-Hyperemesis Gravidarum 2--Intrahepatic cholestasis of pregnancy 3-Acute fatty liver of pregnancy
33	GIT diseases of the Liver	Acute &Chronic pancreatitis &Pancreatic tumour	1- Acute pancreatitis 2- Chronic pancreatitis 3- Pancreatic tumour
34	Nephrology	Functional anatomy and physiology of the kidney	1-Functions of the kidneys 2-Anatomy of the kidneys
35	Nephrology	Acute Kidney Injury	1-definition 2-Pathogenesis 3-Clinical assessment 4-Management 5-Prognosis 6- Established ACUTE RENAL FAILURE
36	Nephrology	Chronic renal failure	1- definition and etiology2- clinical features 3- Fluid and electrolyte balance 4- Cardiovascular disease and lipids 5-Hematological Manifestations 6-Renal osteodystrophy 7-management
37	Nephrology	Glomerular diseases I	1- Histological Terms of Glomerular Changes 2-Classification of glomerulopathies 3- Investigations 4- Nephrotic syndrome
38	Nephrology	Glomerular diseases II	1- Minimal-change glomerular lesion 2- Focal segmental glomerulosclerosis 3- Membranous glomerulopathy 4- IgA nephropathy
39	Nephrology	Glomerular diseases III	1- Henoch–Schönlein purpura 2- membrano-proliferative glomerulonephritis



			3- Infection-related glomerulonephritis
40	Nephrology	Glomerular diseases IV	1- diabetic nephropathy
41	Nephrology	Acute & chronic interstitial nephritis	1- definition 2- diagnosis 3- investigations 4- management
42	Nephrology	Renal vascular diseases	1- Renal artery stenosis 2- Acute renal infarction 3- Diseases of small intrarenal vessels
43	Nephrology	Renal involvement in systemic conditions	1- Diabetes mellitus 2- Multiple myeloma 3- Hepatic–renal disease 4- Sarcoidosis 5- Systemic vasculitis 6- Systemic sclerosis 7- Sickle-cell nephropathy
44	Nephrology	Urinary Tract Infection	1-clinical features 2-investigations 3-management 4- Persistent or recurrent UTI 5-a symptomatic bacteriuria

### **Clinical sessions:**

#### **History and case presentation**

**Physical examination:** Inspection, Superficial palpation, Deep palpation, Percussion (including signs of ascites), Auscultation, Signs of liver and gall bladder disease, Examination of the kidney

**Skills:** NG tube insertion, Folly's Catheter insertion & removal, Peritoneocentesis, Urine dipstick and analysis

## **2- Gynecology II**

### **Aims of the course:**

Is to provide students with essential knowledge, skills and attitude about obstetrics.

### **Learning objectives:**

#### **(Knowledge):**

- 1- Explain the types, causes and management of abnormal fetal growth.
- 2- Explain the definition, causes, complication and management of intrauterine fetal death.
- 3- Illustrate the basic anatomy of the female pelvis and fetal skull.
- 4- Explain types, causes, complications and management of abnormal presentations and positions.
- 5- Discuss preterm labor (definition, risk factors, causes, complications prevention and management).
- 6- Discuss post term pregnancy.
- 7- Discuss Rh- iso immunization.
- 8- Discuss different medical disorders occurring during pregnancies and their management (e.g.: hypertension, pyelitis, hyperemesis, diabetes, anemia...).
- 9- Understand the common infections seen in pregnancy and have implications on mother, fetus and infant and describe the main principle of their managements.
- 10- Discuss causes of bleeding in late pregnancies (placenta Previa, placenta abruption ,vasa Previa) and their management.
- 11- Describe the obstetrics emergencies with their management (Sepsis, Obstetric hemorrhage, Eclampsia, Amniotic fluid embolism, Umbilical cord prolapse ,Shoulder dystocia, Uterine inversion, Uterine rupture).
- 12- List types and the causes of complications of third stage of labor and outline their management.
- 13- Describe the physiological changes during puerperium and abnormalities occurring in puerperium and their management.
- 14- Discuss operative delivery (C/S, instrumental vaginal delivery).

#### **(Skills):**

1. Assess the gestational age of a pregnant lady through history taking, focused clinical examination, beta-HCG level, and ultrasound assessment
2. Explain the principle of taking obstetrics history
3. Explain the key points in obstetrics examination
4. Illustrate how to perform obstetrics examination
5. Obtain obstetrics history, perform physical examination, plan approach for diagnosis and management.
6. Determine fundal level, symphysis-fundal height, lie, presentation and engagement by proper obstetrics examination
7. Clinically differentiate between normal pregnancies and high risk pregnancies from long cases history taking.
8. Distinguish between different causes of major obstetrics hemorrhage with judgment of life threatening conditions like hypovolemic shock through vital signs, general, abdominal and pelvic examinations.
9. Evaluate the risk of bleeding in late pregnancy and how to start management with emphasis on NOT doing vaginal examination
10. Appraise different methods of assessment of fetal wellbeing with proper use of Sonic-aide, CTG, US to evaluate fetal wellbeing, and distressed fetuses which need immediate intervention.

**(Attitudes):**

- 1- Communicate with the patient as a person, not as a disease, and understand that the patient is a person with beliefs, values, goals, and concerns, which must be respected in addition to respecting the patient's dignity, privacy, information confidentiality and autonomy.
- 2- Counsel the patient before doing any intervention and in different situations with respect to her wish whenever this is possible.
- 3- Maintain the atmosphere of cooperation, peer relationships, and mutual respect in the university society

**Teaching methods:**

Lectures

Clinical and small group sessions:

(Clinical demonstrations, practice of skills, lectures and discussions)

General obstetrics and gynecological in patient teaching ward

Outpatient clinic (obstetrics and gynecology)

Emergency department demonstration. OR theatres.

Clinical rounds and small group activities:

Each 3week , students are divided into 2 equal groups; each group being assigned to one of the OBGYN units that constitute the department. Within each unit, students will have a clinical round in the morning from 8:00am –9:00am discussing a clinical case from inpatients then they are subdivided to small groups to examine the patients. This occurs 4 times a week.

During the whole 4wk , there is also a problems based learning given to the students from 9:00am till 9:45 am discussing one of the obstetrics subjects according to the plan of teaching

### Assessment methods:

Marks allocated	Examination	Marks	Parameters
100%M	Term 2	2	attendance
20%M	End course clinical	18	assessment
20%	Written exam	60%	exam 4 written 6 slides cases MCQ , most appropriate answers , matching short assay ( 2 hours )
60%	Final exam	50%	Short cases exam in gynecology 60% cases MCQ , most appropriate answers , matching 40% short assay( 3 hours )
			-

### Course contents

1	Preterm labour , PROM and management
2	Primary and secondary PPH and management
3	Clinical presentation of patients with DVT , Pulmonary embolism and management
4	Diabetes in pregnancy

5	Clinical presentation of pregnant patient with renal and urinary UTI
6	Thyroid disease in pregnancy
7	Instrumental delivery
8	Cardiac disease in pregnancy
9	Vital statistic in obstetric
10	Operative obstetric Types of perineal tears , episiotomy and C/Sand cerclage
11	Clinical presentation of patient with breech , unstable lie –Management in pregnancy and labour
12	Surgical illness in pregnancy
13	Clinical presentation and management of RH negative pregnant patient in pregnancy and labour
14	Induction and augmentation of labour
15	Birth injuries to normal newborn –Apgar scor
16	Obstetric emergencies-Cord prolapsed, DIC, Shock, Amniotic fluid embolism

## Seminars

Every week four student are given topics to prepare and present in front of the class . There will be discussion ,question , and sessions . Teacher will evaluate the presentation of the student and explain the subject if students have any difficulty to understand the subject .

- 1- Antepartum and postpartum Hg
- 2-Episiotomy and perineal tears
- 3-Preterm labour and PROM
- 4-Diabetes in pregnancy
- 5-Analgesia and anesthesia in labour
- 6-The partogram
- 7-Fetal heart monitoring
- 8-Breech presentation
- 9-Caesarian section
- 10-Postmaturity
- 11-Normal and abnormal presentation

## References:

- 1.Obstetric by ten teachers. Arnold
- 2.Evidence based medicine in obstetrics & gynecology
- 3.Dewhurst's textbook for obstetrics & gynecology
- 4.Essential of obstetrics & gynecology

### **3- Surgery II**

#### **Aims of the course:**

- 1-To provide the student with the knowledge, and skills which enable him/her to identify, analyze, manage clinical surgical problems in order to provide efficient, cost effective and humane patient care.
- 2-To provide the student with an appropriate background covering the common and/or important surgical conditions in a systematic way.
- 3-To enable students to take a skillful logic and organized patient history
- 4-To enable the student to perform a clinical bedside examination in a systematic way
- 5-To enable the student to observe and detect the common clinical signs associated with surgical conditions.
- 6-To enable the development and application of appropriate professional attitudes, ethical principles and communication skills.

#### **Learning objectives:**

##### **(Knowledge):**

1. Describe the anatomy of surgically important structures, organs and regions.
2. Describe the histology of surgically important tissues.
3. Describe the physiology of surgically important organs and systems.
4. Describe the principles of molecular biology and wound healing.
5. Describe the microbiology and parasitology of surgically important pathogens and their treatment..
6. Describe the epidemiology, etiology, pathophysiology, pathology, complications and prognosis of the various common and important surgical diseases and disorders.
7. Describe the clinical picture, investigations and differential diagnosis of the various common and important surgical diseases and disorders.
8. Describe the pharmacological basis of surgically important medications.
9. Describe the procedures and minimally-invasive techniques used in the treatment of surgical diseases.
10. Describe palliative care for untreatable surgical condition

**(Skills)**

1. Present a well constructed detailed patient history.
2. Perform full physical examination appropriate to age and gender in acute and chronic clinical conditions
3. Take and record a structured patient-centered history in acute and chronic conditions.
4. Construct appropriate management plan for patients with common and important surgical diseases.
5. Order appropriate investigations.
6. Perform venepuncture and collect blood samples.
7. Insert a cannula into peripheral veins.
8. Practice enteral, parenteral, inhalational and topical methods for drug administration.
9. Administer basic oxygen therapy.
10. Insert a nasogastric tube.
11. Perform bladder catheterization.
12. Interpret basic bedside laboratory tests.
13. Adopt suitable measures for safety and infection control.

**(Attitudes):**

1. Adopt an empathic and holistic approach to patients and their problems, taking into consideration beliefs values, goals and concerns.
2. Respect the patient's right to know and share in decision making as well as dignity, privacy, information confidentiality and autonomy.
3. Understand and respect the different cultural beliefs and values regardless of their disabilities in the community they serve.
4. Recognize the important role played by other health care professions in patients' management, respecting their contributions in patient's management regardless of degree or occupation

**Teaching methods:**

1. Clinical classes
2. Lectures
3. Illustrated lecture

4. skill laps

5. Emergency rounds

### Assessment methods:

Written exams which are mainly clinical case scenarios with single choice questions

Clinical exams: oral exams, long case, short case and OSCE exams

Student's Log Book

### Course contents

#### Theory

subjects	Hours
<b>1 head and neck</b>	<b>2</b>
learning objectives to understand management lump in the neck common neck disorders	
, branchial cyst, branchial fistula, cystic hygroma, thyroglossal duct cysts and fistula,	1
trauma to the neck, inflammatory conditions of the neck, ludwig's angina, acute and chronic lymphadenitis, primary tumours of the neck, <i>chemodectoma</i> , secondary carcinoma	2
<b>2 salivary gland</b>	<b>2</b>
learning objectives to understand: •• the surgical anatomy of the salivary glands •• the presentation, pathology and investigation of salivary gland disease •• the medical and surgical treatment of stones, infections and tumours that affect salivary glands	
common disorders of minor salivary glands ( cysts and tumours), the sublingual glands anatomy, common disorders of the sublingual glands( cysts and tumours), the submandibular glands anatomy, inflammatory disorders of the submandibular gland,	1
tumours of the submandibular gland, the parotid gland anatomy, inflammatory condition, tumours , complications of parotidectomy , degenerative diseases	2
<b>3 thyroid gland</b>	<b>4</b>
learning objectives •• to understand the development and anatomy of the	



thyroid gland <ul style="list-style-type: none"> <li>•• to know the physiology and investigation of thyroid function</li> <li>•• to be able to select appropriate investigations for thyroid swellings</li> <li>•• to know when to operate on a thyroid swelling</li> <li>•• to describe thyroidectomy</li> <li>•• to know the risks and complications of thyroid surgery</li> </ul>	
embryology, surgical anatomy, physiology of thyroid hormone secretion and thyroid function tests, thyroid imaging	1
thyroid enlargement (classification of goiter), clinically discrete swellings, <i>retrosternal goiter</i> , ,	2
hyperthyroidism surgery for thyrotoxicosis, postoperative complications,	3
neoplasms of the thyroid, thyroiditis	4
<b>4 parathyroid gland,</b>	<b>1</b>
to understand: <ul style="list-style-type: none"> <li>•• the anatomy of the parathyroid glands</li> <li>•• the physiology of calcium regulation</li> <li>•• the underlying causes of hypercalcaemia and appropriate emergency management</li> <li>•• the aetiology, presentation, investigation and management of primary hyperparathyroidism and associated special cases</li> <li>•• the aetiology, presentation, investigation and management of secondary and tertiary hyperparathyroidism</li> <li>•• the aetiology and management of parathyroid carcinoma</li> </ul>	
anatomy of the parathyroid glands, calcium homeostasis and parathyroid hormone regulation, hyperparathyroidism, parathyroid carcinoma, hypoparathyroidism	1
<b>5 the adrenal glands</b>	<b>1</b>
learning objectives to understand: <ul style="list-style-type: none"> <li>•• the anatomy and function of the adrenal and other abdominal endocrine glands</li> <li>•• the diagnosis and management of these endocrine disorders</li> <li>•• the role of surgery in the management of these endocrine disorders</li> </ul>	
anatomy, function of the adrenal glands, incidentaloma, primary hyperaldosteronism – conn’s syndrome, cushing’s syndrome, adrenocortical carcinoma, adrenal insufficiency, pheochromocytoma and neuroblastoma	1
<b>6 principles of laparoscopic surgery</b>	<b>1</b>

<p>learning objectives to understand:</p> <ul style="list-style-type: none"> <li>•• the principles of laparoscopic and robotic surgery</li> <li>•• the advantages and disadvantages of such surgery</li> <li>•• the safety issues and indications for laparoscopic and robotic surgery</li> <li>•• the principles of postoperative care</li> </ul>	
<p>definition, surgical trauma in open and minimally invasive, limitations of minimal access surgery, preparation of the patient, general intraoperative principles, creating a pneumoperitoneum, complications , postoperative care</p>	
<p><b>7. introduction to trauma</b></p>	2
<p>learning objectives</p> <ul style="list-style-type: none"> <li>•• become familiar with the timeline concept in trauma management</li> <li>•• understand how to assess a trauma problem</li> <li>•• learn how to respond to a trauma problem</li> <li>•• understand how to select early total care and damage control surgical strategies</li> </ul>	
<p>definition of trauma, the magnitude of the problem, the management of trauma, the significance of time in the outcome, assessment and response, the assessment of trauma, <i>mechanisms</i>,</p>	1
<p>the response to trauma, the medical response to injury, local protocols and guidelines, planning an individual operation</p>	2
<p><b>8.early assessment and management of severe trauma</b></p>	1
<p>learning objectives</p> <ul style="list-style-type: none"> <li>•• how to identify and assess the severely injured patient</li> <li>•• early treatment goals for multiply injured patients</li> <li>•• understand the role of permissive hypotension, tranexamic acid and massive transfusion protocols</li> <li>•• understand the principles of damage control surgery (dcs) versus early total care (etc)</li> </ul>	
<p>identification of severe trauma, role of the trauma team, primary survey, cabcde., secondary survey, damage control surgery versus early total care</p>	1
<p><b>9. Torso trauma ( abdominal injury)</b></p>	1
<p>learning objectives</p> <ul style="list-style-type: none"> <li>•• the indications for and techniques of the trauma laparotomy</li> <li>•• the philosophy of damage control surgery</li> <li>•• the management of trauma to the pelvis</li> </ul>	
<p>investigation, <i>focused abdominal sonar for trauma and extended fast, diagnostic peritoneal lavage, individual organ injury, damage control, abdominal compartment</i></p>	1

syndrome	
<b>10.the breast</b>	<b>4</b>
<b>To understand:</b> <ul style="list-style-type: none"> <li>•• Appropriate investigation of breast disease</li> <li>•• Breast anomalies and the complexity of benign breast Disease</li> <li>•• The modern management of breast cancer</li> </ul>	
<b>comparative and surgical anatomy, investigation of breast symptoms, the nipple, benign breast disease, congenital abnormalities, injuries of the breast</b>	1
<b>acute and subacute inflammations of the breast, <i>duct ectasia/periductal mastitis</i>, aberrations of normal development and involution, treatment of mastalgia, breast cysts, galactocele, fibroadenoma, phyllodes tumour, when the diagnosis of carcinoma is in doubt, risk of malignancy developing in association with benign breast pathology, carcinoma of the breast , aetiological factors,</b>	2
<b>pathology, paget’s disease of the nipple, the spread of breast cancer, clinical presentation, staging of breast cancer, prognosis of breast cancer, treatment of cancer of the breast, breast cancer screening , familial breast cancer , male breast.</b>	3
<b>11.Bariatric and metabolic surgery</b>	<b>4</b>
<b>Learning objectives</b> <b>To know and understand:</b> <ul style="list-style-type: none"> <li>•• What severe and complex obesity is</li> <li>•• Rationale for surgery and the concept of metabolic surgery</li> <li>•• Eligibility and NICE guidelines</li> <li>•• Multidisciplinary assessment</li> <li>•• The common operations and how they work</li> <li>•• How to assess and treat perioperative complications</li> <li>•• Follow-up, nutritional supplements and biochemical monitoring</li> </ul>	1
<b>introduction, rationale, metabolic surgery, eligibility, the common operations, complications,</b>	
<b>26. Urinary symptoms and investigations</b>	<b>1</b>
<b>Learning objectives</b> <ul style="list-style-type: none"> <li>•• To understand the significance of pain relating tom urinary tract pathology</li> <li>•• To understand the difference between renal pain and ureteric colic</li> </ul> To understand the definitions of common lower urinary tract symptoms <ul style="list-style-type: none"> <li>•• To be able to select the appropriate diagnostic tests to establish a diagnosis of urinary tract disease</li> </ul>	
<b>pain, lower urinary tract symptoms (luts) haematuria, discolouration of the urine, pneumaturia, symptoms related to the external genitalia, investigation of urinary symptoms, urine-based tests, <i>tumour markers</i>, <i>urological endoscopy</i> , urological imaging</b>	
<b>12. Kidneys and ureters</b>	

<p><b>Learning objectives</b>  <b>To recognise and understand:</b></p> <ul style="list-style-type: none"> <li>•• Important congenital abnormalities of the upper urinary tract</li> <li>•• Important cystic diseases of the kidney</li> <li>•• The management of sepsis in the upper urinary tract</li> <li>•• The pathophysiology of renal stone formation</li> <li>•• The management of urinary tract calculi</li> <li>•• The aetiology, presentation and surgical management of obstruction to the upper urinary tract</li> <li>•• The management of open and closed trauma to the kidney and ureter</li> <li>•• Important renal neoplasms and their presentation</li> <li>•• Surgery of upper urinary tract tumours</li> </ul>	
<p>surgical anatomy, embryology, congenital abnormalities, infections, stones diseases, urinary tract obstruction, renal trauma, injury to the ureter, vascular pathology, tumours of the kidney, upper tract transitional cell carcinoma (uttcc), wilms' tumour (nephroblastoma),</p>	
<p><b>13. The urinary bladder</b></p>	
<p><b>Learning objectives</b>  <b>To understand:</b></p> <ul style="list-style-type: none"> <li>•• The anatomy, vascular supply and innervation of the bladder in relation to function and disease</li> <li>•• The principles of management of bladder trauma, incontinence and fistulae</li> <li>•• The common causes of acute and chronic urinary retention and management</li> <li>•• The different types of bladder cancer and the principles of management</li> </ul>	
<p><b>surgical anatomy of the bladder, congenital defects of the bladder, bladder trauma, retention of urine, neuropathic bladder, incontinence of urine, bladder stones, foreign bodies in the bladder, diverticula of the bladder, urinary fistulae, lower urinary tract infection and cystitis, schistosomiasis of the bladder , neoplasms of the bladder, urinary diversion.</b></p>	
<p><b>14. The prostate and seminal vesicles</b></p>	
<p><b>Learning objectives</b>  <b>To understand:</b></p> <ul style="list-style-type: none"> <li>•• The relationship of anatomical structure and biochemical function to the development and treatment of benign and malignant disease of the prostate</li> <li>•• The terminology used to describe lower urinary tract symptoms and to know their causes as well as them treatment options available</li> <li>•• Which investigations are appropriate for carcinoma of the prostate</li> <li>•• Clinical staging of carcinoma of the prostate and how staging contributes to the complex decision</li> </ul>	
<p><b>embryology, surgical anatomy, physiology, benign prostatic hyperplasia, assessment of the patient with lower urinary tract symptoms, management of men with benign prostatic hyperplasia or bladder outflow obstruction, prostatic calculi, carcinoma of the prostate, prostatitis, disorders of seminal vesicles</b></p>	
<p><b>15. Urethra and penis</b></p>	
<p><b>Learning objectives</b>  <b>To recognise and understand:</b>  The common congenital abnormalities of the urethra  The diagnosis and management of urethral trauma  The diagnosis and management of urethral stricture  The diagnosis and management of phimosis  The principles of management of a man with erectile dysfunction  The common diseases of the penis and urethra and the principles of their surgical management</p>	

<p><b>the male urethra anatomy, congenital abnormalities, injuries to the male urethra, <i>urethral stricture</i>, other conditions of the urethra( fistula , calculi, tumors), the female urethra anatomy, <i>prolapse, stricture fowler’s syndrome</i>, the penis anatomy, diseases of the foreskin, injuries of the penis, <i>erectile dysfunction, priapism</i>, carcinoma of the penis, inflammation of the penis and urethra urethral discharge, sexually transmitted infections.</b></p>	
<p><b>16. Testis and scrotum</b></p>	
<p><b>Learning objectives</b></p> <ul style="list-style-type: none"> <li>•• To recognise testicular maldescent and to appreciate the reasons for intervention</li> <li>•• To recognise and manage testicular torsion</li> <li>•• To be able to recognise and understand the management of the common scrotal swellings (varicocele, hydrocele and epididymal cysts)</li> <li>•• To recognise and understand the management of testicular tumours</li> <li>•• To understand the treatment options for infertile men</li> </ul>	
<p><b>embryology and anatomy of the testis, incompletely descended testis, injuries to the testis, absent testis, torsion of the testis, varicocele, hydrocele, cysts associated with the epididymis, epididymo-orchitis, tuberculous epididymo-orchitis, orchitis, tumours of the testes, tumours of the epididymis, the scrotum fournier’s gangrene, carcinoma of the scrotum, male factor infertility,</b></p>	
<p><b>17. Transplantation</b></p>	
<p><b>Learning objectives</b></p> <ul style="list-style-type: none"> <li>•• To appreciate the immunological basis of allograft rejection</li> <li>•• To know the principles of immunosuppressive therapy</li> <li>•• To be aware of the side effects of non-specific immunosuppression</li> <li>•• To be familiar with the major issues concerning organ donation</li> <li>•• To appreciate the main indications for organ transplantation To know the surgical principles of organ implantation</li> <li>•• To be able to give an account of the causes of graft dysfunction</li> <li>•• To know the likely outcomes after transplantation</li> <li>•• To be aware of potential future developments in transplantation</li> </ul>	
<p><b>historical perspective, definitions, graft rejection, abo blood group antigens, types of allograft rejection, graft-versus-host disease, hla matching, immunosuppressive therapy,</b></p>	

**Clinical sessions:**

History taking and presentation

General examination, head and neck examination

Abdominal examination

Examination of peripheral vascular system

Chest examination

The student should be able to write a well-constructed history and systemic examination for the following topics

- 1 Abdominal pain
  - 2 Abdominal swelling
  - 3 Change in bowel habit / rectal bleeding
  - 4 upper gastrointestinal bleeding
  - 5 Difficulty swallowing / dyspepsia /dysphagia
- Sings of peritonitis
- 6 Jaundice
  - 7 Lumps in groin Gen
  - 8 Lumps in scrotum / scrotal pain
  - 9 Pain in loin
  - 10 Urinary retention or flow obstruction
  - 11 Hematuria (including stones and tumors)
  - 12 Leg ulceration
  - 13 Painful and/or paralyzed limb
  - 14 Breast lumps and nipple discharge Gen (Breast)
  - 15 Lumps in the neck
  - 16 Caring for the postoperative patient, including nutrition, enhanced recovery and the critically ill patient; advice re return to activities
  - 17 Thyroid enlargement and hyperthyroidism
  18. Signs of chronic liver diseases

**References:**

Essential books (text books):

Bailey and Love's Short Textbook of Surgery,

Norman Browse clinical surgery

Recommended books:

Schwartz Textbook of Surgery

Current Surgical therapy

## **4- Pediatrics II**

### **Aims of the course:**

- To provide the students with basic knowledge of normal and abnormal growth and development (physical, physiologic, psychosocial) and its clinical application from birth till adolescence.
- To enable students to provide basic health care for Pediatric age group (neonates, infants, children and adolescents).
- To provide students with appropriate knowledge and skills needed for management of the common and important pediatrics emergencies and diseases.
- To provide the students with appropriate professional attitude and communication and problem solving skills.
- To enable the students to acquire lifelong learning competencies necessary for continuous professional development.
- Describe preventive strategies for common infectious disorders, malnutrition, genetic and metabolic disorders, poisoning, accidents and child abuse.
- Outline national programs relating to child health including immunization programs.

### **Learning objectives:**

#### **(Knowledge):**

- 1-Describe normal growth and development during infancy, childhood and adolescence.
- 2-Identify abnormalities of growth and development during infancy and childhood.
- 3-Describe appropriate management for abnormalities affecting growth and development.
- 4-Identify common genetic diseases and their impact on children and families.
- 5-Determine the nutritional requirements and the most common nutritional disorders affecting infants and children.
- 6-Describe appropriate management of nutritional disorder.
- 7-Describe the indications, contraindications, administration and precautions of the immunization necessary for infants and children according to the national schedule and the condition of the child.

8-Recognize the most important behavioral and social issues during childhood and adolescence.

9-Describe appropriate measures for health promotion as well as prevention of diseases and injury in infants, children and adolescents.

10-Describe the causes, pathogenesis, clinical symptoms, signs, investigations, treatment and prognosis of the most important neonatal and pediatric problems.

11-Set the management priorities for different neonatal and pediatric emergency.

12-Describe the theoretical basis of professional practical skills and evidence based medicine (EBM).

13-Recognize basis of ethics, medico legal aspects of health, problems malpractice and common medical errors.

14-Recognize basics of health and patient's safety and safety procedures during practical and clinical years.

**(Skills):**

1-take and record a structured patient-centered medical history.

2-check vital signs in neonates, infants, children and adolescents.

3-asses physical and mental development in neonates, infants, children and adolescents according to standard milestones and recognize abnormalities.

4-perform appropriate clinical and anthropometric assessment of the nutritional status of infants and children.

5-perform an adequate clinical examination for a patient in the pediatric age group and identify deviations from normal.

6-construct appropriate management strategies both diagnostic and therapeutic for patients with common acute and chronic pediatric diseases.

7-assess, classify and describe appropriate treatment for sick children below the age of five years according to the principles of Integrated Management of Childhood Illness(IMCI).

8-compose an initial plan of management for stabilization for different neonatal and pediatrics emergencies.

9-work out drug dosage based on patient's criteria and health condition.

10-write safe prescriptions of different types of drugs.

**(Attitudes):**



1-adopt an empathic and holistic approach to the patients and their problems taking into consideration beliefs, values, goals and concerns.

2-respect the patients, families right to know and share in decision making as well as dignity, privacy, information confidentiality and autonomy.

3-understand and respect the different cultural beliefs and values regardless of their disabilities in the community they serve.

4-recognise the important role played by other health care professions in patients, management regardless of degree or occupation.

5-counsel patients suffering from different conditions as well as their families.

6-recognize one's own limitations of knowledge and skills referring patients to appropriate health facility at the appropriate stage.

### Teaching methods:

Theoretical lectures

Clinical sessions: case discussions

Seminars and small group teachings

### Assessment methods:

<b>20 degree</b>	<b>Mid written exam</b>	<b>Short assay, MCQ, Matching, most appropriate</b>
<b>20 degree</b>	<b>Clinical exam</b>	<b>OSCE, slides, oral</b>
<b>60 degree</b>	<b>Final course Written exam</b>	<b>Short assay, MCQ, Matching, most appropriate</b>

### Course contents:

1.growth and development(2 2.Milestone 3.Commen cold 4.Croup 5.Broncholitis 6.Asthma(2) 7.Pneumonia(2)	10ساعات	ا.د. عباس الشباني Causes, epidemiology, clinical manifestation, diagnosis, treatment, prevention
1.measles 2.rubella, roseola infantum 3.chicken pox 4.kala-azar 5.vaccination 6.TEF 7.GERD	11ساعات	ا.م.د. شيماء داخل Causes, epidemiology, clinical manifestation, diagnosis, treatment, prevention

8.pyloric stenosis, Intussusception 9.hirschsprung disease 10.AGE 11.viral hepatitis		
1.mumps 2.pertussis 3.poliomyelitis 4.GBS 5.Typhoid fever 6.Brucellosis 7.meningitis (2) 8.encephalitis	9ساعات	ا.د. نسمة الحجية Causes, epidemiology, clinical manifestation, diagnosis, treatment, prevention

### **Clinical and small group teaching.**

Students divided to small group teaching and they learn examination of body systems ( C.V.S., R.S., G.I.T., C.N.S.) ,( examination of pediatrics patients in the pediatric wards with different clinical findings) .

At the end of the course , there is clinical assessment .

### **References:**

- 1-Nelson-Essentials of Pediatrics.
- 2-Pediatric Secrets.
- 3-Nelson Textbook of Pediatrics.
- 4-Hutchison,s Clinical Methods.
- 5-Pediatric Clinical Exam Made Easy.
- 6-Macload,s Clinical Examination.

## **5-Community Medicine II**

### **Aims of the course:**

1-Teaching undergraduates medical students the principles and methods of epidemiology, medical statistics, basic epidemiology and control of communicable and non-communicable diseases. This is in addition to

2-Teaching of primary health care concepts and practical programs in Iraq. Health care administration (planning management and evaluation techniques) as well as medical sociology and demography are also taught by the Department.

3-Brief sessions are also given on topics related to health economics, health information and utilization of health care services.

4-A short course is also arranged to tackle problems of environmental and occupational health.

### **Learning objectives:**

#### **(Knowledge):**

- 1.To acquire basic knowledge on main components of community medicine interests
- 2.To develop relevant competencies and skills in epidemiology and statistics so as to be able to measure and evaluate health and health care services
- 3.To develop abilities and competencies in the epidemiology and control of major health problems at population level
- 4.To develop basic principles of scientific research
- 5.To develop understanding of primary health care as strategy and services to the population
- 6.To contribute to the requirements of graduation of competent doctors to serve national, regional as well as local goals
- 7.To be prepared for postgraduate training in the future
- 8.To be prepared to pursue self-learning towards continuing professional development.

#### **(Skills):**

- 1.Interpret the distribution of disease in a population in terms of person, place and time
- 2.Describe the components of a rate, ratio and proportion

3. List, define and compute common rates used to measure fertility, morbidity and mortality in community
4. Define absolute risk, relative risk and attributable risk. Interpret their use in epidemiological situations
5. Distinguish between association and causation and list causal criteria
6. Describe major epidemiological studies (cross-sectional, longitudinal, case-control and cohort)
7. Make a simple design of an epidemiological study to describe the distribution of disease in population
8. Make a simple design of an epidemiological study to identify risk factors for a given disease
9. Analyze and interpret results obtained from relevant epidemiological studies

**(Attitudes):**

- 1- The proper ethical approach when dealing with patients in the field of primary health care centers
- 2- The proper communication skills needed when giving important advice necessary for health promotion and disease prevention
- 3- The ethical and legal codes used for conducting health related research and the proper way of acquiring patient's consent and respect autonomy
- 4- The importance of keeping patient's information confidential

**Teaching methods:**

Theoretical lectures

Small groups research projects

Regular visits to Primary Health Care Centers and students active involvement in patients care

**Assessment methods**

Written exams

Evaluation of research projects

Reports and seminars

Students activity during small group sessions and visits

**Course contents:**

**Theory**

مخرجات التعلم المطلوبة	الساعات	الأسبوع
Components	3	الاول
Nutrition during pregnancy	3	الثاني
Infection during pregnancy	3	الثالث
Low birth weight	3	الرابع
Prematurity	3	الخامس
Evaluation of MCH care	3	السادس
Vital statistics in MCH	3	السابع
Primary health care services	3	الثامن
Health care for children	3	التاسع
Growth monitoring , immunization , development	3	العاشر
School health services	3	الحادي عشر
Supportive programs to primary health care (PHC)	3	الثاني عشر
Skills of PHC workers	3	الثالث عشر
The characteristics of five star doctor	3	الرابع عشر
National PHC programs	3	الخامس عشر

### Practical sessions:

Include regular visits to Primary Health Care Centers and other health care centers with students observing the system and participating in patient service under supervision in addition to research projects, seminars and small group sessions

### References:

Control of communicable diseases manual CDC Atlanta

Hennikan's Epidemiology in Medicine

## **5-Forensic Medicine II**

### **Aims of the course:**

- Each lecture handout will provide specific objectives.
- The course will familiarize students with the bases of forensic medical concepts, and the art of dealing with cases referred by investigative authorities to health institutions.
- This course will include gross, microscopic, and radiologic material to help the students in understanding the theoretical information.
- Lectures will be directed to clarify forensic medical vocabulary related to various diseases and injuries leading to damage or death.
- Practical labs will be directed to facilitate the acquisition of the basic practical skills in the field of forensic medicine that are necessary in the daily professional life of a newly graduated doctors.
- Small groups student based learning sessions will help students to communicate and cooperate in order to reduce time needed to build up the required deep and enormous forensic medical information and to motivate students toward active process of learning.

### **Learning objectives:**

#### **(Knowledge):**

- 1-Study and define the meaning of forensic medicine in general, its global systems, the local system, its divisions (living and autopsy departments)
- 2-Definition of death, signs and causes.
- 3-Description of all types of violent injuries. (vocabulary of the initial medical forensic report)
- 4-Description of etymology.
- 5-Study sexual offences, virginity test, sterility and impotence.
- 6-DNA testing applications in forensic medicine.

#### **(Skills):**

- 1-Demonstrate the probable and confirmed signs of death, diagnose its occurrence, timing and death certificate edition.
- 2-Description of trauma and the methods of editing all kinds of forensic medical reports.

3-Examination of hymen .

4-Age estimation, clinically and by x-ray.

**(Attitudes):**

1-The development of the dialectic of doubt and scientific certainty in forensic medical field.

2-Stimulating the sense of preserving and developing scientific gains by clarifying the rights and duties of a newly graduated doctor.

3-Recognize and apply appropriate professional attitudes and problem solving skills.

4-Perform scientific research.

5-Work and learn within a team and communicate ideas and arguments effectively.

**Teaching methods:**

1. Lectures

2. Practical classes

3. Small group discussion with case study and problem solving

4. formative assessment

**Assessment methods:**

Written Examination: Assessment of knowledge and understanding and intellectual skills. These are usually done as summative assessments at the end of each system

Practical Examination: A. Assessment of practical skills.

B. Intellectual skills

**Course contents:**

Week	Date /1hour	Lecture subject	objectives
Week-1	Sunday		
	Monday		
	Tuesday		
	Wednesday	G.I.T. causes, esophageal varices, rapture gastric and peptic ulcers, acute hemorrhagic pancreatitis, fatty liver.	The student will be familiar with causes of death related to severe bleeding following rapture peptic ulcer, acute pancreatitis, and fatty liver.
	Thursday	C.N.S. causes, subarachnoid hemorrhage, berry aneurysm, cerebral hemorrhage, epilepsy	The student will be familiar with causes, of sudden death related to central nervous system, specially subarachnoid bleeding, and cerebral hemorrhage following high blood pressure.

		, genito-urinary causes. Infant death	Intra-abdominal bleeding following ectopic pregnancy.
Week-2	Sunday		
	Monday		
	Tuesday		
	Wednesday	Asphyxia: definition, general signs, classification,	The student will be able to diagnose suffocation by its general signs.
	Thursday	Smothering, choking ,strangulation,	The student will be familiar with cases of application pressure on the neck.
Week-3	Sunday		The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and differential diagnosis
	Monday		
	Tuesday		
	Wednesday	Throttling, ligamentous strangulation, hanging.	The student will be familiar with dealing and diagnosing throttling, strangulation and hanging.
	Thursday	Traumatic asphyxia, drowning, mechanism of drowning, chemical asphyxia	The student will be familiar with the most common type of asphyxia associated with social events (traumatic asphyxia), drowning, suffocation by gases.
Week-4	Sunday		
	Monday	l	
	Tuesday		
	Wednesday	Sexual offences, anatomical description, hymen, examination of the hymen.	The student will be able to examine hymen and describe its details.
	Thursday	The sequences of sexual intercourse: rapture of the hymen,	The student will be able to diagnose tear in hymen.
Week-5	Sunday		
	Monday		
	Tuesday		
	Wednesday	Intercourse with virgin without rapturing hymen, sexually transmitted diseases,	The student will be familiar with conditions that intercourse occurred with no hymen tear, with common sexually transmitted diseases.
	Thursday	Pregnancy: signs and symptoms , the forensic medical importance, Labor:,	The student will be familiar with diagnosing pregnancy, and its importance in forensic medicine.
Week-6	Sunday		
	Monday		
	Tuesday		



	<b>Wednesday</b>	Abortion: types, spontaneous: inevitable, missed, threatened.	The student will be familiar with types of abortions.
	<b>Thursday</b>	Induced abortion: accidental, therapeutic, criminal: procedures to induce abortion, complications.	The student will be familiar with types of induced abortions, procedures and complications of criminal abortion.
<b>Week-7</b>	<b>Sunday</b>		
	<b>Monday</b>		
	<b>Tuesday</b>		
	<b>Wednesday</b>	Forensic toxicology: definition, duties of doctors, classification : corrosive poisons, autopsy findings,	The student will be familiar with definition of forensic toxins, duties of doctors at emergency ward, the characteristics of acids and alkaloids poisonings.
	<b>Thursday</b>	Irritant poisons, autopsy findings, arsenic, lily, lead volatile poisons: alcohol	The student will be familiar with causes ,types ,clinical presentation, radiological findings, pathological finding and pathophysiology and differential diagnosis
<b>Week-8</b>	<b>Sunday</b>		
	<b>Monday</b>		
	<b>Tuesday</b>		
	<b>Wednesday</b>	Carbon monoxide poisoning, H <sub>2</sub> S poisoning, cyanide poisons, kerosene,	The student will be familiar with signs, autopsy findings and manner of poisoning with co ,cyanide, and kerosene.
	<b>Thursday</b>	Drugs poisoning, aspirin and paracetamol, food poisoning	The student will be familiar with signs, autopsy findings and antidote in cases of poisoning with drugs, aspirin and paracetamol.
<b>Week-9</b>	<b>Sunday</b>		
	<b>Monday</b>		
	<b>Tuesday</b>		
	<b>Wednesday</b>	Identification: definition, identifiers ,finger print, dental record, general appearance, clothes check, milestones	The student will learn about identification by finger prints dental records and general appearance.
	<b>Thursday</b>	Mole, scars, malformation, tattoo ,cautery signs, bone identification	The student will be taught about using nevi, scars, congenital and acquired malformations as identification tools.

Week-10	Sunday		
	Monday		
	Thursday	Identification of body remnants, age estimation	The students will be informed about procedures used to estimate ages.
Week-11	Sunday		
	Monday		
	Tuesday		
	Wednesday	Identification of human body remnant ,blood spot identification, sperm spot, saliva spot	The student will be informed about techniques of human remnants identification, blood spot, semen spots, saliva spots.
	Thursday	Identification of natural or artificial threads remnants, hair in forensic field,	The student will be familiar with methods of collecting evidence of natural and artificial threads remnant in crime scene.
Week-12	Sunday		
	Monday		
	Tuesday		
	Wednesday	Death associated with surgery and anesthesia.	The student will be informed about the major causes of death on surgical bench.
	Thursday	Death associated with surgery and anesthesia.	The student will be informed about the most common technical errors leading to death during surgery.
Week-15	Sunday		
	Monday		
	Tuesday		
	Wednesday	Infanticide	Students will be familiar with the common methods used to kill newborn infant.
	Thursday	D.N.A. applications in forensic medicine	Students will be informed about procedures of collecting and analyzing D.N.A. samples.
Final Exam			

#### Small groups session / Practical sessions and SBL

Week	Subject-practical session	SBL
Week-1 Group A,B,C,D,	Diagnosis of asphyxia, smothering, manual strangulation, hanging.	Approach examination

Week-2 Group A,B,C,D,	Sexual asphyxia, traumatic asphyxia.	Approach examination
Week-3 Group A,B,C,D,	Drowning	Approach examination
Week-4 Group A,B,C,D,	Approach to sexual offences.	Approach examination
Week-5 Group A,B,C,D,	Rape, examination of hymen.	Approach examination
Week-6 Group A,B,C,D,	Forensic toxins, corrosive poisons,	Approach examination
Week-7 Group A,B,C,D,	Irritant poisons, drugs, aspirin and paracetamol poisoning.	Approach examination to
Week-8	Food poisoning	Approach examination
Week-9 Group A,B,C,D,	Identification: finger prints, dental records, tattoo, bone identification	Approach examination &
Week-10 Group A,B,C,D,	Age estimation.	Approach examination of x-ray.
Week-11 Group A,B,C,D,	Blood, seminal, saliva spots identification.	Approach examination
Week-12 Group A,B,C,D,	Natural and artificial thread remnant analysis.	Approach examination
Week-13 Group A,B,C,D,	Death by cold	Approach examination
Week-14 Group A,B,C,D,	Infanticide	Approach examination
Week-15 Group A,B,C,D,	Timing of death	Approach examination
Final Exam		

**Reference:**

Text book of Forensic Medicine and Toxicology

## **5- Medical Ethics II**

### **Aims of the course:**

Students will be familiar with the important ethical and legal regulations that rule the clinical practice

### **Learning objectives:**

#### **(Knowledge):**

- 1- what is meant by The Medical Responsibility
- 2-What are the important rules of keeping patient's Confidentiality
- 3- The important ethical and legal regulations that rule special situations like brain death
- 4- The ethical codes of issues regarding reproduction
- 5- The ethical codes of issues regarding transplantation

#### **(Skills):**

How to deal with different types of patients and how to follow the ethical rules in different situations

#### **(Attitudes):**

- 1- Remember that doctors are providers of health care
- 2-Respect patient autonomy at all times
- 3-Following the ethical rules protect the doctor as well as the patient
- 4-What to do when there is Personal involvement with patients

### **Teaching methods:**

Theoretical lectures with case scenarios and discussion

Role play and video lectures

### **Assessment methods:**

Written exams

Students attendance and activity

## Course contents:

- 1- المسؤولية الطبية
- 2- واجب الطبيب في حفظ اسرار المريض
- 3- استثناءات تبيح كشف السر
- 4- الموت الدماغي
- 5- الموت الرحيم
- 6- التلقيح الصناعي وتأجير الارحام
- 7- الاعقام والاجهاض
- 8- نقل الأعضاء
- 9- زراعة خلايا المخ والجهاز العصبي

## Daily schedule of second course weeks (fourth grade)

اليوم	10:00-8:00	12:30-10:30	1:30-12:30	2:30-1:30
الاحد	B سريري توليد D سريري اطفال A سريري جراحة C سريري باطنية	توليد (قاعة بن رشد) نظري	طب مجتمع نظري (قاعة بن رشد)	
الاثنين	C سريري باطنية D سريري اطفال A سريري جراحة B سريري توليد	طب مجتمع نظري (قاعة بن النفيس) 2	اطفال نظري (بن النفيس) 2	
الثلاثاء	C سريري باطنية D سريري اطفال A سريري توليد B سريري جراحة	جراحة نظري (قاعة بن النفيس) 2	جراحة نظري (قاعة بن النفيس) 2	اخلاق طبية (قاعة بن النفيس) 2
الاربعاء	B سريري توليد C سريري باطنية D سريري اطفال A سريري جراحة	طب عدلي عملي A+B	طب مجتمع عملي A+B	
	D سريري اطفال A سريري جراحة	c+D طب مجتمع عملي	طب عدلي عملي C+D	
الخميس	باطنية نظري (قاعة بن النفيس) 2	باطنية نظري (قاعة بن النفيس) 2	طب عدلي نظري (قاعة بن النفيس) 2	

**Fifth year:**

**First course:**

عدد الوحدات	عدد الساعات		المادة الدراسية	ت
	العملي	النظري		
4	2	3	Medicine (باطنية)	.1
3	2	2	Gynecology (نسانية)	.2
4	2	3	Surgery (جراحة)	.3
6	8	2	Pediatrics (اطفال)	.4
3	2	2	Ophthalmology	.5
5	4	3	Psychiatry	.6
25			المجموع	

# 1- Medicine I

## **Aims of the course:**

By the end of the course of Internal Medicine, the student should be qualified as a general practitioner, who is able to:

- Make a proper diagnosis of common medical conditions accurately and independently based on adequate history taking, physical examination and interpretation of relevant supportive investigations.
- Deal with acute medical emergencies safely and effectively with the aid of the assistant lecturers.
- Identify the indications and logistics of referring patients to higher levels of experience or specialization.
- Perceive and integrate accurately the progress in medical knowledge and Technology

## **Learning objectives:**

### **(Knowledge):**

- 1- Interpret common rheumatologic serologies.
- 2-Diagnosis of the common Rheumatologic diseases
- 3-Students will also become proficient in physical exams of the musculoskeletal system.
- 4-Therapeutic interventions and pharmacology used in rheumatology will be better understood.
- 5-Exposure to the diagnosis and management of hematologic diseases in the inpatient and outpatient settings.
- 6-The student will become familiar with the clinical evaluation of cytopenias, and the staging and treatment of hematologic malignancies.
- 7-The principles of the treatment of neoplastic diseases and the effective use of the clinical laboratory in managing hematologic disorders.
- 8-Students should be able to identify normal and abnormal peripheral blood and bone marrow cell morphology.

**(skills):**

1. Take a good medical history.
2. Measure vital signs adequately.
3. Conduct a proper general examination and identify normal and major abnormal physical signs.
4. Conduct proper regional examination of the thorax and abdomen by inspection, palpation, percussion and auscultation to identify:
  - Surface anatomy of internal organs.
  - Normal physical signs.
  - Major abnormal physical signs.
5. Develop and present a comprehensive medical sheet including history and physical examination.
6. Develop the clinical skills of eliciting abnormal physical signs.
7. Interpret the significance and relevance of abnormal physical signs.
8. Identify the appropriate supportive investigations relevant to a particular patient and adequately interpret the results.
9. Integrate the patient's symptomatology, historic data, abnormal physical signs and investigations into a comprehensive differential diagnosis.
10. Identify adequate logistics for further patient assessment and management.
11. Become acquainted with special approach to the diagnosis of common medical conditions related to the specialty.
12. Get exposed to less common medical disorders within the domain of specialty.
13. Get updated information about and demonstrations on modern diagnostic tools within the specialty.
14. Get acquainted with special therapeutic and interventional techniques related to the specialty.
15. Perform basic nursing procedures as injections, infusions, transfusion, introduction of urinary catheter, gastric and rectal tubes, etc.
16. Adequately interpret the results of common laboratory investigations as urine analysis, blood picture, liver and kidney function tests, etc.
17. Properly read X-ray, CT and ultrasonic images of common diseases.



**(Attitudes):**

- 1- Demonstrate the clinical responsibilities of the role of the doctor
- 2- Demonstrate a compassionate and professional behavior to reassure that patients needs are addressed
- 3- Maintain the patient confidentiality and respect dignity and privacy
- 4- Act with integrity, be polite, considerate, trustworthy and honest
- 5- Manage time and prioritize effectively

**Teaching methods:**

1. Lecture
2. Practical class
3. Small group discussion with case study and problem solving
4. Quizzes

**Assessment methods:**

Written Examination: Assessment of knowledge and understanding and intellectual skills.

Practical Examination: A. Assessment of practical skills.

B. Intellectual skills

**Course contents:****Theory**

A- Rheumatology:

- 1- Introduction
- 2- Rheumatoid Arthritis RA
- 3- Juvenile RA
- 4- Systemic lupus erythematosus
- 5- Classification and DDx of arthropathies
- 6- Sero negative arthropathies
- 7- Crystal arthropathies
- 8- Drugs used in rheumatic diseases
- 9- Corticosteroids and other immunosuppressive agents
- 10- Back pain
- 11- Basic immunology and immune diseases
- 12- Introduction to Rehabilitation
- 13- Modalities of Physiotherapy
- 14- Rehabilitation of brain damage and spinal cord trauma and lesion

## B- Hematology:

- 1-Hematopoiesis
- 2-Bone marrow failure
- 3-Anemias
- 4-Bleeding disorders
- 5-Lymphadenopathy
- 6-Anticoagulants
- 7-Acute leukemia
- 8-Blood transfusion
- 9-Myeloproliferative disorders
- 10-Lymphomas
- 11-Chronic leukemia
- 12-Thrombophilia

### **Practical sessions:**

3 weeks training at the Rheumatology and Rehabilitation outpatient clinic in which students are divided for small groups, they will interact with patients, learn how to take history, perform examination, make differential diagnosis and how to formulate a treatment plan.

### **References**

- 1-Davidson's principle & practice of medicine
- 2-Harrison's Textbook of medicine
- 3-Cecil textbook of medicine.
- 4-Kummer & Clark of medicine
- 5-Macleod clinical method.

## **2- Gynecology I**

### **Aims of the course:**

-Provide students with basic knowledge of normal and abnormal growth and development of the female genital tract enable students to provide basic health care for female in different age group (prepubertal, pubertal, childbearing, premenopausal, and menopausal), & provide students with an appropriate background covering the common and important gynecological emergencies and diseases (causes, diagnosis and management).

-Provide appropriate ethical and professional education necessary for establishment of excellent communication with patients and colleagues and using sound ethical principles in clinical decision making.

-Provide lifelong learning competencies necessary for continuous professional development and research studies.

### **Learning objectives:**

#### **(Knowledge):**

1-describe the anatomical features and development of the female genital tract and their clinical application.

2- Explain the physiology of menstruation, puberty (its abnormalities and their management), menopause (abnormalities and their management).

3- Discuss etiology of bleeding in early pregnancy (i.e. Abortion, ectopic, vesicular mole) and their manner.

4-Differentiate the types, causes and treatment of dysmenorrhea and premenstrual syndrome (PMS) Discuss the magnitude of the infertility problem and its different etiologies, basic diagnostic tools, and treatment of infertility.

5-Describe causes, types, and methods of diagnosis and management of STDs (sexually transmitted diseases) with emphasis on methods of prevention and serious complication of STDs.

6-Outline the pathology of cervical, uterine, ovarian, vaginal and vulval cancers, with emphasis on screening methods and early recognition and broad lines of management of these conditions.

#### **(Skills):**

A-Professional skills: distinguish between different causes of bleeding in early pregnancies with judgment of life threatening conditions e.g.: hypovolemic shock of inevitable abortion, disturbed ectopic pregnancy, through vital signs, general, abdominal and pelvic examinations. Counsel problems occurring in menopause with emphasis on postmenopausal bleeding, (any case of postmenopausal bleeding should be considered malignant until proved otherwise). Counsel regarding methods of contraception suitable for each patient and how to use or apply it.

B-Intellectual skills: The student should obtain a complete and reliable history in gynecological clinic or ward, and will be able to give a good history. History must include: Patient's identity and characterization

Marital, obstetrics and contraceptive history, menstrual history. Past history including medical, surgical, habits, allergies and consanguinity whichever relevant to the case. Family history relevant to the case. The student should be capable of performing physical examination, including: general, cardiovascular system, respiratory system, breast, abdomen and pelvic examination. The student's findings will show at least 80% accuracy rate as compared to the instructor's findings. The student will be able to diagnose and outline the management of: Bartholin abscess, Vulvo-vaginitis Cervicitis and cervical ectropion, pelvic infections including: Sexually transmitted diseases. The student will show adequate capability in making the diagnosis and outlining the management of: endometriosis and adenomyosis, Leiomyoma, tub ovarian and ovarian masses.

Given a case of acute lower abdominal pain, the student will outline the causes and plan the management. The student will be able to discover vulvar, cervical and uterine pre-malignancies and malignancies.

Given a case of abnormal vaginal bleeding, the student will be able to outline the investigations and management.

The student will be able to diagnose Genital Prolapse and its varieties, urogenital fistulas, and to outline the management. perform physical examination, plan the investigation and management of: Precocious or delayed puberty, premature menopause, amenorrhea, galactorrhea and hirsutism..Given a case of infertility, the student will be able to interview the couple, perform physical examination, plan the investigations and outline the management. The student will be able to perform speculum examination and to observe obtaining high vaginal swabs, urethral and cervical swabs, wet smears, pap smears and to do bimanual examination. The student may observe if possible: Loop insertion, cervical biopsies, cervical cauterizations..

C-Communication and general skills: Communicate with the patient as a person, not as a disease, and understand that the patient is a person with beliefs, values, goals, and concerns, which must be respected in addition to respecting the patient's dignity, privacy, information confidentiality and autonomy. Counsel the patient before doing

any intervention and in different situations with respect to her wish whenever this is possible.

Maintain the atmosphere of cooperation, peer relationships, and mutual respect in the university society.

Advance the knowledge base of gynecology by developing and encouraging scientific researches.

**(Attitudes):**

The student will be able to perform speculum examination and to do during their clinical attachment high vaginal swabs, urethral and cervical swabs, wet smears, pap smears and to do bimanual examination.

The student may observe & share if possible in: Loop insertion, cervical biopsies, cervical cauterizations, examination under anesthesia, evacuation of retained products of conception, hysterosalpingography, and laparoscopy.

The student will have fair knowledge of utilization of ultrasound technology in the diagnosis of missed miscarriage early pregnancy, retained products of conception, Ectopic pregnancy, uterine Leiomyoma, ovarian and tubo-ovarian masses, and the use of serial ultrasound to monitor follicular growth and ovulation.

**Teaching methods:**

1-lectures: two lectures per week from 11.00am till 12:00pm & from 2:00 pm till 3:00pm (general topics) to cover the basic minimal knowledge required for all physicians & to utilize the available time (45-50 minutes) in presenting the knowledge as simple, updated, well-illustrated, and easily understood as possible. Rare topics, and those irrelevant to our community should be omitted or given less importance and time. Lectures are delivered whenever possible by the senior academic staff. Lectures given as clinical presentation to cover each area.

2-clinical attachments: Each term, students are divided into 10-11 groups, students will have a clinical round in the morning from 8:00am -9.15 discussing a clinical case from outpatients then they are subdivided to small groups to examine the patients & in the gynecology outpatient clinic, they take history from an outpatient lady & do gynecological examination.

3-problem based learning: if there is no patients with particular problem in the ward, teacher has to be a "role player" and make the students take history followed by diagnosis, investigation and management:

1. Bleeding in early pregnancy (miscarriages and Trophoblastic disease)
2. Leiomyoma of uterus
3. Antepartum haemorrhage & postpartum haemorrhage

4. Episiotomy & perineal tears
5. Endometriosis, Adenomyosis
6. Cervical cancer (Pre malignant & malignant).
7. infertility

## **2. CLINICAL ATTACHMENT**

The students are offered clinical attachment in Gynaecology for 10 days. 10 courses during 1<sup>st</sup> term, each course, nearly 30-35 students.

students will have a clinical round in the morning from 8:00am – 8:30am discussing a clinical case from inpatients, outpatients, emergency room, then from 8:30 till 9:15 start clinical cases & from 9.15–10 am start with video skills or model & from 10 till 10.45 am problem based learning PBL.

## **3. TEACHER CENTERED TUTORIALS and PROBLEM BASE LEARNING 10 am- 10.45 am**

Tutorial in a gynecological case are taken by senior staff, student will take history from patient and examine them under the supervision of the teacher. Different cases will be discussed daily.

Patients are taken from various wards and or outpatient clinic. If there is no patient teacher will act as a role player. Interpret value, read ultrasound pictures, x-rays, instruments, contraceptive method and pathology specimen. These are shown during tutorial with explanation and discussion.

Ultimate objective No: 1 is to be covered by these activities. The student will be trained adequately on self-learning methods and procedures. So, they can continuously update her knowledge and skills. The role of teachers in these activities is to supervise and guide the student's effort. If there is no patients with particular problem in the ward, teacher has to be a "role player" and make the students take history followed by diagnosis, investigation and management. This occurs daily for the course which is 10 days.

## **4. TEACHER CENTERED Audio-visual material demonstrations and practice skills 9.15am–10. am.**

Daily, the teacher will discuss for the student the procedures & operation in gynecology, this is started from Sunday till Thursday for 10 days

5<sup>th</sup> year

<i><b>Tutorials</b></i>	<i><b>Day</b></i>	<i><b>Gynecology</b></i>
<b>Week 1</b>	Sunday	Gynecological history and Examination
	Monday	Patient with a diagnosis of Endometriosis /clinical presentation /dx /treatment
	Tuesday	Discuss Various Contraception methods
	Wednesday	Patient with vaginal discharge – discuss about various types of vaginitis & it is management
	Thursday	Patient admitted in the ward with suspected ectopic (history investigation & management)
<b>Week 2</b>	Sunday	Patient with leiomyoma of uterus – various presentation and management
	Tuesday	Patient admitted with heavy and prolong bleeding history taking – differential diagnosis – investigations and management
	Wednesday	Patient with history of previous recurrent miss carriages – now admitted at 11 weeks pregnancy. History taking, diagnosis, investigation and management
	Thursday	Assessment

<b>Audio-visual</b>	<b>Day</b>	<b>Gynecology</b>
<b>Week 1</b>	<b>Sunday</b>	Learn the students how to perform speculum examination and how to obtain high vaginal swabs, urethral and cervical swabs, wet smears, pap smears and to do bimanual examination.
Monday		Loop insertion, cervical biopsies, cervical cauterizations, examination under anesthesia, evacuation of retained products of conception, hysterosalpingography
Tuesday		The student may observe if possible: Implanon insertion and mirena insertion
Wednesday		The student will be familiar with gynecological instruments and their uses Set of D&C and how can perform hysterosalpingography
Thursday		The student may observe if possible: How to perform colposcopic examination
Sunday		Slide show of various types of contraceptive methods. Side effect & complication
Monday		The student will have fair knowledge of utilization of ultrasound technology in the diagnosis of missed miscarriage early pregnancy ,retained products of conception, Ectopic pregnancy, uterine Leiomyoma, ovarian and Tubo-ovarian masses, and the use of serial ultrasound to monitor follicular growth
Tuesday		Slide show of laparoscopic procedures (i.e ovarian drilling , ovarian cystectomy)
Wednesday		The student will be able to observe major operations, like: myomectomy, abdominal and vaginal hysterectomies, and pelvic floor repair
Monday		Assessment

### **Assessment methods:**

#### 1.Attendance

- a. Behavioral & ethical attendance
- b. Logbook for clinical cases
- c.Attendance in outpatient clinic

The minimum accepted attendance is 70 % at the end of term examination.



## 2. Assessment tools

- a. Written examination: for assessment of general knowledge & understanding.
- b. Oral examination by two members of teaching staff to assess how fifth year student deal with gynecological scenario problems.
- c. Clinical examination (long case exam): medical student's ability in managing clinical cases in comprehensive way.

### Course contents:

#### 1-Theory:

No.	Topics
1	Anatomy of female genital organs
2	Physiology of menstruation
3	Normal and abnormal development of female genital tract
4	Inter sex
5	Amenorrhea ( primary and secondary )
6	Abnormal vaginal bleeding
7	Miscarriages
8	Recurrent miscarriage
9	Ectopic pregnancy
10	Benign gestational trophoblastic diseases
11	Malignant gestational trophoblastic diseases
12	Premenstrual tension syndrome and dysmenorrhea \
13	Non hormonal contraception
14	Hormonal contraception
15	Polycystic ovarian syndrome
16	Hirsutism
17	Female infertility
18	Male infertility
19	Assisted reproduction therapy
20	Normal vaginal discharge and vaginal infections

21	Sexually transmitted diseases
22	Pelvic inflammatory diseases

## 2-Clinical cases:

Reproductive Endocrinology and Infertility:

Interpretation of different HSG ( Hysterosalpingographies) to determine uterine, cervical, and tubal lesions that may cause infertility

History taking and examination of cases of amenorrhea

Displacements, Traumatic Lesions, and Urogynecology:

History taking and examination of different cases of genital prolapse and cases with SUI (Stress Urinary incontinence)

History taking and examination of genital fistula.

Contraception and Family Planning:

Examination of different types of contraceptive devices, and observation of the methods of their application in the outpatient clinic.

Pelvic-abdominal mass cases:

History taking and examination of different cases.

Abnormal genital tract bleeding cases:

History taking and examination of different cases

**3- Medical Skills:** further subdivision of the students into small groups with the residents to observe them while managing the outpatient clinic, also they can watch ultrasound being done by the staff members, and interpret different gynecological diseases& can enter the emergency gynecology room watching for minor operations as dilatation and curettage and Bartholin abscess.

**4-Clinical Diagnostic Studies:** The students will be trained adequately on self-learning methods and procedures. So, they can continuously update their knowledge and skills. The role of teachers in these activities is to supervise and guide the student's effort.

## References:

- 1.Gynecology by ten teachers. Arnold
- 2.Evidence based medicine in obstetrics & gynecology
- 3.Dewhurst's textbook for obstetrics & gynecology
- 4.Essential of obstetrics & gynecology

## 3- Surgery I

### Aim of the course:

- Provide students with basic knowledge of principal of surgical anatomy and fracture and Orthopaedic problems related to upper and lower limbs and spine and provide background covering the common and important Orthopaedic emergencies and diseases (causes, diagnosis and management).
- Provide appropriate ethical and professional education necessary for establishment of excellent communication with patients and colleagues and using sound ethical principles in clinical decision making .
- Provide lifelong learning competencies necessary for continuous professional development and research studies.

### Learning objectives:

**1-Knowledge:** principles of fracture management and major guide line about common Orthopaedic emergencies related to upper , lower limb or spine and pelvis whether pediatrics or adults .

### 2-Skills:

Professional skills: distinguish between different types of fractures and kind of conservative or fixation tools used and the common orthopedic procedure in the emergency department like cast, traction etc...

Intellectual skills: The student should obtain a complete and reliable history in fracture clinic or ward, and will be able to give a good history.

Communication and general skills: Communicate with the patient as a person, not as a disease, and understand that the patient is a person with beliefs, values, goals, and concerns, which must be respected in addition to respecting the patient's dignity, privacy, information confidentiality and autonomy. Counsel the patient before doing any intervention and in different situations with respect to his or her wish whenever this is possible.

Maintain the atmosphere of cooperation, peer relationships, and mutual respect in the university society.

Advance the knowledge base of fractures by developing and encouraging scientific researches.

### 3-Attitudes:

- 1- Demonstrate the clinical responsibilities of the role of the doctor
- 2- Demonstrate a compassionate and professional behavior to reassure that patients needs are addressed

3-Maintain the patient confidentiality and respect dignity and privacy

4- Act with integrity, be polite, considerate, trustworthy and honest

5- Manage time and prioritize effectively

### **Teaching methods:**

1-lectures: Three hours per week (Monday )from 1.00pm till 2:00pm & (Tuesday )from 11:00 am till 1:00pm (general topics)to cover the basic minimal knowledge required for all physicians &to utilize the available time in presenting the knowledge as simple , updated, well-illustrated, and easily understood as possible. Rare topics, and those irrelevant to our community should be omitted or given less importance and time. Lectures are delivered whenever possible by the senior academic staff. Lectures given as clinical presentation to cover each areas.

2-clinical attachments:: students are divided into 5-6 groups , students will have a clinical round in the morning from 8:00am -9.00am discussing a clinical case from outpatients then they are subdivided to small groups to examine the patients& in the outpatient clinic.

3-problem based learning: if there is no patients with particular problem in the ward, teacher has to be a "role player" and make the students take history followed by diagnosis, investigation and management

### **Assessment methods:**

1.Attendance

a. Behavioral & ethical attendance

b. Logbook for clinical cases

c.Attendance in outpatient clinic

The minimum accepted attendance is 70 % at the end of term examination.

2.Assessment tools

a. Written examination: for assessment of general knowledge & understanding.

b. Oral examination by two members of teaching staff to assess how fifth year student deal with orthopaedic scenario problems.

c.Clinical examination to medical student's attendance in managing clinical cases in apprehensive way.

3.Assessment schedules: fifth year MBCHB program assessment schedules include:

Marks allocated	Examination	Marks	Parameters
10% M	Term exam held at the end of 14 days of clinical attachment	28	Attendance oral examination
30 %M	Mid Term	30	MCQ , most appropriate answers , matching short assay ( 2 hours )
60%M	End course	60	60% cases MCQ , most appropriate answers , matching 40% short assay( 3 hours )

### Course contents:

No.	Topics	Learning content	Hours
1	Introduction Introduction to traumatology and orthopedics. Bone regeneration. Closed and open fractures. Modern methods of fracture treatment	Master the basic knowledge of Transport Immobilization. Features of treatment of multiple, combined and combined injuries of the support and movement system. Transport immobilization. Basic principles. Devices for transport immobilization. Definition of "fracture". Classification of fractures, clinic, diagnosis, treatment. Complications that occur in the treatment of fractures: delayed fusion, false joints, improper fusion. The causes of these complications, their prevention and treatment.	3
2	Upper limb trauma	Master the basic knowledge of scapular damage.	5

		<p>Classification, diagnosis, treatment. Dislocations and fractures of the clavicle. Diagnosis, conservative and operative treatment. Mechanogenesis of fractures of the proximal humerus. Classification, diagnosis, treatment. Fractures of the diaphysis of the humerus. Mechanogenesis of injury, diagnosis, treatment. Fractures of the distal end of the humerus. Mechanogenesis of injury, classification, diagnosis, treatment. Fractures of the ulnar process. Mechanogenesis of injury, clinic, diagnosis, treatment. Fractures of the radial head. Classification, mechanism of injury. Clinic, diagnosis, treatment. Fractures of the diaphyses of the forearm bones. Classification, mechanism of damage. Features of fragment displacement. Clinic, diagnosis. Indications for conservative and operative methods of treatment. Fractures of the distal end of the radial bone and their types. Mechanogenesis of damage. Clinic, diagnosis, treatment Fractures of the bones of the hand. Fractures of the wrist and metacarpal bones. Typical mechanisms of injury. Clinic, diagnosis, treatment. Damage to the tendons of the fingers. Clinic, diagnosis, treatment. Classification of bleeding in injuries and damage to blood vessels. Clinic of acute blood loss.</p>	
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		Ways to temporarily stop bleeding on the battlefield and stages of medical evacuation. Clinic and treatment of nerve damage.	
3	Lower limb trauma	<p>Master the basic knowledge of the classification of fractures of the proximal femur. Mechanism of damage. Clinic, diagnostics. Providing medical care at the prehospital stage. Methods of treatment, their indications and features depending on the location of fractures and their types. Fractures of the femoral shaft. Mechanism of injury, clinic, diagnosis. Features displacement of fragments depending on the location of the fracture. Indications for conservative and surgical treatment. Fractures of the condyles of the femur. Classification, mechanism of injury. Clinic, diagnosis. The main principles of treatment. Indications for operative and conservative methods of treatment. Fractures of the patella. Clinic, diagnosis. Methods of treatment depending on the type of fracture. Knee ligament damage. Mechanism of injury, clinic, diagnosis. Methods of their conservative and operative treatment. Damage to the menisci. Mechanism of injury, clinic, diagnosis, treatment. Damage to the soft tissues of the lower leg (muscles, heel</p>	5

		<p>tendon, small tibial and tibial nerves, blood vessels). Clinic, diagnosis and treatment. Fractures of the tibia. Classification. Damage mechanism, clinic, diagnosis. Conservative and operative methods of treatment of shin bone fractures, indications for them. Shin bone fractures. Classification, mechanism of injury, diagnosis. Conservative and operative treatment. Closed reposition technique for typical bone fractures. Fractures of the calcaneus and heel bones. The mechanism of their damage. Clinic, diagnosis, treatment. Fractures of the metatarsals and phalanges of the fingers. Clinic, diagnosis, treatment. Features of treatment of fractures of foot bones.</p>	
4	<p>Spine trauma and orthopaedic Spine injury. Clinic, diagnosis, treatment. Open fractures, features of treatment. Traumatic osteomyelitis</p>	<p>Master basic knowledge about spinal injuries, mechanogenesis, clinic, diagnosis. Treatment. Features of modern approaches to the treatment of open fractures, classification. Methodology of treatment of posttraumatic osteomyelitis.</p>	5
5	<p>Lower limb orthopaedic</p>	<p>Master the common sport related injuries and common congenital and soft tissue problems related to lower limbs and pelvis in pediatrics and adult</p>	5



6	Upper limb orthopedics	Master the common sport related injuries and common congenital and soft tissue problems related to upper limbs and shoulder girdle in pediatrics and adult	5
7	Tumors Orthopaedic infections  Inflammatory, tumorous and tumorous diseases of the musculoskeletal system. Clinic, diagnosis, treatment.	Master basic knowledge about tumor and tumorlike diseases of the musculoskeletal system.	4
9	Osteoporosis and rickets	Master the basic principles of detection and diagnosis, laboratory diagnostics. Instrumental diagnostics. Basic principles of treatment of osteopenia and osteoporosis.	2

10	<p><b>Amputation</b></p> <p>Limb amputations. Rehabilitation and prosthetics for the disabled with limb defects. Treatment of traumatological and orthopedic patients in an outpatient setting.</p>	<p>Master the basic knowledge of indications for limb amputation. Methods and methods of limb amputation. Features of treatment of patients with defects of extremities The purpose and objectives of prosthetics. Indications and contraindications to prosthetics. Types of limb prostheses - cosmetic, activecosmetic. Orthopedic devices, their purpose, device. Indications for use orthopedic devices. Orthopedic shoes. Indications for the appointment of orthopedic shoes. Principles of organization of outpatient care for patients with injuries and orthopedic diseases.</p>	1
11	<p><b>Osteoarthritis</b></p>	<p>Master basic knowledge of Clinical manifestations of osteochondrosis and osteoarthritis, modern methods of diagnosis and treatment of degenerative - dystrophic diseases of the spine and joints.</p>	1
12	<p><b>Neurologic disorder and nerve injury</b></p>	<p>Master basic knowledge of clinical diagnosis of partial and complete nerve injuries and there treatment</p>	1

## 2-Clinical cases:

Pediatric supracondylar fracture of humorous

Hip spica for fracture femur

Compound fracture tibia: emergency managements

Hip joint septic arthritis

3- Medical skills A: further subdivision of the students into small groups with the residents to observe them while managing the outpatient clinic, also they can watch cast room and minor operation room , and interpret different.

4-Clinical Diagnostic Studies: The students will be trained adequately on self-learning methods and procedures. So, they can continuously update their knowledge and skills. The role of teachers in these activities is to supervise and guide the student's effort.

**References:**

1-Apley's System of Orthopaedics and Fractures, 9th Edition

2-Campbell's Operative Orthopaedics, 4-Volume Set - 14th Edition

## **4- Pediatrics**

**Aims of the course:**

-To provide the students with basic knowledge of normal and abnormal growth and development (physical, physiologic, psychosocial) and its clinical application from birth till adolescence.

-To enable students to provide basic health care for Pediatric age group (neonates, infants, children and adolescents).

-To provide students with appropriate knowledge and skills needed for management of the common and important pediatrics emergencies and diseases.

-To provide the students with appropriate professional attitude and communication and problem solving skills.

-To enable the students to acquire lifelong learning competencies necessary for continuous professional development.

### **Learning objectives:**

#### **(Knowledge):**

1-Describe the causes, pathogenesis, clinical symptoms, signs, investigations, treatment and prognosis of the most important Hematological, Endocrine and Cardiac pediatric problems.

2-Set the management priorities for pediatric emergency.

3--Describe the theoretical basis of professional practical skills and evidence based medicine (EBM).

4-Recognize basis of ethics, medicolegal aspects of health, problems malpractice and common medical errors.

5-Recognize basics of health and patient, s safety and safety procedures during practical and clinical years.

#### **(Skills)**

1-take and record a structured patient-centered medical history.

2-check vital signs in neonates, infants, children and adolescents.

3-asses physical and mental development in neonates, infants, children and adolescents according to standard milestones and recognize abnormalities.

4-perform appropriate clinical and anthropometric assessment of the nutritional status of infants and children.

5-perform an adequate clinical examination for a patient in the pediatric age group and identify deviations from normal.

6-construct appropriate management strategies both diagnostic and therapeutic for patients with common acute and chronic pediatric diseases.

7-assess, classify and describe appropriate treatment for sick children below the age of five years according to the principles of Integrated Management of Childhood Illness(IMCI).

8-compose an initial plan of management for stabilization for different neonatal and pediatrics emergencies.

9-work out drug dosage based on patients criteria and health condition.

10-write safe prescriptions of different types of drugs.

**(Attitudes):**

1-adopt an empathic and holistic approach to the patients and their problems taking into consideration beliefs, values, goals and concerns.

2-respect the patients, families right to know and share in decision making as well as dignity, privacy, information confidentiality and autonomy.

3-understand and respect the different cultural beliefs and values regardless of their disabilities in the community they serve.

4-recognise the important role played by other health care professions in patients, management regardless of degree or occupation.

5-counsel patients suffering from different conditions as well as their families.

6-recognize one's own limitations of knowledge and skills referring patients to appropriate health facility at the appropriate stage.

**Teaching methods:**

Theoretical lectures

Clinical sessions which include case discussions in small group settings

**Assessment methods:**

Marks allocated	examination	parameters
20 degree	Mid written exam	Short essay, matching, MCQ, most appropriate answers
20 degree	Clinical exam	Osce, slides, short case exam, oral

60 degree	Final course written exam	Short essay in the form of clinical cases ,matching ,MCQ ,most appropriate answers
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### Course contents:

<ol style="list-style-type: none"> <li>1.introduction to anemia</li> <li>2.physiological anemia of infancy</li> <li>3.megaloblastic anemia</li> <li>4.iron deficiency anemia</li> <li>5.hereditary spherocytosis ,G6PD deficiency</li> <li>6.Thalassemia</li> <li>7.sickle cell anemia</li> <li>8.ITP , henoch-schonlein purpura</li> <li>9.hemophilia, vonwillebrand disease</li> <li>10.leukemia,lymphoma</li> </ol>	10ساعات	<p>ا.م.د.عبد العزيز وناس</p> <p>Causes,epidemiology,clinical manifestation,diagnosis,treatment</p>
<ol style="list-style-type: none"> <li>1.Congenital adrenal hyperplasia</li> <li>2.Congenital hypothyroidism,Neonatal hypothyroidism</li> <li>3.hypoparathyroidism</li> <li>4.short stature</li> <li>5.Precocious puberty</li> </ol>	5ساعات	<p>ا.د.اعلان الزامل</p> <p>Causes,epidemiology,clinical manifestation,diagnosis,treatment</p>
<ol style="list-style-type: none"> <li>1.APSGN</li> <li>2.Hemolytic uremic syndrome</li> <li>3.Nephrotic syndrome</li> <li>4.UTI</li> <li>5.Genetic disease;prenatal diagnosis, Down syndrome</li> </ol>	5ساعات	<p>ا.د.رحمن الجبوري</p> <p>Causes,epidemiology,clinical manifestation,diagnosis,treatment</p>
<ol style="list-style-type: none"> <li>1.Congenital and acquired cardiac diseases ;introduction</li> <li>2.Etiology ofCHD and classification</li> <li>3.Acyanotic volume overload (VSD)</li> <li>4.PDA, ASD</li> <li>5.Cyanotic congenital heart lesions (TOF)</li> <li>6.Paroxysmal hypercyanotic attacks, prognosis and complications of TOF</li> <li>7.TGA</li> <li>8.Heart failure in children</li> <li>9.Infective endocarditis in children</li> <li>10.Myocarditis,cardiomyopathy</li> </ol>	10ساعات	<p>ا.د.محمد الشمسي</p> <p>Causes,epidemiology,clinical manifestation,diagnosis,treatment</p>

## 5- Ophthalmology

### Aims of the course:

1-Provide students with basic knowledge of normal and abnormal anatomy and physiology of the eye and the process of vision, provide students with an appropriate background covering the common and important eye emergencies and diseases (causes, diagnosis and management).

2-Provide appropriate ethical and professional education necessary for establishment of excellent communication with patients and colleagues and using sound ethical principles in clinical decision making .

3-Provide lifelong learning competencies necessary for continuous professional development and research studies.

### **Learning objectives:**

#### **1-Knowledge and understanding :**

describe the anatomy and the eye, and their clinical aspects, explain the physiology of vision and color vision , common eye emergencies like trauma whether penetrating or blunt trauma and chemical injuries and explain how to basically manage them, explain the common eye disease s in the community like refractive errors and cataract and their pathophysiology and how to manage them .

describe how to diagnose and manage eye infections at different levels like conjunctivitis and keratitis and orbital cellulitis and how to diagnose squint and neurology related problems, understanding the pupillary reactions and their clinical attachments.

#### **2-Skills:**

**Professional skills:** taking quick and informative history from the patients and examine the patient using slit lamp set and understand how to use this set for different examinations techniques, knowing how to diagnose corneal disorders and foreign body and common conjunctival diseases like infections, diagnose anterior segment common diseases like cataract.

Understand how to Examine the patients using direct and indirect ophthalmoscope to see posterior segment disorders like optic atrophy , understand how to examine the patient in refraction room and how to measure visual acuity of the patients by using Snellen chart and other methods for children , examine patients at squint room and understand basic information about different types of squint.

**Intellectual skills:** The student should obtain a complete and reliable and quick history in ophthalmology clinic, and will be able to give a good history. History must include: Patient's identity and eye symptoms bring the patients to the clinic, good systemic history especially neurological symptoms and quick systemic history.

Examination of the patient include inspection for visible eye abnormality like ptosis or mass, mastering slit lamp examination for good inspection of the anterior segment and its common disease like cataract, ocular motility examination, visual field examination using machine available, squint examination and posterior segment examination using direct ophthalmoscopy.

**Communication and general skills:** Communicate with the patient as a person, not as a disease, and understand that the patient is a person with beliefs, values, goals, and concerns, which must be respected in addition to respecting the patient's dignity, privacy, information confidentiality and autonomy. Counsel the patient before doing any intervention and in different situations with respect to her wish whenever this is possible. Maintain the atmosphere of cooperation, peer relationships, and mutual respect in the university society. Advance the knowledge base of eye diseases by developing and encouraging scientific researches.

### **3-Attitudes:**

- 1- Demonstrate the clinical responsibilities of the role of the doctor
- 2- Demonstrate a compassionate and professional behavior to reassure that patients needs are addressed
- 3-Maintain the patient confidentiality and respect dignity and privacy
- 4- Act with integrity, be polite, considerate, trustworthy and honest
- 5- Manage time and prioritize effectively

### **Teaching methods:**

1-lectures: two lectures per week to cover the basic minimal knowledge required for all physicians & to utilize the available time (45-50 minutes) in presenting the knowledge as simple, updated, well-illustrated, and easily understood as possible. Rare topics, and those irrelevant to our community should be omitted or given less importance and time. Lectures are delivered by the senior academic staff. Lectures given as clinical presentation to cover each areas.

2-clinical attachments: Each term, students are divided into 10-11 groups, students will have a clinical course in ophthalmology department from 8:00am to 11:00 am discussing a clinical case from outpatients then they are subdivided to small groups to examine the patients & they take history from an outpatient lady & do slit lamp examination and refraction.

## **2. CLINICAL ATTACHMENT**

All students are offered clinical attachment in ophthalmology department in Al-Diwaniya teaching hospital where they take history and do slit lamp and general



examination with refraction and train how to use ancillary tests available from 8:00 to 11:00 am each group for 2 weeks.

**Assessment methods:**

1.Attendance

- a. Behavioral & ethical attendance
- b. Logbook for clinical cases
- c.Attendance in outpatient clinic

The minimum accepted attendance is 70 % at the end of term examination.

2.Assessment tools

- a. Written examination: for assessment of general knowledge & understanding.
- b. Oral examination by two members of teaching staff to assess how fifth year student deal with eye problems

Course contents:

No .	Topics	Learning objectives	Hours
1	Anatomy and physiology of the eye	1.to know the structure of the eye in layer & in segments and chambers. 2.To know the blood and nerve supply of the eyeball, 3.Quick eye assessment 4. Identification of visual acuity and visual field.	2
2	Conjunctival disorders	the anatomy of the conjunctiva and the clinical evaluation, symptoms and signs of conjunctival disorders affecting the conjunctiva Bacterial infection, simple and gonococcal infections with neonatal keratoconjunctivitis Viral infection Chlamydia infection Allergic disease affecting the conjunctiva with conjunctival degeneration which are pinguicula concretions and pterygium .	2
3	Refractive errors	Anatomy of refractive elements of the eye , the cornea and the lens physiology of vision. Types of refractive errors , Causes, signs and symptoms , treatment modalities of each one. Presbyopia definition cause pathophysiology and treatment.	2
4	Corneal disorders	Anatomy and physiology of the cornea	2

		<p>Infections (bacterial, viral and fungal) all illustration about symptoms and signs with diagnosis and treatment even complications</p> <p>Keratoconus (pathophysiology, epidemiology, clinical presentation, diagnosis and treatment )with simple talk about the most important and recent technology of treatment</p>	
5	Lens	<p>1- anatomy and physiology of the lens.</p> <p>2- to understand the process of accommodation.</p> <p>3- cataract : causes ,physiology, classification -3 according to maturity and site of cataract, signs and symptoms of cataract , indication of treatment and types of surgery done with advantages and disadvantages of Each procedure , complications of cataract surgery and how to deal with .</p> <p>4- Congenital cataract: causes and -4 pathophysiology, examination techniques in infants with suspected cataract, treatment modality and time factor importance , types of surgical procedures.</p> <p>5- Congenital aphakia : causes and treatment. -5</p> <p>6- Lens dislocation : causes and physiology , systemic association , signs and symptoms treatments modality and indications.</p>	2
6	Uveal tract	<ul style="list-style-type: none"> <li>•• to understand the anatomy and pathophysiology of lacrimal apparatus in relation to disease</li> <li>•• to be able to decide on the most appropriate techniques to use in the investigation of patients</li> <li>•• to understand the critical importance of excessive watery eye</li> <li>•• to be able to recognise the presentation of epiphora and dry eye <ul style="list-style-type: none"> <li>•• to know about the causes of dacryocystitis</li> </ul> </li> </ul>	1
7	Lid disorders	<p>the anatomy and histology of the eyelid and their relationship to disease</p> <p>the clinical features, investigations and treatment</p> <p>Abnormality in shape and position of eyelid</p> <p>Entropion</p> <p>Ectropion Ptosis Causes ,treatment</p> <p>/Triachiasis/Congenital anomaly in lid</p>	2

8	glaucoma	<p>glaucoma is a worldwide blinding disease ,understanding disease concept regarding early diagnosis and appropriate treatment considered a big achievement , there are two main glaucoma categories open and closed angle and according to presentations ;are: the acute and chronic one.</p> <ul style="list-style-type: none"> <li>• Angle anatomy and physiology of aqueous circulation :central points in glaucoma explanation</li> </ul> <p>Need to know:</p> <ol style="list-style-type: none"> <li>a. factors affect level of IOP</li> <li>b. always keep glaucoma in mind during examination of old age and diabetic patients</li> </ol> <p>How to approach patient with glaucoma;</p>	2
9	Scleral disorders	<ol style="list-style-type: none"> <li>1.Recognize the anatomy of sclera and episclera.</li> <li>2.Identify the clinical methods to differentiate between scleritis and episcleritis.</li> <li>3.Classification, clinical features, and Mx of episcleritis.</li> <li>4.Classification, clinical features, associations .DDx and Mx of scleritis..</li> </ol>	1
10	Trauma	<p>Determine the types of ocular traumas  Classify the ocular tram anatomically  Outline the management of ocular trauma  Important options on Intraocular FB.  Enoculation and sympathetic ophthalmia</p>	1
11	Orbital disorders	<ol style="list-style-type: none"> <li>1. acknowledgment of orbital anatomy is important to understand the effects of any orbital pathology on vision and then how we can approach it, also the course of optic nerve has 25 cm intraorbital.</li> <li>2.Medical and surgical conditions that hit the orbit and its adenxia  Important points: <ol style="list-style-type: none"> <li>1.orbital anatomy (bone and soft tissue)</li> <li>2.thyroid eye disease manifestations</li> <li>3.emergency orbital infection</li> <li>4. orbital heamangeoma(infant and adult).</li> </ol> </li> </ol>	2

12	Eye and systemic disaeses	Diabetic retinopathy	1
13	Tumors of the eye	retinoplastoma	2
14	Neuro-ophthalmology	<ul style="list-style-type: none"> <li>•• the basic anatomy and physiology of the cranial nerves</li> <li>to understand:</li> <li>•• the aetiology and pathology of common optic nerve problems</li> <li>•• the principles of investigation of optic nerve problems</li> <li>•• pupillary light reflex</li> </ul>	1
15	strabismus	<ul style="list-style-type: none"> <li>•• the basic anatomy and physiology of the extraocular muscles</li> <li>•• the types and classification of squint</li> <li>to understand:</li> <li>•• the aetiology and pathology of squint</li> <li>•• the principles of investigation</li> <li>•• the importance of non-surgical management of strabismus</li>   <li>•• the principles of squint surgery</li> <li>anatomy of extraocular muscles</li> <li>axes of fick</li> <li>visual and anatomical axis</li> </ul>	1
	Total		24

## 6- Psychiatry

## **Aims of the course:**

1-To introduce medical students to the fields of General Psychiatry and Behavioral sciences and to make them familiar with Psychopathology and the psychopharmacology.

2-Make the students able to diagnose different mental disorders when presented to them in the future.

3-Teach the students how to manage patients with mental health problems in different health settings.

Learning objectives:

### **(Knowledge):**

By the end of the course the students should know what do we mean by mental disorders and understand their classification and etiology in addition to the epidemiology, diagnostic criteria and management

### **(Skills):**

How to take history from psychiatric patients.

-How to perform mental state examination.

-How to prescribe psychotropic medications.

-How to use Psychotherapy in the management of different psychiatric problems.

### **(Attitudes):**

1-Students should have an idea about the burden of mental health issues on society

2-Be able to sympathize with patients in order to offer the optimum help for them.

3-The importance of reassurance and support in the management

4- How to be empathetic and non judgmental

5- How to deal with the social stigma related with mental patients

### **Teaching methods:**

i. Formal lectures.

ii. Clinical sessions.

iii. Problem Based Learning

### **Assessment methods:**

-Theoretical exams which include essay questions in the form of clinical cases in addition to single choice questions.

-Clinical exam in the form of long case and oral exam.

**Course contents:**

Theory:

<b>Title</b>	<b>objectives</b>
Introduction to Psychiatry	Introduce the students to concept of mental disorders
Psychopathology	Definition of signs & symptoms in psychiatry
Psychopathology	
Psychopathology	
Psychopathology	
Mood disorders	How to diagnose and classify depression
Mood disorders	Etiology and treatment of depression
Mood disorders	Other mood disorders
Schizophrenia	Introduction to schizophrenia & how to diagnose it
Schizophrenia	Classification and etiology
Schizophrenia	Treatment and prognosis
Anxiety disorders	Classification and clinical features
Anxiety disorders	Understanding how to diagnose and treat Generalized anxiety disorder and panic disorder
Anxiety disorders	Phobias Understanding how to diagnose and treat
Stress related disorders	Knowing the normal response to stress and acute stress disorder
Stress related disorders	Understanding how to diagnose and treat Post-traumatic stress disorder
Stress related disorders	Understanding how to diagnose and treat Adjustment disorder
Obsessive Compulsive disorder	Understanding how to diagnose and treat OCD
Somatoform disorders	Explaining the relationship between psychiatry and other medical branches
Somatoform disorders	Understanding how to diagnose and treat Conversion disorder
Cognitive disorders (delirium)	Identification of risk factors & knowing how to manage cases of Delirium

Cognitive disorders	Knowing the classification and clinical features of Dementia
Cognitive disorders	Understanding how to diagnose and treat Alzheimer's dementia
Cognitive disorders	Knowing how to differentiate other types of dementia
Child psychiatry	Explaining the differences between child and adult psychiatry Understanding how to diagnose and treat Autism
Child psychiatry	Understanding how to diagnose and treat ADHD & other disorders
Substance use disorders (alcohol)	Knowing how to diagnose alcohol dependence
Substance use disorders (alcohol)	Knowing the medical and psychiatric consequences of alcohol abuse
Substance use disorders(drugs)	How to diagnose and treat drug addiction & what are its causes
Substance use disorders(drugs)	Knowing the clinical features of dependence on different types of drugs
Delusional disorders	How to classify and diagnose delusional disorders
Delusional disorders	Understanding different types of delusional disorders
Personality disorders	Explaining different types of personality disorders
suicide	Knowing epidemiology, risk factors, common methods, management & prevention of Suicide
Deliberate self-harm	Knowing epidemiology, risk factors, common methods & management Of DSH
Eating and Sleep disorders	How to diagnose and treat different types of eating and sleep disorders
Learning disability	Knowing the diagnosis, classification, health risks , causes and prevention of learning disability
Learning disability	Knowing the clinical features and health risks of Down and Fragile X syndromes
Psychiatric aspects of obstetrics and gynecology	Knowing the classification, clinical features & management of post-partum psychiatric disorders

Psychiatric aspects of obstetrics and gynecology	How to diagnose and treat psychiatric conditions in gynecology
Psychoanalytic theory	Understanding topographical and structural parts of psycho-analytic theory
Defense mechanisms	Knowing different Defense mechanisms

### **Clinical sessions (small group sessions)**

Time 8:00-10:00 A.M

10:00-11:00 A.M

1-History in psychiatry.

History taking from patients

2-Mental State Examination. Performing MSE

3-Schizophrenia and other psychotic disorder. PBL (formal thought disorder)

4-Mood disorders. PBL (psychotic depression)

5-Physical treatments (psychopharmacology and ECT) Tour in psychiatric pharmacy

6- Substance use disorders PBL (poly substance use)

7-Somatoform (conversion) and anxiety disorders. PBL (Pseudo seizure)

8-Child psychiatry. PBL (child autism)

9- Mental Retardation. PBL (Down syndrome)

### **References:**

-Ten Teachers Psychiatry For Medical Students.

-Oxford Shorter Textbook Of Psychiatry



Daily schedule of first course weeks (Fifth grade)

اليوم	8:00-11:00	11:30-12:30	12:30-1:30	1:30-2:30
الأحد	عيادة خارجية	باطنية(قاعة المرحوم د.حمادي)	نفسية(قاعة المرحوم د.حمادي)	عيون(قاعة المرحوم د.حمادي)
الاثنين	عيادة خارجية	نسائية I(قاعة بن رشد)	نسائية I(قاعة بن رشد)	كسور(قاعة بن رشد)
الثلاثاء	عيادة خارجية	باطنية(قاعة بن سينا 2)	كسور(قاعة بن سينا 2)	كسور(قاعة بن سينا 2)
الأربعاء	عيادة خارجية	نفسية(قاعة المرحوم د.حمادي)	نفسية(قاعة المرحوم د.حمادي)	باطنية(قاعة المرحوم د.حمادي)
الخميس	عيادة خارجية	اطفال(قاعة المرحوم د.حمادي)	اطفال(قاعة المرحوم د.حمادي)	عيون(قاعة المرحوم د.حمادي)

مجاميع التدريب السريري تشمل ( نفسية، عيون، اطفال ،كسور، جراحة عامة، نسائية ،مفاصل)

Fifth year:

Second course:

عدد الوحدات	عدد الساعات		المادة الدراسية	ت
	العملي	النظري		
3	2	2	Medicine II (باطنية)	.1
3	2	2	Gynecology II (نسانية)	.2
4	2	3	Surgery II (جراحة)	.3
3	2	2	Radiology	.4
3	2	2	Dermatology	.5
3	2	2	ENT	.6
19			المجموع	

## 1- Medicine II

## **Aims of the course:**

By the end of the course of Internal Medicine, the student should be qualified as a general practitioner, who is able to:

- Make a proper diagnosis of common medical conditions accurately and independently based on adequate history taking, physical examination and interpretation of relevant supportive investigations.
- Deal with acute medical emergencies safely and effectively with the aid of the assistant lecturers.
- Identify the indications and logistics of referring patients to higher levels of experience or specialization.
- Perceive and integrate accurately the progress in medical knowledge and Technology.

## **Learning objectives:**

### **(Knowledge):**

#### **Neurology**

- (1) build on their basic science and clerkship experience in terms of knowledge and physical examination skills;
- (2) expand their skills in ambulatory neurology, with an emphasis on neurological problems which they will encounter throughout their career, regardless of specialty;
- (3) gain knowledge regarding newer treatment modalities and research in the field;
- (4) explore the option of neurology as a career choice;
- (5) learn more about sub specialization in neurology.

#### **Geriatric medicine**

The student will be exposed to the clinical problems of the older patient in the inpatient, outpatient, long term care, and home settings.

At the end of a one month rotation, a student would be able to perform geriatric assessments, and begin to institute a management plan for common geriatric issues (eg. hypertension and diabetes, dementia, delirium, polypharmacy, urinary incontinence, dizziness, falls, pressure ulcers, and sensory impairment).

Students will understand the role of the various members of the interdisciplinary care team. The students will also begin to understand the importance of various services such as visiting nurse and home health care.

Students will appreciate the non-medical issues (psychosocial) in caring for the older patients, and will develop greater comfort in discussing goals of care and advanced directives with patients.

**(skills):**

1. Take a good medical history.
2. Measure vital signs adequately.
3. Conduct a proper general examination and identify normal and major abnormal physical signs.
4. Conduct proper regional examination of the thorax and abdomen by inspection, palpation, percussion and auscultation to identify:
  - Surface anatomy of internal organs.
  - Normal physical signs.
  - Major abnormal physical signs.
5. Develop and present a comprehensive medical sheet including history and physical examination.
6. Develop the clinical skills of eliciting abnormal physical signs.
7. Interpret the significance and relevance of abnormal physical signs.
8. Identify the appropriate supportive investigations relevant to a particular patient and adequately interpret the results.
9. Integrate the patient's symptomatology, historic data, abnormal physical signs and investigations into a comprehensive differential diagnosis.
10. Identify adequate logistics for further patient assessment and management.
11. Become acquainted with special approach to the diagnosis of common medical conditions related to the specialty.
12. Get exposed to less common medical disorders within the domain of specialty.
13. Get updated information about and demonstrations on modern diagnostic tools within the specialty.
14. Get acquainted with special therapeutic and interventional techniques related to the specialty.
15. Perform basic nursing procedures as injections, infusions, transfusion, introduction of urinary catheter, gastric and rectal tubes, etc.

16. Adequately interpret the results of common laboratory investigations as urine analysis, blood picture, liver and kidney function tests, etc.

17. Properly read X-ray, CT and ultrasonic images of common diseases.

**(Attitudes):**

1- Demonstrate the clinical responsibilities of the role of the doctor

2- Demonstrate a compassionate and professional behavior to reassure that patients needs are addressed

3-Maintain the patient confidentiality and respect dignity and privacy

4- Act with integrity, be polite, considerate, trustworthy and honest

5- Manage time and prioretise effectively

**Teaching methods:**

1. Lecture

2. Practical class

3. Small group discussion with case study and problem solving

4. Quizes

**Assessment methods:**

Written Examination: Assessment of knowledge and understanding and intellectual skills.

Practical Examination: A. Assessment of practical skills.

B. Intellectual skills

**Course contents:**

**Theory**

**A- Neurology:**

1-Neurological localization

2-Metabolic encephalopathies

3-Cerebral atherosclerosis

4-Epilepsy and convulsive disorders

5-CV stroke

6-Speech abnormalities

7-Hemiplegia Paraplegia

- 8-Neurogenic bladder disorders
- 9-Diseases of muscles and neuromuscular junction
- 10-Ataxia
- 11-Space occupying lesions
- 12-Extrapyramidal syndromes
- 13-Dementia
- 14-Peripheral neuropathy and radiculopathies
- 15-1Coma
- 16-Meningitis /encephalitis
- 17-MS

**B- Geriatric medicine:**

- 1-Effect of aging on body systems
- 2-Cognitive disorders in the elderly
- 3-Falls
- 4-Delirium in the elderly
- 5-Urinary incontinence
- 6-Prescribing for the elderly.

**C- Poisoning:**

- 1-Introduction
- 2-Organophosphorus poisoning
- 3-Paracetamol poisoning
- 4-Scorpion & snake bites poisoning

**Clinical training:**

Students will be divided into small groups and each group will have a 3 weeks training at the Neurology center at Al Diwanyah Teaching Hospital. Each student will:

- 1.Function as an integral member of the inpatient neurology team (ward or consults)
- 2.Independently assess patients, present their findings, and begin a plan of care under the supervision of senior residents and attendings.
- 3.Appropriately follow and document their patients' progress.

4. Presentation of the neurological patient and demonstration of the neurological examination.
5. Appropriate application of neurological and neurophysiological techniques.
6. Take evening and night call at reasonable intervals, under the supervision of resident staff.
7. Attend assigned clinics.
8. Attend and participate in the Department's grand rounds, journal club, neuropathology and neuroradiology lectures, and other regularly scheduled conferences

### **References**

- 1- Davidsons principle & practice of medicine
- 2- Harrison's Textbook of medicine
- 3- Cecile textbook of medicine.
- 4- Kummer & Clark of medicine
- 5- Macleod clinical method

## 2- Gynecology

### **Aims of the course:**

-Provide students with basic knowledge of normal and abnormal growth and development of the female genital tract enable students to provide basic health care for female in different age group (prepubertal, pubertal, childbearing, premenopausal, and menopausal), & provide students with an appropriate background covering the common and important gynecological emergencies and diseases (causes, diagnosis and management).

-Provide appropriate ethical and professional education necessary for establishment of excellent communication with patients and colleagues and using sound ethical principles in clinical decision making.

-Provide lifelong learning competencies necessary for continuous professional development and research studies.

### **Learning objectives:**

#### **(Knowledge):**

1-describe the anatomical features and development of the female genital tract and their clinical application.

2- Explain the physiology of menstruation, puberty (its abnormalities and their management), menopause (abnormalities and their management).

3- Discuss etiology of bleeding in early pregnancy (i.e. Abortion, ectopic, vesicular mole) and their manner.

4-Differentiate the types, causes and treatment of dysmenorrhea and premenstrual syndrome (PMS) Discuss the magnitude of the infertility problem and its different etiologies, basic diagnostic tools, and treatment of infertility.

5-Describe causes, types, and methods of diagnosis and management of STDs (sexually transmitted diseases) with emphasis on methods of prevention and serious complication of STDs.

6-Outline the pathology of cervical, uterine, ovarian, vaginal and vulval cancers, with emphasis on screening methods and early recognition and broad lines of management of these conditions.

#### **(Skills):**

A-Professional skills: distinguish between different causes of bleeding in early pregnancies with judgment of life threatening conditions e.g.: hypovolemic shock of inevitable abortion, disturbed ectopic pregnancy, through vital signs, general, abdominal and pelvic examinations. Counsel problems occurring in menopause with



emphasis on postmenopausal bleeding, (any case of postmenopausal bleeding should be considered malignant until proved otherwise). Counsel regarding methods of contraception suitable for each patient and how to use or apply it.

B-Intellectual skills: The student should obtain a complete and reliable history in gynecological clinic or ward, and will be able to give a good history. History must include: Patient's identity and characterization

Marital, obstetrics and contraceptive history, menstrual history. Past history including medical, surgical, habits, allergies and consanguinity whichever relevant to the case. Family history relevant to the case. The student should be capable of performing physical examination, including: general, cardiovascular system, respiratory system, breast, abdomen and pelvic examination. The student's findings will show at least 80% accuracy rate as compared to the instructor's findings. The student will be able to diagnose and outline the management of: Bartholin abscess, Vulvo-vaginitis Cervicitis and cervical ectropion, pelvic infections including: Sexually transmitted diseases. The student will show adequate capability in making the diagnosis and outlining the management of: endometriosis and adenomyosis, Leiomyoma, tub ovarian and ovarian masses.

Given a case of acute lower abdominal pain, the student will outline the causes and plan the management. The student will be able to discover vulvar, cervical and uterine pre-malignancies and malignancies.

Given a case of abnormal vaginal bleeding, the student will be able to outline the investigations and management.

The student will be able to diagnose Genital Prolapse and its varieties, urogenital fistulas, and to outline the management. perform physical examination, plan the investigation and management of: Precocious or delayed puberty, premature menopause, amenorrhea, galactorrhea and hirsutism..Given a case of infertility, the student will be able to interview the couple, perform physical examination, plan the investigations and outline the management. The student will be able to perform speculum examination and to observe obtaining high vaginal swabs, urethral and cervical swabs, wet smears, pap smears and to do bimanual examination. The student may observe if possible: Loop insertion, cervical biopsies, cervical cauterizations..

C-Communication and general skills: Communicate with the patient as a person, not as a disease, and understand that the patient is a person with beliefs, values, goals, and concerns, which must be respected in addition to respecting the patient's dignity, privacy, information confidentiality and autonomy. Counsel the patient before doing any intervention and in different situations with respect to her wish whenever this is possible.

Maintain the atmosphere of cooperation, peer relationships, and mutual respect in the university society.

Advance the knowledge base of gynecology by developing and encouraging scientific researches.

**(Attitudes):**

The student will be able to perform speculum examination and to do during their clinical attachment high vaginal swabs, urethral and cervical swabs, wet smears, pap smears and to do bimanual examination.

The student may observe & share if possible in: Loop insertion, cervical biopsies, cervical cauterizations, examination under anesthesia, evacuation of retained products of conception, hysterosalpingography, and laparoscopy.

The student will have fair knowledge of utilization of ultrasound technology in the diagnosis of missed miscarriage early pregnancy, retained products of conception, Ectopic pregnancy, uterine Leiomyoma, ovarian and tubo-ovarian masses, and the use of serial ultrasound to monitor follicular growth and ovulation.

**Teaching methods:**

1-lectures: two lectures per week from 11.00am till 12:00pm & from 2:00 pm till 3:00pm (general topics) to cover the basic minimal knowledge required for all physicians & to utilize the available time (45-50 minutes) in presenting the knowledge as simple, updated, well-illustrated, and easily understood as possible. Rare topics, and those irrelevant to our community should be omitted or given less importance and time. Lectures are delivered whenever possible by the senior academic staff. Lectures given as clinical presentation to cover each area.

2-clinical attachments: Each term, students are divided into 10-11 groups, students will have a clinical round in the morning from 8:00am -9.15 discussing a clinical case from outpatients then they are subdivided to small groups to examine the patients & in the gynecology outpatient clinic, they take history from an outpatient lady & do gynecological examination.

3-problem based learning: if there is no patients with particular problem in the ward, teacher has to be a "role player" and make the students take history followed by diagnosis, investigation and management:

1. Bleeding in early pregnancy (miscarriages and Trophoblastic disease)
2. Leiomyoma of uterus
3. Antepartum haemorrhage & postpartum haemorrhage
4. Episiotomy & perineal tears

5. Endometriosis, Adenomyosis

6. Cervical cancer (Pre malignant & malignant).

7. infertility

## 2. CLINICAL ATTACHMENT

The students are offered clinical attachment in Gynaecology for 10 days. 10 courses during 1<sup>st</sup> term, each course, nearly 30-35 students.

students will have a clinical round in the morning from 8:00am – 8:30am discussing a clinical case from inpatients, outpatients, emergency room, then from 8:30 till 9:15 start clinical cases & from 9:15–10 am start with video skills or model & from 10 till 10.45 am problem based learning PBL.

### Assessment methods:

1. Attendance

a. Behavioral & ethical attendance

b. Logbook for clinical cases

c. Attendance in outpatient clinic

the minimum accepted attendance is 70 % at the end of term examination.

2. Assessment tools

a. Written examination: for assessment of general knowledge & understanding.

b. Oral examination by two members of teaching staff to assess how fifth year student deal with gynecological scenario problems.

c. Clinical examination (long case exam) . to medical students attendance in managing clinical cases in comprehensive way.

Assessment schedule:

Marks allocated	Examination	Marks	Parameters
20% M	Term exam held at the end of 10 days of clinical attachment	4 16	Attendance Long gynecology cases oral examination

20%M	Term 2		
60%M	End course	2 3 5	attendance activity exam 4 written 6 slides
40%	Mid year	60%	cases MCQ , most appropriate answers , matching short assay ( 2 hours )
60%	Final exam	40% 50%	Short cases exam in gynecology 60% cases MCQ , most appropriate answers , matching 40% short assay( 3 hours )

**Course contents:**

Benign and malignant diseases of the vulva
Pruritis vulva
Premalignant and malignant disease of the vagina
Benign and premalignant disease of the cervix
Carcinoma of the cervix
Uterine fibroid
Carcinoma of the endometrium
Endometriosis and adenomyosis
Benign tumour of the ovary
Malignant tumour of the ovary
Anatomy of female pelvis
Genital tract prolapse
Urinary incontinence
Genito-urinary fistula
Menopause and <i>hormone replacement therapy</i> HRT
Post menopause bleeding

U/S in gynecology
Hysteroscopy and laparoscope
Chronic pelvic pain
Child hood disorders

**References:**

1. Gynecology by ten teachers . Arnold
2. Evidence based medicine in obstetrics & gynecology
3. Dewhurst's textbook for obstetrics & gynecology
4. Essential of obstetrics & gynecology
5. Jeff coat's principles of gynecology
6. William's obstetrics Appleton century croft

## **3- Surgery II**

### **Aims of the course:**

- Provide students with basic knowledge of principal of surgical anatomy and cardiothoracic surgical problems and provide background covering the common and important cardiothoracic surgical emergencies and diseases (causes, diagnosis and management).
- Provide the students with basic knowledge and principals of pediatric surgical diseases and problems and provide the background covering the common important pediatric surgical emergencies, congenital anomalies and diseases (causes, diagnosis and management).
- Provide students with basic knowledge of principal of surgical anatomy and reconstructive surgery problems and provide background covering the common and important plastic surgery emergencies and diseases (causes, diagnosis and management).
- Provide students with basic knowledge of anesthesiology & ICU principal of anesthetic problems and provide background covering the common and important ICU emergencies and diseases (causes, diagnosis and management).

### **Learning objectives:**

#### **(Knowledge):**

- 1- principles of management of thoracic trauma, types and management of pneumothorax, empyema, lung cysts and pulmonary neoplasms principles of cardiopulmonary bypass and other common cardiac conditions of surgical importance.
- 2- principles of pediatric surgical patient management and major guide line about common congenital anomalies and emergencies related to the pediatric patient.
- 3- principles of skin loss management by using skin graft and flaps , head and neck congenital anomalies like cleft lip and palate , hand surgery , skin tumors and maxillofacial trauma.
- 4- principles of general & regional anesthesia & airway management, intravenous fluid management, & critically ill patient's management.

#### **(Skills):**

- 1-Student should be able to diagnose and differentiate types of pneumothorax, haemothorax, and flail chest. Should be able to insert thoracostomy tube (simulator teaching). Should be able to insert central venous line (simulator). Perform cardiopulmonary resuscitation.

2- The student will be able how to read the formal pediatric Chest Xray, Abdominal X ray, the routine pediatric surgical examination. The student may observe common surgical intervention like surgical dressing, central IV line insertion etc. The student will have the opportunity to attend the pediatric surgical operative room and visualize the common surgical operations (if possible).

3-distinguish between types of wound closure and indications of use each type , how dealing with neonate with cleft lip and palate and know the time of surgery, management of hand trauma in emergency and how receive and manage patient with facial trauma in emergency room.

4- The student will be able to do life saving measures. The student may be able to prepare the patient preoperatively. The student will have fair knowledge of determining what is the best type of anesthesia for each individual case.

**(Attitudes):**

Communicate with the patient as a person, not as a disease, and understand that the patient is a person with beliefs, values, goals, and concerns, which must be respected in addition to respecting the patient's dignity, privacy, information confidentiality and autonomy.

Counsel the patient before doing any intervention and in different situations with respect to his or her wish whenever this is possible.

Maintain the atmosphere of cooperation, peer relationships, and mutual respect in the society.

**Teaching methods:**

1-lectures: 3 hours per week (Monday) from 12 pm till 1:00pm to cover the basic minimal knowledge required for all physicians & to utilize the available time in presenting the knowledge as simple, updated, well-illustrated, and easily understood as possible. Rare topics, and those irrelevant to our community should be omitted or given less importance and time. Lectures are delivered whenever possible by the senior academic staff. Lectures given as clinical presentation to cover each areas.

2-clinical attachments: students are divided into 5-6 groups; students will have a clinical round in the morning from 8:00am -9.00am discussing a clinical case from outpatients then they are subdivided to small groups to examine the patients& in the outpatient clinic.

3-problem based learning: if there are no patients with particular problem in the ward, teacher has to be a "role player" and make the students take history followed by diagnosis, investigation and management.

4- Medical skills: further subdivision of the students into small groups with the residents to observe them while managing the outpatient clinic, also they can watch surgical operative room and minor operation room, and interpret different.

5-Clinical Diagnostic Studies: The students will be trained adequately on self-learning methods and procedures. So, they can continuously update their knowledge and skills. The role of teachers in these activities is to supervise and guide the student's effort.

**Assessment methods:**

1.Attendance

A. Behavioral & ethical attendance

B. Logbook for clinical cases

C.Attendance in outpatient clinic

The minimum accepted attendance is 50 % at the end of term examination.

2.Assessment tools

A. Written examination: for assessment of general knowledge & understanding.

B. Oral examination by two members of teaching staff to assess how fifth year student deal with plastic scenario problems.

C. Clinical examination to medical students attendance in managing clinical cases in apprehensive way.

Assessment schedules :

Marks allocated	Examination	Marks	Parameters
10% M	Term exam held at the end of 14 days of clinical attachment	28	Attendance oral examination
30 %M	Mid Term	30	MCQ , most appropriate answers , matching short assay ( 2 hours )
60%M	End course	60	60% cases MCQ , most appropriate answers , matching 40% short assay( 3 hours )



## Course contents:

### 1- Cardio-thoracic surgery:

subjects	Hours
<b>Thorax</b>	
<b>Learning objectives</b> <b>To understand:</b> <ul style="list-style-type: none"> <li>•• The anatomy and physiology of the thorax</li> <li>•• Investigation of chest pathology</li> <li>•• The role of surgery in pleural disease</li> <li>•• The assessment of patients requiring lung surgery</li> <li>•• Surgical oncology as applied to chest surgery</li> </ul>	
<b>Anatomy and physiology, risk assessment , investigations of respiratory diseases</b>	1
<b>Disorders of the pleura, pneumothorax, insertion and management of chest tube, surgical management of pneumothorax</b>	1
<b>Pleural effusion ,empyema thoracis</b>	1
<b>Disorders of air way, hemoptysis</b>	1
<b>Lung cancer ,</b>	1
<b>Lung METASTASES, benign lung tumor, the mediastinal conditions</b>	1
<b>Bronchiectasis , lung abscess, lung cyst</b>	1
<b>Chest trauma</b>	1
<b>Chest trauma</b>	1
<b>Chest trauma</b>	1
<b>Chest trauma</b>	1
<b>Conditions of the diaphragm , disorders of chest wall</b>	1
<b>Cardiac surgery</b>	
<b>Learning objectives</b> <b>To understand:</b> <ul style="list-style-type: none"> <li>The important role of surgery in cardiac disease</li> <li>The role of investigation in planning surgery</li> <li>The management of coronary heart disease</li> <li>The role of surgery in valvular heart disease</li> <li>The special role of surgery in congenital heart disease</li> <li>The management of aortic vascular and pericardial disease</li> </ul>	
<b>CARDIOPULMONARY BYPASS</b>	1
<b>CORONARY ARTERY BYPASS SURGERY</b>	1
<b>VALVULAR HEART DISEASE</b>	1

### 2- Pediatric surgery:

N	Learning content	Hr
1	<b>Embryology/Developmental</b> <ul style="list-style-type: none"> <li>• Branchial apparatus remnants</li> <li>• Thyroglossal remnants</li> </ul>	

	<ul style="list-style-type: none"> <li>• Dermoid cyst head and neck</li> <li>• Pre-auricular sinuses and cysts</li> <li>• <b>Body wall:</b> - Development - abnormalities</li> <li>• <b>Abdominal Wall</b> - embryology and anatomy of the abdominal cavity. - gastroschisis and exomphalos - (Prune Belly) Syndrome</li> <li>• <b>Chest wall:</b> Explain the different types of chest wall deformity</li> <li>• <b>Umbilicus :</b> umbilical hernia , umbilical discharge ,</li> <li>• <b>Spine :</b> neural tube development and defects</li> <li>• <b>Diaphragm (CDH):</b> development and defects</li> <li>• <b>Esophagus :</b> embryology of foregut formation, the types of esophageal atresia with or without tracheo-oesophageal fistula.</li> <li>• <b>Bowel :</b> the types of atresia , process of normal intestinal rotation .</li> <li>• <b>Vascular anomalies</b></li> </ul>	
2	<p><b>Neonatal</b></p> <ul style="list-style-type: none"> <li>• Neonatal intestinal obstruction</li> <li>• Neonatal anomalies</li> <li>• CDH</li> <li>• Anorectal malformation</li> <li>• Biliary atresia</li> </ul>	
3	<p><b>Fluids/Nutrition/Growth</b></p> <ul style="list-style-type: none"> <li>• Normal homeostasis</li> <li>• Trauma/Shock</li> <li>• Infantile Hypertrophic Pyloric Stenosis</li> <li>• Gastro esophageal reflux .</li> </ul>	
4	<p><b>Genito-Urinary</b></p> <ul style="list-style-type: none"> <li>• <b>Inguino-scrotal swelling :</b> the embryology of the inguinoscrotal region and why hernias and hydroceles may occur.</li> <li>• <b>Congenital renal anomalies</b> Posterior urethral valves , Hypospadias , Vesicoureteric reflux and UTI</li> </ul>	
5	<p><b>Other Acquired abdominal disorders</b></p> <ul style="list-style-type: none"> <li>• GI bleeding</li> <li>• Gastrointestinal polyps</li> <li>• Abdominal cysts</li> <li>• Rectal Prolapse</li> <li>• Recurrent abdominal pain of childhood</li> </ul>	
6	<p><b>Neoplasia</b></p> <ul style="list-style-type: none"> <li>• Nephroblastoma (Wilms tumour)</li> <li>• Gonadal tumours</li> <li>• Lymphoma</li> <li>• Teratoma/ Sacrococcygeal teratoma</li> <li>• Neuroblastoma</li> </ul>	

### 3- Plastic surgery:

No.	Topics	Learning content	Hours
1	Skin graft and flaps	<p><b>Goal: learn the student how can manage skin defect and wound that can not have closed primarily.</b></p> <p>defintion and types of skin graft, indications            classification of skin graft            defintion of flap            difference between graft and flap            classifications of flaps  <b>What's skin graft</b>            Types: autogenous, isograft, allograft, xenograft.            Classifications: split thickness (sheet, mesh), full thickness  <b>Skin graft revascularization phases</b>                Serum imbibition                Lasts 24 – 48 hr                Fibrin layer forms (adhere the graft to the bed).                Nutrient absorption into the graft (from the bed by capillary action)            Inosculation            Recipient &amp; donor end capillaries aligned.                Kissing capillaries            Graft revascularized through kissing capillaries</p> <p>How to optimize TAKE  <b>Flap</b>                Any tissue used for reconstruction or wound closure that retains all or part of its original blood supply after the tissue has been moved to the recipient location</p> <p>Classifications of flaps:            Tissue to be transferred            Location of donor site            Blood supply</p>	1
2	Cleft lip and palate	Incidence, types, causes Classification Nasal deformity	1

		<p>Management timing and planning for surgery</p> <p>Secondary management of cleft palate</p> <p>Complications of cleft palate surgery</p>	
3	Hand surgery	<p>Hand trauma assessment</p> <p>History</p> <p>Examination</p> <p>Investigations</p> <p>Basic principles of hand management</p> <p>Compartment syndrome</p> <p>Flexor and extensor tendons injuries</p> <p>Finger tip injury</p> <p>Hand incisions</p> <p>Hand infection</p> <p>Carpal tunnel syndrome</p>	1
4	Premalignant and malignant skin tumors	<p>Goal: the medical students should differentiate between skin cancer and other benign skin lesions and types of these skin cancers and what is the riskier one and their management</p> <p>Premalignant lesions:</p> <p>Actinic keratosis, Squamous cell carcinoma in situ</p> <p>Malignant skin lesions:</p> <p>Basal cell carcinoma: types and surgical management</p> <p>Squamous cell carcinoma management</p> <p>Difference between basal and squamous cell carcinoma</p> <p>Melanoma types and management</p>	1
5	Maxillofacial trauma	<p><b>Goal:</b> Facial injuries deserve special attention because of their life and aesthetic significant. So we should know how we do management for facial trauma as a life threatening problems and as aesthetic problems</p> <p>Facial injuries classified into:</p> <ol style="list-style-type: none"> <li>1.Soft tissue injury.</li> <li>2.Skeleton injury.</li> <li>3.Both are affected</li> </ol>	1

		<p>Evaluation and initial management</p> <p>History</p> <p>Clinical examination</p> <p>investigations</p> <p>emergency management: maintenance airway, control hemorrhage, aspiration, shock, identification of injuries</p> <p>soft tissue injury</p> <p>types of soft tissue injury</p> <p>special region consideration: cheek, eyebrow, eyelid, lip, nose</p> <p>skeletal injury:</p> <p>mandibular fracture</p> <p>zygomatic fracture</p> <p>nasal fracture</p>	
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#### 4- Anesthesiology & ICU

No.	Topics	Learning content	Hours
1	Introduction to Anesthesia	<p><b>Goal :learn the student the definition &amp; types of anesthesia</b></p> <p>Definition</p> <p>Types</p> <p>Advantages &amp; disadvantages of each type</p> <p>Indications &amp; contraindications</p> <p>Complications &amp; their management</p>	1
2	Preoperative assessment	<p>How to prepare the patient preoperatively:</p> <p>History</p> <p>Physical examination</p> <p>Investigations</p> <p>Premedications</p> <p>Advices</p>	1

3	Regional anesthesia	Types Indications & contraindications Types of local anesthetic agents, their classifications & dosage Toxicity of local anesthetic drugs, diagnosis & management	1
4	Intravenous fluid management	Types of intravenous fluids, their consistency, indications & distribution Calculation of intravenous fluid recommended for each situation	2
5	Cardiopulmonary resuscitation (CPR)	Diagnosis & management of cardiac standstill Clinical evaluation, fast & proper intervention for such life threatening situations.	1

## 4- Radiology

Aims of the course:

The course teach the student the basics of the radiology by which the student can know the general uses of main radiological modalities and headlines of radiological appearances of different diseases in these modalities which are essential to know in his future medical career.

Learning objectives:

**(Knowledge):**

1-How to incorporate the results of different radiological tests in each case to reach the right diagnosis.

2- What are the best radiological tests for each clinical presentation.

3- The indications of different tests like conventional X ray, Ultrasound, CT scan, and MRI

**(Skills):**

1- The interpretation of common and basic radiological tests which are frequently encountered by gunior doctors at the emergency department.

2- The proper preparation of patients for radiological tests

**(Attitudes):**

Communicate with the patient as a person, not as a disease, and understand that the patient is a person with beliefs, values, goals, and concerns, which must be respected in addition to respecting the patient's dignity, privacy, information confidentiality and autonomy.

Counsel the patient before doing any intervention and in different situations with respect to his or her wish whenever this is possible.

Maintain the atmosphere of cooperation, peer relationships, and mutual respect in the society.

**Teaching methods:**

1-lectures: 2 hours per week to cover the basic minimal knowledge required for all physicians &to utilize the available time in presenting the knowledge as simple, updated, well-illustrated, and easily understood as possible. Rare topics, and those irrelevant to our community should be omitted or given less importance and time. Lectures are delivered whenever possible by the senior academic staff. Lectures given as clinical presentation to cover each areas.

2-clinical attachments: students are divided into 5-6 groups discussing a clinical case from outpatients then they are subdivided to small groups to examine the patients& in the outpatient clinic in different imaging centers at the hospital.

3-problem based learning: if there are no patients with particular problem in the ward, teacher has to be a "role player" and make the students take history followed by diagnosis, investigation and management.

**Assessment methods:**

1.Attendance

- A. Behavioral & ethical attendance
- B. Logbook for clinical cases
- C.Attendance in outpatient clinic

The minimum accepted attendance is 50 % at the end of term examination.

2.Assessment tools

- A. Written examination: for assessment of general knowledge & understanding.
- B. Oral examination by two members of teaching staff to assess how fifth year student deal with plastic scenario problems.
- C. Clinical examination to medical student's attendance in managing clinical cases in apprehensive way.

Assessment schedules:

Marks allocated	Examination	Marks	Parameters
10% M	Term exam held at the end of 14 days of clinical attachment	28	Attendance oral examination
30 %M	Mid Term	30	MCQ , most appropriate answers , matching short assay ( 2 hours )
60%M	End course	60	60% cases MCQ , most appropriate answers , matching 40% short assay( 3 hours )

**Course contents:**

Item	Lecture 1
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<b>Subject</b>	Introduction / basic principles in radiology
<b>Learning objectives</b>	To understand : Physics of X-ray and different imaging modalities . Discussion about the radiation hazards and how to protect the patients from these hazards
<b>Content</b>	Introduction :  X-ray production and absorption . physics of X-ray , CT scan , ultrasound and MRI .  Radiation hazards and protection .
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Kahlil Al – umeri
<b>Item</b>	Lecture 2
<b>Subject</b>	Introduction for radiology of urinary system
<b>Learning objectives</b>	To understand : <ul style="list-style-type: none"> <li>• Review of radiological anatomy of urinary system</li> <li>• What are the different types, of radiological modalities used to evaluate the urinary system</li> <li>• The normal appearance of different parts of urinary system in these modalities</li> <li>• Main uses of each radiological modality in evaluation of urinary system</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• Introduction</li> <li>• Radiological Investigations of urinary system</li> <li>• Ultrasound</li> <li>• Pain film / KUB</li> <li>• EU</li> <li>• Urethrography</li> <li>• Cystography</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Shaimaa A. kadhum
<b>Item</b>	Lecture 3
<b>Subject</b>	Continue for introduction of urinary stem
<b>Learning objectives</b>	To understand : <ul style="list-style-type: none"> <li>• Normal appearance of urinary system in CT , MRI , radio radionuclide studies</li> <li>• main uses of previous modalities</li> <li>• Review images for radiological appearance of urinary system In CT , MRI and isotope scan</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• Computed tomography in urinary system , uses and normal appearance of urinary system</li> <li>• MRI in urinary system , the main uses and normal appearance</li> <li>• Radionuclide studies in urinary system</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. shaimaaa A. kadhum

<b>Item</b>	Lecture 4
<b>Subject</b>	Congenital variations of urinary system
<b>Learning objectives</b>	To understand : <ul style="list-style-type: none"> <li>• The types of congenital variations of urinary system</li> <li>• The clinical significance of each type</li> <li>• The radiological appearance of different and most common types of congenital variations of urinary system</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• Ectopic kidney</li> <li>• Rotated kidney</li> <li>• Duplicated PCS</li> <li>• Uretrocels</li> <li>• Horseshoe kidney</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Shaimaa A. kadum
<b>Item</b>	Lecture 5
<b>Subject</b>	Pathology of urinary system ( part 1 )
<b>Learning objectives</b>	To understand : <ul style="list-style-type: none"> <li>• The radiological appearance of common disease in urinary system</li> <li>• Methods for evaluation of stones and their types according to contents</li> <li>• Techniques for evaluation of urinary tract obstruction and its possible causes What is the meaning and the causes of non visualized kidney in IVU</li> <li>• Renal mass evaluation how to differentiate benign and malignant masses The area and depth of burns</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• Urinary tract calculi</li> <li>• Nephrocalcinosis</li> <li>• Urinary tract obstruction</li> <li>• Causes of obstruction according to the level</li> <li>• PUJ obstruction in details as example for urinary tract obstruction</li> <li>• Causes of non visualized kidney in IVU</li> <li>• Renal mass evaluation</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Shaimaa A. kadhum
<b>Item</b>	Lecture 6
<b>Subject</b>	Continues Urinary tract pathology ( part 2 )
<b>Learning objectives</b>	To understand : <ul style="list-style-type: none"> <li>•The radiological appearance of different types of urinary tracts infections</li> <li>•Radiological evaluation of urinary system trauma specially renal trauma</li> <li>• Radiological evaluation of renal failure</li> <li>• UB pathology regarding stones , tumor ,and obstruction and trauma</li> </ul>

<b>content</b>	<ul style="list-style-type: none"> <li>• Pyelonephritis :radiological appearance in different modalities</li> <li>• Nephric and Perinephric abcess</li> <li>• Tuberculosis affecting urinary system</li> <li>• radiological appearance of kidney in renal trauma</li> <li>• radiological appearance of kidney in renal failure ...</li> <li>• Urinary bladder ( stone , tumor, obstruction )</li> <li>• Types of bladder rupture</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Shaimaa A. kadhum
<b>Item</b>	Lecture 7
<b>Subject</b>	Introduction to gasterointestinal tract Radiology
<b>Learning objectives</b>	<p>To understand :</p> <ul style="list-style-type: none"> <li>• Review of radiological anatomy of gasterointestinal tract. <ul style="list-style-type: none"> <li>• Different types of imaging modalities used in evaluation of abdominal pathologies.</li> <li>• Different plain abdominal film projections , and advantages of each one.</li> <li>• Normal plain abdomen.</li> <li>• How to differentiated between small and large bowel by plain abdominal film.</li> <li>• Plain abdominal film to detect different pathologies.</li> </ul> </li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• Introduction about different imaging modalities used to assessed abdominal pathologies.</li> <li>• Advantages of plain abdominal film.</li> <li>• Different types of abdominal x-ray positions (supine AP film, erect abdominal film, left lateral decubitus, CXR) and its indications.</li> <li>• Types of intestinal obstruction ( large and small bowel obstruction) the causes and how to assessed and reaching the diagnosis.</li> <li>• Mechanical vs functional obstruction.</li> <li>• Types of large bowel volvulus .</li> <li>• Toxic megacolon</li> <li>• Causes of extraluminal air including pneumoperitonium.</li> <li>• Cuses of abdominal calcification.</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Maal Anwer Kadhum
<b>Item</b>	Lecture 8
<b>Subject</b>	Contrast study in GIT
<b>Learning objectives</b>	<ul style="list-style-type: none"> <li>• knowledge about different types of contrast study</li> <li>• imaging techniques: general principles.</li> <li>• Review of endoscopy and transesophageal ultrasound.</li> </ul>

	<ul style="list-style-type: none"> <li>• knowledge of esophageal pathologies and how to choice modality of image and reach diagnosis.</li> <li>• Pathologies of stomach with imaging techniques.</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• Types of contrast study</li> <li>• Indications and contraindication for each types of contrast material.</li> <li>• Abnormalities in abrium study.</li> <li>• Esophageal abnormalities (strictures, masses, dilatation, webs , hernias)</li> <li>• Stomach and duodenum (barium study, CT)</li> <li>• Stomach and duodenal pathologies(peptic ulcer, tumoers, lymphoma, ect..)</li> <li>• Imaging signs of diseases of small intestine (dilatation , narrowing , crohns disease</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Maal Anwer Kadhum.
<b>Item</b>	Lecture 9
<b>Subject</b>	Imaging techniques of large intestine
<b>Learning objectives</b>	<p>To understand:</p> <ul style="list-style-type: none"> <li>• imaging techniques (x ray , contrast study , CT, MRI) <ul style="list-style-type: none"> <li>• Normal appearance of large intestine.</li> <li>• Different pathologies of large intestine and how to choose tge best imaging modality.</li> </ul> </li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• Normal appearance of colon.</li> <li>• Imagines of diseases of large intestine ( narrowing, dilatation, inflammatory bowel disese, ulcerative colitis,)</li> <li>• Diverticular disease.</li> <li>• Appendicitis.</li> <li>• Pneumatosis coli.</li> <li>• Intussusception.</li> <li>• Hirschsprung disease.</li> <li>• Colon polyps and tumors.</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Maal Anwer Kadhum.
<b>Item</b>	Lecture 10
<b>Subject</b>	Radiology of Hepatobilliary system
<b>Learning objectives</b>	<p>To understand:</p> <ul style="list-style-type: none"> <li>• methods of imaging. <ul style="list-style-type: none"> <li>• Knowledge about liver disease.</li> <li>• Understand the basis of Ultrasound , CT, MRI in liver disease.</li> <li>• Imaging techniques in biliary system ( ultrasound , ERCP. MRCP).</li> <li>• Gall bladder diseases and best imaging modality in each pathology.</li> </ul> </li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• Ultrasound of normal liver , and liver anatomical segment classification</li> <li>• CT, MRI of liver.</li> <li>• Liver masses</li> <li>• Liver abscess</li> </ul>

	<ul style="list-style-type: none"> <li>• Cirrhosis of liver and portal hypertension.</li> <li>• Fatty infiltration of liver.</li> <li>• ERCP and MRCP</li> <li>• Gall stones.</li> <li>• Cholecystitis.</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Maal Anwer Kadhum.
<b>Item</b>	Lecture 11
<b>Subject</b>	Radiology of pancreas and spleen
<b>Learning objectives</b>	<ul style="list-style-type: none"> <li>• Demonstrate imaging techniques in pancreatic diseases.</li> <li>• How to differentiated between acute and chronic pancreatitis.</li> <li>• Pancreatic mass.</li> <li>• Splenic trauma.</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>• Ultrasound of normal pancreas.</li> <li>• Pancreatic masses.</li> <li>• Acute pancreatitis.</li> <li>• Chronic pancreatitis.</li> <li>• Splenic trauma.</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Maal Anwer Kadhum.
<b>Item</b>	Lecture 12
<b>Subject</b>	Introduction of Respiratory system
<b>Learning objectives</b>	To know type of imaging of chest radiology Advantage & disadvantage of each one Normal CXR in details
<b>content</b>	<ul style="list-style-type: none"> <li>• CXR normal appearance</li> <li>• CT scan of chest</li> <li>• MRI of the chest</li> <li>• Foroscopy of the chest</li> <li>• US of the chest</li> <li>• Isotopes of the chest</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Amjaad Majeed
<b>Item</b>	Lecture 13
<b>Subject</b>	:Radiological sign of lung disease
<b>Learning objectives</b>	<ul style="list-style-type: none"> <li>• To know the appearance of abnormal CXR</li> <li>• To identify the caused of abnormal CXR</li> </ul>
<b>content</b>	<p style="text-align: center;">Air space filling (pulmonary oedema or consolidation )  . Pulmonary collapse (atelectasis )  . Spherical shadows  . Line shadows  ,Widespread small shadows .  the presence of cavitations or calcification should be noted .</p>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr . Amjaad Majeed

<b>Item</b>	Lecture 14
<b>Subject</b>	Specific lung disease
<b>Learning objectives</b>	<ul style="list-style-type: none"> <li>To know the radiological appearance of different types of lung disease</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>Pneumonia its type &amp; their radiological appearance</li> <li>TB appearance in cxr &amp; CT scan</li> <li>Primary , post-primary &amp; military TB</li> <li>Hydatid cyst of the chest</li> <li>Complicated hydatid cyst</li> <li>Radiology of COPD</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Amjaad Majeed
<b>Item</b>	Lecture 15
<b>Subject</b>	Pleura , mediastinum & hilum
<b>Learning objectives</b>	<ul style="list-style-type: none"> <li>To know the radiological appearance of pleura &amp; mediastinum diseases &amp; masses</li> <li>To differentiated pleura &amp; mediastinal pathology from pulmonary pathology</li> </ul>
<b>content</b>	<ul style="list-style-type: none"> <li>Pleural effusion</li> <li>Pneumothorax</li> <li>Localized &amp; free pleural effusion</li> <li>Pleural masses</li> <li>Mediastinal masses</li> <li>Mediastinal shift</li> <li>Hilar enlargement</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Amjaad Majeed
<b>Item</b>	Lecture 16
<b>Subject</b>	Lung tumors
<b>Learning objectives</b>	<p>Radiological appearance of primary &amp; secondary lung tumors</p> <p>Sign of tumor spread</p> <p>Staging of the tumors</p>
<b>content</b>	<ul style="list-style-type: none"> <li>Types of lung neoplasm</li> <li>Central bronchogenic carcinoma in CXR &amp; CT scan</li> <li>Peripheral bronchogenic carcinoma in CXR &amp; CT scan</li> <li>Sign of local &amp; distance spread</li> <li>Sign of lung deposit from other primary</li> <li>Role of CT scan in diagnosis &amp; staging of lung related tumor</li> <li></li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Amjaad Majeed
<b>Item</b>	Lecture 17
<b>Subject</b>	Radiological anatomy of brain
<b>Learning objectives</b>	<p>To understand:</p> <p>Radiological methods which used to investigation brain diseases.</p> <p>Radiological appearance of normal brain tissue in CT scan and MRI .</p>

	Induction of each modality in brain diseases
<b>content</b>	<ul style="list-style-type: none"> <li>• Radiological anatomy of skull.</li> <li>• Meninges.</li> <li>• Brain</li> <li>• Ventricles</li> <li>• Blood supply.</li> <li>• Indications of plain X ray.</li> <li>• Indications of CT scan .</li> <li>• Indications of MRI</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Najat Adel Hashim
<b>Item</b>	Lecture 18
<b>Subject</b>	Intracranial hemorrhage
<b>Learning objectives</b>	<p>To understand:</p> <ul style="list-style-type: none"> <li>•types of intracranial hemorrhage according to anatomical site.</li> </ul> <p>Radiological appearance of hemorrhage in different stages: acute, sub acute and chronic .</p> <p>Common causes of each types of hemorrhage.</p>
<b>content</b>	<ul style="list-style-type: none"> <li>• Intracranial hemorrhage types : intra-axial and extra-axial.</li> <li>• Types of extra-axial hemorrhage :</li> <li>• extra dural hemorrhage , causes and radiological appearance in CT scan and MRI.</li> <li>• Sub dural hemorrhage, causes and radiological appearance in CT scan and MRI.</li> <li>• Sub arachnoid hemorrhage, causes and radiological appearance in CT scan and MRI.</li> <li>• Types of intracranial axial hemorrhage:</li> <li>• Intracerebral hemorrhage, causes and radiological appearance in CT scan and MRI.</li> <li>• Intra ventricular hemorrhage, causes and radiological appearance in CT scan and MRI.</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Najat Adel Hashim
<b>Item</b>	Lecture 19
<b>Subject</b>	Brain infarction
<b>Learning objectives</b>	<p>To understand:</p> <ul style="list-style-type: none"> <li>•what is ischaemic changes and brain infarction .</li> </ul> <p>Types of infarction.</p> <p>Common image modality use in investigation of infarction.</p> <p>Radiological appearance of infarction in different stages.</p>
<b>content</b>	<ul style="list-style-type: none"> <li>• Defintion of stroke</li> <li>• Ischaemic stroke , and it is types .</li> <li>• Indications of CT scan and radiological signs different stages</li> <li>• Indications of MRI and radiological signs in different stages.</li> </ul>

<b>Time</b>	1 hour
<b>Lecturer</b>	Dr . Najat Adel Hashim
<b>Item</b>	Lecture 20
<b>Subject</b>	Intracranial infections
<b>Learning objectives</b>	To understand: <ul style="list-style-type: none"> <li>types of intracranial infections according to anatomical site.</li> </ul> Indications of radiological investigation. Radiological appearance of each types of infection .
<b>content</b>	<ul style="list-style-type: none"> <li>Role of radiology in intracranial infections.</li> <li>Forming of intracranial infections : cerebritis ,brain abscess, encephalitis and meningitis.</li> <li>Radiological signs of intracranial infections forming,in CT SCAN and MRI.</li> <li>Complications of intracranial infections and radiological appearance in CT scan and MRI.</li> <li>Brain tuberculosis radiological signs and complications.</li> <li>Brain hydatid cyst radiological signs and complications.</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr . Najat Adel Hashim
<b>Item</b>	Lecture 21
<b>Subject</b>	Intracranial tumor
<b>Learning objectives</b>	To understand: Types of intracranial tumors . How can differentiate between intra-axial and extra-axial tumor mass . What images modality of choice for diagnosis and follow up tumor mass
<b>content</b>	<ul style="list-style-type: none"> <li>Roles of imaging diagnosis intracranial tumors.</li> <li>Types of intracranial tumores :</li> <li>Intra-axial tumors : primary tumors it is Gillman.</li> <li>Types of brain glioma and radiological signs in CT scan and MRI .</li> <li>Secondary tumor : Brain metastasis : radiological signs in CT scan and MRI.</li> <li>Extra axial tumor : Meningioma ,radiological signs in CT scan and MRI.</li> </ul>
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr . Najat Adel Hashim

<b>Item</b>	Lecture 22
<b>Subject</b>	Imaging of bone disease :
<b>Learning objectives</b>	To understand : Basic signs of bone diseases in X-rays . Role of other imaging modalities in musculoskeletal system.
<b>Content</b>	Plain x-ray ( basic signs of bone diseases ) . CT scan (Indications of CT scan ) MRI ( technique , types of images , indications ) Ultrasound role in musculoskeletal diseases . Nuclear medicine bone scan ( Indications of bone scan)



<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Kahlil Al – umeri

<b>Item</b>	Lecture 23
<b>Subject</b>	Imaging of bone disease : Bone tumors and Osteomyelitis :
<b>Learning objectives</b>	To understand : Bone tumors types and radiological features in different imaging modalities . Discussion about osteomyelitis .
<b>Content</b>	Types of bone tumors Types of primary tumors according to the cell of origin Radiological features of primary tumors Secondary bone tumors , sites of involvement .  Osteomyelitis : organisms , spread , radiological features in different imaging modalities .
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Kahlil Al – umeri

<b>Item</b>	Lecture 24
<b>Subject</b>	Imaging of bone disease : Joints diseases .
<b>Learning objectives</b>	To understand : Bone tumors types and radiological features in different imaging modalities . Discussion about osteomyelitis .
<b>Content</b>	Radiological anatomy of the joint in plain film Signs of joint diseases by plain film , CT scan and MRI Radiological features of rheumatoid arthritis , osteoarthritis and gout .
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Kahlil Al – umeri

<b>Item</b>	Lecture 25
<b>Subject</b>	Imaging of bone disease : Spines
<b>Learning objectives</b>	To understand : Bone tumors types and radiological features in different imaging

	modalities . Discussion about osteomyelitis .
<b>Content</b>	X-ray of cervical and Lumbar spines . Plain spine X-rays views Anatomy Stability lines Vertebral CT scan and MRI imaging Radiological pathological features .
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Kahlil Al – umeri

<b>Item</b>	Lecture 26
<b>Subject</b>	Imaging of bone disease : Spines
<b>Learning objectives</b>	To understand : Bone tumors types and radiological features in different imaging modalities . Discussion about osteomyelitis .
<b>Content</b>	X-ray of cervical and Lumbar spines . Plain spine X-rays views Anatomy Stability lines Vertebral CT scan and MRI imaging Radiological pathological features .
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Kahlil Al – umeri

<b>Item</b>	<b>Lecture 27</b>
<b>Subject</b>	Breast imaging
<b>Learning objectives</b>	a. Introduction to breast imaging b. Overview of breast radiologic anatomy
<b>Content</b>	a. Discussing different imaging modalities used in breast assessment, b. Their indications, limitations, advantages, and disadvantages, and when to request certain modalities c. normal appearance on mammogram and ultrasound in different age groups clarifying the hormonal influence on breast appearance e.g: pregnancy, lactation, and menopause
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Doaa Faris

<b>Item</b>	<b>Lecture 28</b>
<b>Subject</b>	Breast imaging

<b>Learning objectives</b>	Learn how to characterize common breast pathologies, stressing on the ability to characterize them into benign and malignant ones relying on imaging, and clinical findings
<b>Content</b>	a. diffuse breast abnormality b. focal lesions: cysts, fibroadenoma, and cancer
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Doaa Faris
<b>Item</b>	<b>Lecture 29</b>
<b>Subject</b>	Breast imaging
<b>Learning objectives</b>	a. breast screening program b. Male breast
<b>Content</b>	a. Simplified overview of the breast screening program: indication, modalities, commonly used lexicon b. Male breast: normal appearance, gynecomastia, and cancer
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Doaa Faris
<b>Item</b>	<b>Lecture 30</b>
<b>Subject</b>	Para-nasal sinus imaging
<b>Learning objectives</b>	Learn the radiologic anatomy on different imaging modalities with brief discussion on commonly encountered pathologic process affecting the PNS
<b>Content</b>	a. Trauma b. Infection c. Neoplastic process
<b>Time</b>	1 hour
<b>Lecturer</b>	Dr. Doaa Faris

## 5- Dermatology

**Aims of the course:**

1)To have knowldge and understandig of common skin diseases and sexually transmitted diseases.

2)To define common skin diseases and sexually transmitted diseases.

3)To have attitudes with patient who have common skin diseases and sexually transmitted diseases.

**Learning objectives:**

**(Knowledge):**

The common skin diseases, sexually transmitted diseases and some rare skin disorders.

**(Skills):**

To have professional skills to interpret the clinical picture of The common skin diseases, sexually transmitted diseases and some rare skin disorders and to diagnose them and have intellectual skill to treat them.

**(Attitudes):**

-To be honest in his work.

-To keep secret of his patient.

-To do his best for sake of the patients.

**Teaching methods:**

Lectures showing slides of pictures of different skin lesions

Clinical sessions at the outpatient dermatology clinic in which students will be able to examine patients and take history and observe different management techniques

**Assessment methods:**

A- Written exams

B- Clinical exams

**Course contents:**

<b>week</b>	<b>Topics Covered</b>	<b>Objective</b>
<b>1</b>	<b>Microanatomy of skin part 1</b>	<b>Explanation of anatomical and histological featuersoh skin,hair and nails</b>
<b>2</b>	<b>Microanatomy of skin part 2</b>	<b>Explanation of fuctions of the skin ,hair and nails</b>

<b>3</b>	<b>Signs and symptoms of skin diseases</b>	<b>Explanation of the most important Signs and symptoms in dermatology and discuss the types of skin lesions</b>
<b>4</b>	<b>Eczema part 1</b>	<b>Definition of the disease,its clinical picture,diagnosis and how to treat the disease.</b>
<b>5</b>	<b>Eczema part 2</b>	<b>Definition of the disease,its clinical picture,diagnosis and how to treat the disease.</b>
<b>6</b>	<b>Acne and rosacea</b>	<b>Definition of the disease,its clinical picture,diagnosis and how to treat the disease.</b>
<b>7</b>	<b>Papulosquamous diseases part 1</b>	<b>Definition of the disease,its clinical picture,diagnosis and how to treat the disease.</b>
<b>8</b>	<b>Papulosquamous diseases part 2</b>	<b>Definition of the disease,its clinical picture,diagnosis and how to treat the disease.</b>
<b>9</b>	<b>Superficial fungal infections of skin</b>	<b>Definition of the disease,its clinical picture,diagnosis and how to treat the disease.</b>
<b>10</b>	<b>Bacterial and viral infections of skin part 1</b>	<b>Definition of the disease,its clinical picture,diagnosis and how to treat the disease.</b>

<b>11</b>	<b>Bacterial and viral infections of skin part 2</b>	<b>Definition of the disease,its clinical picture,diagnosis and how to treat the disease.</b>
<b>12</b>	<b>Parasitic skin infestations</b>	<b>Definition of the disease,its clinical picture,diagnosis and how to treat the disease.</b>
<b>13</b>	<b>Connective tissue disorders part 1</b>	<b>Definition of the disease,its clinical picture,diagnosis and how to treat the disease.</b>
<b>14</b>	<b>Connective tissue disorders part 2</b>	<b>Definition of the disease,its clinical picture,diagnosis and how to treat the disease.</b>
<b>15</b>	<b>Pruritus</b>	<b>Definition,the causes(Skin diseases and systemic diseases)and discuss the approach to diagnosis and treatment.</b>
<b>16</b>	<b>Skin diseases caused by physical factors</b>	<b>Classification of these Skin diseases according to the physical factors that cause them.  Definition, and discuss the approach to diagnosis and treatment.</b>
<b>17</b>	<b>Urticaria and reactive erythemas</b>	<b>Definition of the disease,its clinical picture,diagnosis and how to treat the disease.</b>

18	<b>Genodermatoses part 1</b>	<b>Definition of the disease,its clinical picture,diagnosis and how to treat the disease.</b>
19	<b>Genodermatoses part 2</b>	<b>Definition of the disease,its clinical picture,diagnosis and how to treat the disease.</b>
20	<b>Sexually transmitted diseases part 1</b>	<b>Definition of the disease,its clinical picture,diagnosis and how to treat the disease.</b>
21	<b>Sexually transmitted diseases part 2</b>	<b>Definition of the disease,its clinical picture,diagnosis and how to treat the disease.</b>
22	<b>Hair problems</b>	<b>Definition of the disease,its clinical picture,diagnosis and how to treat the disease.</b>
23	<b>Pigmentary skin disorders</b>	<b>Definition of the disease,its clinical picture,diagnosis and how to treat the disease.</b>
24	<b>Bullous skin disorders</b>	<b>Definition of the disease,its clinical picture,diagnosis and how to treat the disease.</b>
25	<b>Skin tumours</b>	<b>Definition of the disease,its clinical picture,diagnosis and how to treat the disease.</b>
26	<b>Drug eruption and treatment in dermatology</b>	<b>Definition of the disease,its clinical picture,diagnosis and how to treat the disease.</b>

27	Phototherapy in dermatology	Explain the specific Phototherapy used in dermatology branch(PUVA,NBUVB). Also discuss the indications,contraindications and complications.
28	Nail disorders	Explain the most common findings of nails abnormalities that occur in skin diseases and systemic diseases.
29	Cutaneous manifestations of systemic diseases part 1	Explain only the skin findings of systemic diseases and short notes about diagnosis and treatment.
30	Cutaneous manifestations of systemic diseases part 2	Explain only the skin findings of systemic diseases and short notes about diagnosis and treatment.

**References:**

- Hunters clinical dermatology.
- Andrews textbook of dermatology.

**6- ENT**

**Aims of the course:**



Otolaryngology is a surgical subspecialty with both medical and surgical background. Diseases that affect structures of the head and neck significantly impact patients' function and quality of life (e.g., smell, hearing, breathing, swallowing, and phonation).

Diseases can be life-threatening (e.g., airway obstruction), urgent (e.g., head and neck cancer), and elective (e.g., cosmetic surgery).

Our surgical procedures are ranging from intricate (e.g., pediatric airway surgery), technologically and anatomically complex (e.g., endoscopic sinus surgery), at the end of course and lectures student should be able to deal with urgent conditions of otolaryngology and had basic knowledge of its diseases and their management.

### **Learning objectives:**

#### **(Knowledge):**

Students will have the necessary information to deal with:

- a) Ear Infection
- b) Hearing Loss / Tinnitus
- c) Vertigo
- d) Facial Paralysis
- e) Diseases of the Nose and Paranasal Sinuses
- f) Diseases of the Pharynx
- g) Diseases of the Larynx and Upper
- h) Diseases of the Oral Cavity
- i) Diseases of the Salivary
- j) Congenital Masses
- k) Lymphatics of the Ear, Nose and Throat

#### **(Skills):**

- i. Otologic history taking for common otologic problems: \* Ear discharge \* Otagia \* Infant hearing loss \* Adult hearing loss \* Dizziness \* Facial weakness
- ii. Otoscopy including pneumatic otoscopy
- iii. Tuning fork tests
- iv. Interpretation of basic audiogram (hearing test)
- v. Otoneurologic examination \* Dix-Hallpike maneuver and the Particle Repositioning Maneuver \* Cranial nerve examination \* Cerebellar function

b) Nose and Paranasal Sinus i. History taking for common nasal problems: \* Nasal obstruction \* Nasal discharge \* Facial pain \* Anosmia \* Epistaxis ii. Anterior rhinoscopy iii. Exposure to endoscopic examination of the full nasal cavity iv. Identification of normal structures within the nasal cavity v. Examination of the external nasal structures vi. General appreciation of plain films and CT scans of the nose and paranasal sinuses

c) Oral Cavity i. History taking for common oral cavity problems: \* Sore mouth \* Drooling \* Salivary gland problems \* Lip lesion

\*Tongue mass ii. Examination of the oral cavity including bimanual palpitation iii. Identification of salivary duct openings iv. Assessment of the oropharynx

d) Pharynx and Larynx i. History taking for common throat problems: \* Sore throat \* Foreign body sensation (globus) \* Hoarseness \* Sleep apnea \* Stridor ii. Examination of the pharynx and larynx via mirror as well as an exposure to endoscopic examination of these anatomical areas

e) Neck i. History taking for common neck/visceral problems: • Thyroid nodule • Neck mass ii. Examination of the head and neck and its viscera iii. Appreciation of normal anatomy • Identification of the triangles in the neck • Identification of surface anatomy of normal anatomical structures, such as the carotid artery, thyroid gland, salivary glands, laryngeal structures iv. Observe the technique of fine needle aspiration.

### **(Attitudes):**

Communicate with the patient as a person, not as a disease, and understand that the patient is a person with beliefs, values, goals, and concerns, which must be respected in addition to respecting the patient's dignity, privacy, information confidentiality and autonomy.

Counsel the patient before doing any intervention and in different situations with respect to his or her wish whenever this is possible.

Maintain the atmosphere of cooperation, peer relationships, and mutual respect in the society.

### **Teaching Methods:**

1 Lectures (credit hours) 2 hour/week

2 Practical sections, (Credit hour) 3hour/day for 2 weeks

### **Assessment methods:**

Written exams: MCQ & SHORT ASSAY

Clinical exam. & OSCE

Quizzes

Mark Distribution:

Mid-term exam 15 degrees

Assessment 5 degrees

Clinical exam 20 degrees

Final exam 60 degrees(written)

Course contents:

topic	hours	Learning objective	Description
<b>EAR ANATOMY &amp;PHYSIOLOGY</b>	1	Understanding basic anatomy physiology and important audio logical investigation and how to deal with otology patients	Basic anatomy ,physiology of external, middle and inner ear with competitive knowledge of audiology investigations
<b>DISEASE OF EXT.EAR</b>	1	Major presentation of external ear diseases their etiology management and complications	Types of otitis externa ,microbiology ,risks factors, prevention and treatment
<b>DISEASE OF EXT.EAR</b>	1	Major presentation of external ear diseases their etiology management and complications	Non inflammatory external ear diseases their presentations, diagnosis and treatment
<b>DISEASE OF MIDDLE EAR</b>	1	Otitis media classification diagnosis risk factors hearing morbidity and complications	Definition ,risks factors ,signs and symptoms role of antibiotics and treatment
<b>DISEASE OF MIDDLE EAR</b>	1	Otitis media classification diagnosis risk factors hearing morbidity and complications	Early diagnosis ,role of medical and surgical treatments
<b>DISEASE OF INNER EAR</b>	1	Vertigo ,hearing loss and tinnitus the main presentation of inner ear diseases how to evaluate and differentiate between inner ear diseases finally ER MANAGEMENT OF VERTIGO	Evaluation of dizzy patient ,roll out of neurological pathology,  Pharmacological and non-pharmacological treatment modality of inner ear diseases
<b>DISEASE OF INNER EAR</b>	1	Vertigo ,hearing loss and tinnitus the main presentation of inner ear	Evaluation of dizzy patient ,roll out of neurological pathology,

		diseases how to evaluate and differentiate between inner ear diseases finally ER MANAGEMENT OF VERTIGO	Pharmacological and non-pharmacological treatment modality of inner ear diseases
<b>ANATOMY OF LARYNX</b>	1	Understanding basic anatomy physiology and important laryngology investigation and how to deal with larynx patients	Laryngeal cartilage frame work, muscles of larynx ,nerve supply, arterial supply and phonation physiology
<b>INFLAMMATION OF LARYNX</b>	1	Clinical presentation, etiology and management of inflammatory laryngeal diseases	Acute laryngitis, CROUP ,epiglottitis, clinical evaluation and treatment
<b>BENIGN DISEASE</b>	1	Benign laryngeal diseases their pathogenesis ,clinical presentation and management	Role of voice abuse, benign larynx pathology  Surgical treatment modality
<b>MALIGNANCY</b>	1	Etiology ,early diagnosis ,presentation and main therapeutics options	Clinical diagnosis, grading ,staging and role of radio chemotherapy ,surgical treatment
<b>VOCAL CORD PALSY</b>	1	Presentation ,diagnosis and phone surgery	Stridor, causes of immobile vocal cord short and long term management
<b>TRACHEOSTOMY</b>	1	Definition ,procedure, indications and complication	Terminology, difficult upper airway ,indications ,complications
<b>ANATOMY OF PHARYNX</b>	1	Student should learn basic anatomical sites of pharynx and their clinical relevance	Description of three parts of pharynx, physiology of deglutition
<b>PHARYNGITIS</b>	1	Etiology clinical presentation and treatment of	Causes of acute pharyngitis, viral, bacterial and non-specific causes role

		various types of pharyngitis	of steroids and antibiotics
<b>PHARYNGEAL TUMORS</b>	1	Most common histological types their presentation early signs	Epithelial and non-epithelial malignancy ,etiology ,clinical features ,diagnosis and modality of treatment
<b>BENIGN DISEASE</b>	1	Focusing on dilemma of aphthae ulcer and how approach	Management of benign pharynx diseases
<b>TONSILLECTOMY</b>	1	Indication contraindications postoperative management	Tonsillitis ,etiology, indications, complications
<b>PHARYNGEAL MANIFESTATION OF SYSTEMIC DISEASE</b>	1	How to approach patient with pharyngitis with hidden underlying systemic diseases	Role of lymphoprolifartive diseases in presentation of pharyngeal diseases
<b>ANATOMY OF NOSE</b>	1	At the end of lecture student should gate basic knowledge of nose and Para nasal sinuses anatomy and physiology	Anatomy of external nares, nasal cavity, cartilaginous frame work ,Para nasal sinuses anatomy
<b>RHINOSINUSITIS</b>	1	Student acquired information about definition & classification of rhino sinusitis	Definition of acute sinusitis ,microbiology, pathogenesis, modality of treatment
<b>EPISTAXIS</b>	1	How to evaluate and manage patient present with epistaxis	Classifications ,etiology ,assessment of bleeding, main methods of treatment
<b>TUMORS</b>	1	Pathological type and site of origin of nasal tumors presentation early diagnosis and major lines of treatments	Benign and malignant tumors, grading and staging and treatment

NASAL POLYP	1	Theories behind nasal polyp formation complications medical and surgical treatment, the role of endoscope	Definition, theories of polyp formation, role of allergy and fungal infection, medical and surgical polypectomy
COMMON E.N.T OPERATION	1	Indications and hoe to deal with emergency complication of adenotonsillectomy	Adenotonsillectomy indications, main steps of procedures and complication management

Daily schedule of second course weeks (fifth grade):

1:30-2:30	12:30-1:30	11:30-12:30	8:00-11:00	اليوم
انف واذن وحنجرة(قاعة المرحوم د.حمادي)	جلدية(قاعة المرحوم د.حمادي)	باطنية(قاعة المرحوم د.حمادي)	عيادة خارجية	الأحد
جراحة(قاعة بن رشد)	نسائيةI(قاعة بن رشد)	نسائية I(قاعة بن رشد)	عيادة خارجية	الاثنين
جراحة (قاعة بن سينا 2)	جراحة(قاعة بن سينا 2)	باطنية (قاعة بن سينا 2)	عيادة خارجية	الثلاثاء
باطنية (قاعة المرحوم د.حمادي)	انف واذن وحنجرة(قاعة المرحوم د.حمادي)	جلدية(قاعة المرحوم د.حمادي)	عيادة خارجية	الأربعاء
	اشعة (قاعة المرحوم د.حمادي)	اشعة(قاعة المرحوم د.حمادي)	عيادة خارجية	الخميس

## Sixth year:

ت	المادة الدراسية	عدد اسابيع التدريب السريري	التفاصيل	عدد الوحدات
.7	Medicine (باطنية)	12	- 10 اسابيع في الطب العام - 2 اسبوع في الامراض النفسية والعصبية - 10 حلقات مناقشة بمعدل واحدة اسبوعيا	12
.8	Gynecology (نسائية)	10	- 10 اسابيع في ردهات النسائية والتوليد - تعطي 10 حلقات مناقشة بمعدل واحدة اسبوعيا	10
.9	Surgery (جراحة)	12	- الجراحة العامة - جراحة الكسور - جراحة المجاري البولية - 10 حلقات مناقشة بمعدل واحدة اسبوعيا	12
.10	Pediatrics (اطفال)	10	- 8 اسابيع في ردهات الاطفال - 2 اسبوع في مركز الرعاية الصحية الأولية - 8 حلقات مناقشة بمعدل مناقشة واحدة اسبوعيا	10
	المجموع	44		44



# **1- Medicine:**

## **Aims of the course:**

**1-**To support acquisition of knowledge and understanding of health and its promotion, and of disease, its prevention and management, in the context of the whole individual and his or her place in the family and in society.

**2-**To enable the student to acquire and become proficient in basic clinical skills such as obtaining a patient's history, undertaking a comprehensive physical and mental state examination, interpreting the findings and constructing diagnostic and treatment plans. The student should be competent in the performance of a limited number of basic technical procedures and become proficient in listening and responding to patients concerns.

**3-**To enable the students to acquire and demonstrate attitudes necessary for the achievement of high standards of medical practice, both in relation to the provision of care of individuals and populations and to his or her personal development including a lifelong commitment to continuing medical education.

## **Learning objectives:**

### **(Knowledge):**

**1-**Discuss the common medical problems presenting to doctors - in primary health care setting, hospital and community - their diagnosis, prevention and treatment.

**2-**Identify disease in terms of mental, functional and physical processes

**3-**State the clinical manifestations and differential diagnosis of common medical disorders with an emphasis on the incidence of the different manifestations and their relative importance in establishing diagnosis, and the early manifestations of serious diseases (e.g. malignancy, emergencies ...etc)

**4-**Recognize the normal aging process in terms of physiologic and clinical manifestations and identify age related diseases and variable causes of disability in old age.

### **(Skills):**

Take a thorough history of appropriate depth and detail, relative to the clinical context.

Demonstrate a complete and/or problem-focused physical examination.

Recognize urgent life-threatening conditions, and institute appropriate initial management.

Safely perform routine diagnostic and therapeutic procedures, including life support.

### **(Attitudes):**

Adopt respect for patients and colleagues that encompasses, without prejudice, diversity of background, opportunity, language, culture and way of life.

Advocate respect of patients' rights, particularly in regard to confidentiality and informed consent.

Justify incorporation into their practice of appropriate attitudes, clinical ethics and legal responsibilities.

### **Teaching methods:**

i. Illustrated Lectures: Large group plenary sessions in lecture theatres are timetabled, 6 hours weekly. They are not intended to convey factual information with students busy taking notes. Instead they are akin to 'key-note addresses', designed to support self education principle. They set the scene for a particular topic, highlight important issues and, hopefully, arouse curiosity in relevant areas. It is left to students to go and explore the subject in critical detail.

ii. Seminars: Students are expected to search and prepare certain topic in a teamwork manner. This work will be orally presented using information technology, role play and group discussion under supervision of a senior tutor for 2 hours. Seminars are held once weekly every Wednesday during senior term session

iii. Clinical Rounds: Tutors demonstrate the core practical clinical skills that are an essential prelude to undertaking a confident and competent clinical history and examination of patients and student practice these skills on patients under supervision for 3 hours daily, 4 days weekly.

iv. Problem-based learning (PBL): Students work in small groups to study written descriptions of clinical situations. By using a specific set of study skills, they use those scenarios to guide them towards relevant theoretical and practical learning.

V. Tutorials: For giving introduction, indications, and interpretation of clinical laboratory tests, radiography, and electrocardiography. Students in small groups then work on ECGs, lab reports, and X-rays to identify abnormalities, interpret findings, and put diagnosis.

vi. Practical clinical technique: focus on the development of practical skills appropriate to the clinical situation. Students have to demonstrate sufficient knowledge and skill before undertaking invasive clinical patients. On procedures Medical Skills Lab allow students to develop many medical skills in the relative 'safety' of Simulation

vii. Role play: Students work in small groups to study written scenarios, each student work with a colleague. One plays the role of the patient and the other play the role of the doctor. This method is essential in learning ethics and communication skills. Tutors will supervise and guide students.

viii. Assignment: each student completes a critical review on a selected topic. The review must be fully referenced and submitted in word-processed form 1200 word at least and delivered in a known dead time.

### Assessment methods:

1- end round clinical exam

2- Student's Log book

3-final year exam

-Written examination &MCQ

-Clinical & OSCE

-ECG –X-rays

Course contents:

### WEEK ONE

Day	Clinical session (case presentation) (8-11am)	practical skills session ( 11-12am)	Rest (12-1pm)	TETURIALS (seminars & PBL) (1-2pm)
<b>SUNDAY</b>	A. حازم الخفاجي- B. راضي فرهود-	Interpretation of CBP & ESR A.حازم الخفاجي- B. مظفر محمد -		PBL Thrombocytopenia A. حازم الخفاجي- B. راضي فرهود-
<b>MONDAY</b>	A.اسامة طاهر- B. ضياء النانلي-	Interpretation of reports of abdominal ultrasound & CT A.اسامة طاهر- B. ضياء النانلي-		PBL Ascites A+B د.اسامة طاهر
<b>TUESDAY</b>	A+B د. كفاح العبيدي	How to perform ECG A. مازن الشباني- B. مهدي الجشعمي-		Seminar Myocardial & pericardial diseases A. مازن الشباني- B. مهدي الجشعمي-
<b>WEDNESDAY</b>	A+B د. علاء العصامي	How to measure blood glucose level using glucometer A+B. عقيل الزامللي		PBL Diabetes A+B د. علاء العصامي
<b>THURSDAY</b>	A. علي طالب- B. اثير الاعرجي-	A+B. ماجد اللبان		PBL: Tuberculosis A. علي طالب- B. ماجد اللبان-
<b>Week two</b>				

Day	Clinical session (case presentation) (8-11am)	practical skills (11am-12pm)	Rest (12-1pm)	Tutorials (include seminars & PBL) (1pm-2pm)
<b>SUNDAY</b>	A- د. حازم الخفاجي- B- د. راضي فرهود-	Interpretation of renal function test A- د. حازم الخفاجي- B- د. وسام هاتف-		Seminar Approach to patient with renal failure A- د. حازم الخفاجي- B- د. راضي فرهود-
<b>MONDAY</b>	A- د. اسامة طاهر- B- د. ضياء النانلي-	Observation of OGD A- د. اسامة طاهر- B- د. ضياء النانلي-		PBL: Peptic ulcer & GI bleeding A+B د. اسامة طاهر
<b>TUESDAY</b>	A+B د. كفاح العبيدي	ECG (ischemic heart disease) A- د. مازن الشباني- B- د. مهدي الجشعي-		Seminar: Anticoagulants, & antiplatelet & thrombolytic therapy A- د. مازن الشباني- B- د. مهدي الجشعي-
<b>WEDNESDAY</b>	A+B د. علاء العصامي	How to perform lumber puncture? A+B د. عقيل الزاملي		PBL: CVA & seizure A+B د. علاء العصامي
<b>THURSDAY</b>	A- د. علي طالب- B- د. اثير الاعرجي-	Illustration of I.V, I.M & S.C injections A+B د. ماجد اللبان		PBL: SLE A- د. علي طالب- B- د. ماجد اللبان-
<b>Week three</b>				
Day	Clinical session (case presentation) (8-11am)	practical skills (11am-12pm)	Rest (12-1pm)	Tutorials (include seminars & PBL) (1pm-2pm)
<b>SUNDAY</b>	A- د. حازم الخفاجي- B- د. راضي فرهود-	How to perform venepuncture & do blood transfusion? A- د. حازم الخفاجي- B- د. مظفر محمد-		Seminar: Approach to patient with anemia A- د. حازم الخفاجي- B- د. راضي فرهود-
<b>MONDAY</b>	A- د. اسامة طاهر- B- د. ضياء النانلي-	How to perform nasogastric intubation A- د. اسامة طاهر- B- د. ضياء النانلي-		Seminar: Medical causes of abdominal pain A+B د. اسامة طاهر

<b>TUESDAY</b>	<b>A+B</b> د. كفاح العبيدي	Illustration of Pulmonary Function Test <b>A-</b> مازن الشباني <b>B-</b> مهند الجشعمي		PBL: Pulmonary emboli <b>A-</b> مازن الشباني <b>B-</b> مهند الجشعمي
<b>WEDENSDAY</b>	<b>A+B</b> د. علاء العصامي	Interpretation of hormonal level assessment <b>A+B</b> د. عقيل الزامللي		PBL: Adrenal insufficiency & Cushing syndrome <b>A+B</b> د. علاء العصامي
<b>THURSDAY</b>	<b>A-</b> علي طالب <b>B-</b> اثير الاعرجي	Interpretation of blood culture <b>A+B</b> د. ماجد اللبان		PBL: Pyrexia of Unknown Origin <b>A-</b> علي طالب <b>B-</b> ماجد اللبان
<b>Week four</b>				
<b>Day</b>	<b>Clinical session (case presentation) (8-11am)</b>	<b>practical skills (11am-12pm)</b>	<b>Rest (12-1pm)</b>	<b>Tutorials (include seminars &amp; PBL) (1pm-2pm)</b>
<b>SUNDAY</b>	<b>A-</b> حازم الخفاجي <b>B-</b> راضي فرهود	How to insert folley's catheter? <b>A-</b> حازم الخفاجي <b>B-</b> مظفر محمد مزعل		PBL: Nephrotic syndrome <b>A-</b> حازم الخفاجي <b>B-</b> راضي فرهود
<b>MONDAY</b>	<b>A-</b> اسامة طاهر <b>B-</b> ضياء النانلي	Interpretation of hepatitis viral screen <b>A-</b> اسامة طاهر <b>B-</b> ضياء النانلي		PBL Hepatitis <b>A+B</b> د. اسامة طاهر
<b>TUESDAY</b>	<b>A+B</b> د. كفاح العبيدي	ECG (arrhythmias & heart block) <b>A-</b> مازن الشباني <b>B-</b> مهند الجشعمي		Seminar Approach to patient with arrhythmia <b>A-</b> مازن الشباني <b>B-</b> مهند الجشعمي
<b>WEDENSDAY</b>	<b>A+B</b> د. علاء العصامي	History & examination <b>A+B</b> د. عقيل الزامللي		PBL Hyper & hypothyroidism <b>A+B</b> د. علاء العصامي
<b>THURSDAY</b>	<b>A-</b> علي طالب <b>B-</b> اثير الاعرجي	Illustration of pleurocentesis Interpretation of chest X ray <b>A+B</b> د. ماجد اللبان		PBL CA lung <b>A-</b> علي طالب <b>B-</b> ماجد اللبان
<b>Week five</b>				
<b>Day</b>	<b>Clinical session (case presentation) (8-11am)</b>	<b>practical skills (11am-12pm)</b>	<b>Rest (12-1pm)</b>	<b>Tutorials (include seminars &amp; PBL) (1pm-2pm)</b>
<b>SUNDAY</b>	<b>A-</b> حازم الخفاجي <b>B-</b> راضي فرهود	Interpretation of blood film & WBC differential		PBL Leukaemia <b>A-</b> حازم الخفاجي

		د. حازم الخفاجي- B. د. وسام هاتف-		د. راضي فرهود-B
<b>MONDAY</b>	د. اسامة طاهر-A د. ضياء النانلي-B	Assessment of bleeding tendencies د. اسامة طاهر-A د. ضياء النانلي-B		PBL Liver cirrhosis A+B د. اسامة طاهر
<b>TUESDAY</b>	A+B د. كفاح العبيدي	Interpretation of cardiac enzymes د. مازن الشباني-A د. مهدي الجشعمي-B		Seminar Approach to patient with chest pain د. مازن الشباني-A د. مهدي الجشعمي-B
<b>WEDNESDAY</b>	A+B د. علاء العصامي	Interpretation of brain imaging (CT & MRI) د. عقيل الزالمي A+B		Seminar Neuro-transmitters A+B د. علاء العصامي
<b>THURSDAY</b>	د. علي طالب A- د. اثير الاعرجي-B	exercise ECG د. ماجد اللبان A+B		PBL COPD & respiratory failure د. علي طالب A- د. ماجد اللبان B-
<b>Week six</b>				
<b>Day</b>	<b>Clinical session (case presentation) (8-11am)</b>	<b>practical skills (11am-12pm)</b>	<b>Rest (12-1pm)</b>	<b>Tutorials (include seminars &amp; PBL) (1pm-2pm)</b>
<b>SUNDAY</b>	د. حازم الخفاجي-A د. راضي فرهود-B	Observation of hemodialysis د. حازم الخفاجي-A د. وسام هاتف-B		PBL Glomerulonephritis د. حازم الخفاجي-A د. راضي فرهود-B
<b>MONDAY</b>	د. اسامة طاهر-A د. ضياء النانلي-B	Interpretation of liver function test د. اسامة طاهر-A د. ضياء النانلي-B		PBL Diarrhoea A+B د. اسامة طاهر
<b>TUESDAY</b>	A+B د. كفاح العبيدي	Interpretation of CT chest د. مازن الشباني-A د. مهدي الجشعمي-B		PBL Endocarditis د. مازن الشباني-A د. مهدي الجشعمي-B
<b>WEDNESDAY</b>	A+B د. علاء العصامي	Assessment of spine MRI د. عقيل الزالمي A+B		Seminar Metabolic bone disease A+B د. علاء العصامي
<b>THURSDAY</b>	د. علي طالب A- د. اثير الاعرجي-B	How to perform CPR د. ماجد اللبان A+B		PBL CA lung د. علي طالب A- د. ماجد اللبان B-
<b>Week seven</b>				
<b>Day</b>	<b>Clinical session</b>	<b>practical skills (11am-12pm)</b>	<b>Rest</b>	<b>Tutorials</b>

	(case presentation) (8-11am)		(12-1pm)	(include seminars & PBL) (1pm-2pm)
SUNDAY	د. حازم الخفاجي-A د. راضي فرهود-B	Observation of bone marrow aspiration د.حازم الخفاجي-A د. وسام هاتف-B		PBL Lymphoma د. حازم الخفاجي-A د. راضي فرهود-B
MONDAY	د.اسامة طاهر-A د. ضياء النانلي-B	Interpretation of general stool examination د.اسامة طاهر-A د. ضياء النانلي-B		PBL malabsorption A+B د.اسامة طاهر
TUESDAY	A+B د. كفاح العبيدي	Assessment of blood pressure د. مازن الشباني-A د. مهدي الجشعمي-B		PBL Hypertension د. مازن الشباني-A د. مهدي الجشعمي-B
WEDNESDAY	A+B د. علاء العصامي	How to perform neurological examination? د. عقيل الزاملي A+B	PBL Extrapyramidal syndrome & peripheral neuropathy	Seminar Approach to patient with jaundice A+B د. علاء العصامي
THURSDAY	د. علي طالب A- د. اثير الاعرجي-B	Interpretation of PT, PTT & INR levels د. ماجد اللبان A+B		Seminar Anti-inflammatory and immunosuppressive drugs د. علي طالب A- د. ماجد اللبان B-
<b>Week eight</b>				
Day	Clinical session (case presentation) (8-11am)	practical skills (11am-12pm)	Rest (12-1pm)	Tutorials (include seminars & PBL) (1pm-2pm)
SUNDAY	د. حازم الخفاجي-A د. راضي فرهود-B	Urine dipstick analysis د.حازم الخفاجي-A د. وسام هاتف-B		PBL Obstructive uropathy د. حازم الخفاجي-A د. راضي فرهود-B
MONDAY	د.اسامة طاهر-A د. ضياء النانلي-B	Assessment of serum electrolytes د.اسامة طاهر-A د. ضياء النانلي-B		PBL Nausea & vomiting (metabolic acidosis & alkalosis) A+B د.اسامة طاهر
TUESDAY	A+B د. كفاح العبيدي	How to measure body temperature? د. مازن الشباني-A د. مهدي الجشعمي-B		Seminar Approach to patient with metabolic Coma د. مازن الشباني-A د. مهدي الجشعمي-B

<b>WEDNESDAY</b>	<b>A+B</b> د. علاء العصامي	How to perform Glasgow coma scale <b>A+B</b> د. عقيل الزامل		Seminar Antibiotics and chemotherapeutics <b>A+B</b> د. علاء العصامي
<b>THURSDAY</b>	د. علي طالب - B- د. اثير الاعرجي	Assessment of cardiac Echo study <b>A+B</b> د. ماجد اللبان		PBL Pneumonia د. علي طالب - B- د. ماجد اللبان
<b>Week nine</b>				
<b>Day</b>	<b>Clinical session (case presentation) (8-11am)</b>	<b>practical skills (11am-12pm)</b>	<b>Rest (12- 1pm)</b>	<b>Tutorials (include seminars &amp; PBL) (1pm-2pm)</b>
<b>SUNDAY</b>	د. حازم الخفاجي - B- د. راضي فرهود	Arterial blood sampling د. حازم الخفاجي - B- د. وسام هاتف		PBL Polycythaemia د. حازم الخفاجي - B- د. راضي فرهود
<b>MONDAY</b>	د. اسامة طاهر - B- د. ضياء النانلي	Observation of colonoscopy د. اسامة طاهر - B- د. ضياء النانلي		PBL Ulcerative colitis <b>A+B</b> د. اسامة طاهر
<b>TUESDAY</b>	<b>A+B</b> د. كفاح العبيدي	How to give I.V antibiotic infusion د. مازن الشباني - B- مظفر محمد مزعل د.		Seminar Approach to a patient with heart failure د. مازن الشباني - B- د. مهند الجشعي
<b>WEDNESDAY</b>	<b>A+B</b> د. علاء العصامي	Assessment of uric acid level <b>A+B</b> د. عقيل الزامل		PBL Gout <b>A+B</b> د. علاء العصامي
<b>THURSDAY</b>	د. علي طالب - B- د. اثير الاعرجي	Interpretation of SPO2 level <b>A+B</b> د. ماجد اللبان		Seminar Approach to a patient with bronchial asthma د. علي طالب - B- د. ماجد اللبان
<b>Week ten</b>				
<b>Day</b>	<b>Clinical session (case presentation) (8-11am)</b>	<b>practical skills (11am-12pm)</b>	<b>Rest (12- 1pm)</b>	<b>Tutorials (include seminars &amp; PBL) (1pm-2pm)</b>
<b>SUNDAY</b>	د. حازم الخفاجي - B- د. راضي فرهود	Interpretation of tumour markers د. حازم الخفاجي - B- د. وسام هاتف		PBL Multiple myeloma د. حازم الخفاجي - B- د. راضي فرهود
<b>MONDAY</b>	د. اسامة طاهر - B- د. ضياء النانلي	Assessment of BMI د. اسامة طاهر - B- د. ضياء النانلي		PBL Obesity <b>A+B</b> د. اسامة طاهر
<b>TUESDAY</b>	<b>A+B</b> د. كفاح العبيدي	Interpretation of markers of		PBL Large vessel disease



		autoimmune diseases د. مازن الشباني-A د. مهدي الجشعي-B		د. مازن الشباني-A د. مهدي الجشعي-B
<b>WEDNESDAY</b>	<b>A+B</b> د. علاء العصامي	Interpretation of rheumatic factor level د. حازم الخفاجي A+B		Seminar Approach to a patient with polyarthritis A+B د. علاء العصامي
<b>THURSDAY</b>	د. علي طالب A- د. اثير الاعرجي-B	How to administer I.M & S.C insulin injections د. عقيل الزاملتي A+B		PBL Diabetic Keto Acidosis د. علي طالب A- د. عقيل الزاملتي B-

### seminars:

Anticoagulants, antiplatelets, and thrombolytic therapy

Antibiotics and chemotherapeutics

Anti inflammatory and immunosuppressive drugs

PUO

Myocardial and pericardial diseases

Neurotransmitters

Metabolic bone diseases

Approach to a patient with chest pain

Approach to a patient with poly arthritis

Approach to a patient with metabolic coma

Approach to a patient with jaundice

Medical causes of acute abdominal pain

Approach to a patient with anemia

Approach to a patient with renal failure

Approach to a patient with heart failure

Approach to a patient with arrhythmia

Approach to a patient with bronchial asthma

## **2- Gynecology**

### **Aims of the course:**

- 1-Provide students with basic knowledge of normal and abnormal growth and development of the female genital tract and normal and abnormal pregnancies and labor.
- 2-Enable students to provide basic health care for females in different age group (prepubertal, pubertal, childbearing, perimenopausal, and menopausal)
- 3-Provide students with an appropriate background covering the common and important obstetrics and gynecological emergencies and diseases (causes, diagnosis and management)
- 4-Provide appropriate ethical and professional education necessary for establishment of excellent communication with patients and colleagues and using sound ethical principles in clinical decision making
- 5-Provide lifelong learning competencies necessary for continuous professional development and research studies.

### **Learning objectives:**

#### **(Knowledge):**

- 1.The student will be able to diagnose pregnancy in first trimester in normal and abnormal conditions, stressing on the use of HCG, and on the indications and limitations of various pregnancy tests.
2. The student will be aware of the structure and function of feto-placental unit including the placenta, membranes, amniotic fluid, the cord and the fetal circulation.
3. The student will be aware of major maternal changes during pregnancy.
4. The student will observe the booking of the patients, request for appropriate investigations, assessment of the risk and plan the management.
- 5.Antenatally, the student will be able to:
  - a. Follow up normal pregnancy.
  - b. Educate mothers on: diet, hygiene, exercise, abnormal symptoms of pregnancy, drugs, preparation for labour and family planning.
  - c. Recognize abnormal symptoms and signs during pregnancy.
  - d. Assess gestational age, clinically.
  - e. Assess lie and presentation.
  - f. Listen to fetal heart with doptone .

g. Read and interpret fetal heart monitoring during pregnancy (NST)

and to do biophysical profile.

6. The student will be able to define induction of labour, differentiate it from augmentation of labour, list indications for induction of labour, select patients for different methods of induction and list possible maternal and fetal complications of labour induction.

7. Intranatally, the student should observe and learn to :

a) Evaluate perinatal record.

b) Assess the progress of labour and interpret normal and abnormal signs on partogram, fetal monitoring, and fetal blood sampling.

c) Select and effectively use analgesic and anaesthetic agents.

d) Assess clinical conditions of newborn by Apgar score and list criteria for immediate Pediatric consultation.

8. Students should observe delivery during their clinical rotation

**(Skills):**

1- Assess the gestational age of a pregnant lady through history taking, \*/focused clinical examination, beta-HCG level, and ultrasound assessment

2-Clinically differentiate between normal pregnancies and high risk pregnancies.

3-Distinguish between different causes of bleeding in early pregnancies with judgment of life threatening conditions e.g.: hypovolemic shock of inevitable abortion, disturbed ectopic pregnancy, through vital signs, general, abdominal and pelvic examinations.

4-Point out the warning signs of late pregnancy and early referral to specialized centers.

5-Evaluate the risk of bleeding in late pregnancy and how to start management with emphasis on NOT doing vaginal examination

6-Appraise different methods of assessment of fetal wellbeing with proper use of Pinard, Sonicaid, US to evaluate fetal wellbeing, and distressed fetuses which need immediate intervention

7-Manage normal labor appropriately and identify cases requiring referral (EBM).

8-Examine the female during labor and early recognition of obstructed labor through clinical symptoms and signs and call for help or refer to a special center

9-Assess complication of the third stage of labor and apply first aid management of each till a senior obstetrician is involved

10-Differentiate normal from abnormal neonate through Apgar score and participate in the initial management of those in need of resuscitation.

11-Counsel problems occurring in menopause with emphasis on postmenopausal bleeding, (any case of postmenopausal bleeding should be considered malignant until proved otherwise)

12-Counsel regarding methods of contraception suitable for each patient and how to use or apply it

**(Attitudes):**

Communicate with the patient as a person, not as a disease, and understand that the patient is a person with beliefs, values, goals, and concerns, which must be respected in addition to respecting the patient's dignity, privacy, information confidentiality and autonomy.

Counsel the patient before doing any intervention and in different situations with respect to her wish whenever this is possible

Maintain the atmosphere of cooperation, peer relationships, and mutual respect in the university society

Advance the knowledge base of medicine by developing and encouraging scientific researches

**Teaching methods:**

The students are offered clinical attachment in Obstetrics and Gynaecology for 10 weeks. Four courses, each course, nearly 40 students are subdivided into two equal subgroups; each group being assigned to one of the OBGYN/ OBSTETRIC units that constitute the department. Within each unit, students will have a clinical round in the morning from 8:30am – 10:30am discussing a clinical case from inpatients, outpatients, emergency room and labour room then they are subdivided to small groups to examine the patients. This occurs 4 times a week.

**2.TEACHER CENTERED TUTORIALS and PROBLEM BASE LEARNING 11.00 am-1.00 pm**

Two Tutorials(one obstetric and one gynecology ) are taken by senior staff , student will take history from patient and examine them under the supervision of the teacher. Different cases will be discussed daily.

Patients are taken from various wards and labour room. If there is no patient teacher will act as a role player. Student are trained to read CTG, interpret value, read ultrasound pictures, x-rays, instruments, contraceptive method and pathology specimen. These are shown during tutorial with explanation and discussion.

Ultimate objective No: 1 is to be covered by these activities. The student will be trained adequately on self-learning methods and procedures. So, they can

continuously update her knowledge and skills. The role of teachers in these activities is to supervise and guide the student's effort. If there is no patients with particular problem in the ward, teacher has to be a "role player" and make the students take history followed by diagnosis, investigation and management. This occurs 3 times a week every Sunday, Tuesday and Wednesday.

### 3. TEACHER CENTERED SEMINARS 9.00 am – 1.00 pm

Every weeks at Monday 8 students ( 4 students are given obstetrical topic and 4 students are given gynecological topic and each topic last 2 hours) to prepare and present in front of the class. There will be discussion, question and answer sessions. Teacher will evaluate the presentation of the students and explain the subject if students have any difficulty to understand the subject.

### 5. Audio-visual material demonstrations and practice skills :

Each week at Thursday from 11:00 am to 1:00 pm

6th year.

PBL problem based learning from (10:30am\_1 pm)

### Assessment methods:

#### 1. Attendance

- a. Behavioral & ethical attendance
- b. Logbook for clinical cases
- c. Attendance in emergency & labour room

The minimum accepted attendance is 70 % at the end of term examination.

#### 2. Assessment tools

- a. Written examination: for assessment of general knowledge & understanding.
- b. Oral examination by two members of teaching staff to assess how sixth year student deal with obstetrics & gynecology scenario problems.
- c. Clinical examination (long case exam) to medical student's attendance in managing clinical cases in apprehensive way.
- d. OSCE examination: including basic & clinical obstetrics & gynecology

#### 3. Assessment schedules: sixth year MBCHB program assessment schedules include:

Marks allocated	Examination	Marks	Parameters
20 M		5	Attendance
		5	OSCE
		5	

	<b>Term exam held at the end of 10 weeks of clinical attachment</b>	<b>5</b>	<b>Long obstetrics &amp; gynecology cases &amp; oral examination</b> <b>Mid-course written examination obstetrics &amp; gynecology ( 2 hours )</b>
<b>80M</b>	<b>Final exam total terms exam at the end of sixth year</b>	<b>40</b>	<b>Written exam in obstetrics &amp; gynecology includes cases MCQ , most appropriate answers , matching &amp; short assay ( 3 hours )</b>  - attendance 5 - Oral examination 10 - OSCE 20 - Short cases exam in Obstetrics & gynecology 5
	<b>1. written exam</b>		
	<b>2. whole courses clinical exam</b>	<b>40</b>	

### Course contents:

<i>BPL</i>	<i>Day</i>	<i>Obstetrics</i>	<i>Gynecology</i>
<b>Week 1</b>	Monday	Maternal and fetal assessment in labour suite, discuss partogram and bishops score	Gynaecological history and Examination
	Tuesday	Antenatal booking and follow up	Patient with a diagnosis of Endometriosis /clinical presentation /dx /treatment
	Wednesday	APH ,Clinical presentation of a patient& management at various gestational age	Various Contraception methods
<b>Week 2</b>	Monday	Patient with PPH in the labour room or admitted after one week with bleeding	Patient with vaginal discharge – discuss about various types of vaginitis
	Tuesday	Pregnant patient admitted with lower abdominal pain . (history taking- diagnosis – differential diagnosis and management)	Patient admitted in the ward with suspected ectopic (history investigation and management)
	Wednesday	Pregnant patient admitted with swollen painful Leg. History taking, diagnosis, investigations, treatment-talk about deep vein thrombosis	physiology of menstruation

<b>Week 3</b>	monday	Pregnant patient with a history of Epilepsy admitted with conclusion History – investigation management	Patient with leiomyoma of uterus – various presentation and management
	Tuesday	Pregnant patient admitted with high blood pressure, history taking ,examination – diagnosis , investigation and management	Patient admitted with suspected ovarian tumor )history taking , diagnosis and management)
	Wednesday	Pregnant patient admitted with pain, fever, dysuria in pregnancy – history taking , diagnosis , investigation, management.	Patient admitted with heavy and prolong bleeding history taking – differential diagnosis – investigations and management
<b>Week 4</b>	Monday	Pregnant patient – 32 weeks admitted because of suspected IUGR – history , investigations, management.	Patient with history of oligomenorrhea and hirsutism discuss management
	Tuesday	Mechanism of labour& pelvic assessment(discuss in labour room)	Patient with history of primary and secondary amenorrhea discuss management
	Wednesday	Discuss about postnatal patient (post caesarean and post normal delivery). History, examination, counseling before discharge.	Patient admitted with Bleeding in early pregnancy (discuss history , diagnosis and management of different types of miscarriage
<b>Week 5</b>	monday	prelabour Preterm rupture of membrane – history , investigation and management	Patient with hx of dysmenorrhea discuss management
	Tuesday	Pregnant patient admitted in the ward with itching at 34 weeks of pregnancy (history , diagnosis , investigation and management)	Clinical presentation ,dx and treatment of precocious puberty
	Wednesday	Patient admitted in the ward with increased vomiting in early pregnancy (history taking-investigation-management)	Clinical presentation ,types,dx ,and treatment of ovarian cyst
<b>Week 6</b>	monday	Patient admitted for induction of labour (history assessment,	Clinical presentation ,dx and treatment of pelvic organ prolapse

		indications method of induction , discuss	
	Tuesday	Clinical presentation and treatment of HELLP	Patient with history of previous recurrent miss carriages – now admitted at 11 weeks pregnancy. History taking, diagnosis, investigation and management.
	Wednesday	management of Rh. Negative pregnant patient	Clinical presentation ,dx and treatment of chronic pelvic pain
<b>Week 7</b>	monday	Fetal heart monitoring (when to do it-How to interpret-management of fetal distress)	Clinical presentation ,dx and treatment of premalignant and malignant disease of cervix
	Tuesday	Prolonged ,abnormal and obstructed labour, Clinical presentation with partogram and its management	Management of infertile couple
	Wednesday	Clinical presentation of patient with multiple pregnancy, Management in pregnancy and labour	Menopause ,clinical presentation and management
<b>Week 8</b>	monday	Mx of pregnant lady with hx of cardiac disease	Patient admitted with abdominal pain fever and discharge - management
	Tuesday	Clinical presentation of a patient with Diabetes in pregnancy – (Gestational Diabetes, known Diabetic) explain management	Patient admitted with post menopausal bleeding. history , examination and management
	Wednesday	Clinical presentation of patient with breech, unstable lie- management in pregnancy &labour	Patient admitted with bleeding – increased vomiting and large for date uterus at 12 weeks history taking, diagnosis , differential diagnosis and management
<b>Week 9</b>	monday	Maternal Pelvis –Types of pelvis Pelvic measurement Fetal skull measurement	Patient admitted with stress incontinence ,management
	Tuesday	Clinical presentation of liver Diseases in pregnancy	Benign and malignant tumors of Ovary – clinical presentation and management



	Wednesday	Clinical Presentation of a pregnant patient with anemia Explain Anemia in pregnancy	Clinical presentation of patients with irregular bleeding- D.U.B Inter menstrual and post coital bleeding management
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**Seminar each Sunday:**

<i>Seminars</i>	<i>Day</i>	<i>Obstetrics</i>	<i>gynecology</i>
<b>Week 1</b>	<i>sunday</i>	Mechanism and stages of labour	Normal and abnormal development of female genital tract
<b>Week 2</b>	<i>sunday</i>	Diabetes in pregnancy	Inter sex (causes , presentations and management)
<b>Week 3</b>	<i>sunday</i>	Multiple pregnancy	Anovulation (types , causes and management)
<b>Week 4</b>	<i>sunday</i>	Instrumental delivery forceps & vacuum	Cervical cancer (Pre malignant & malignant)
<b>Week 5</b>	<i>sunday</i>	Breech Presentations	Normal puberty
<b>Week 6</b>	<i>sunday</i>	Postmaturity	Trophoblastic Diseases
<b>Week 7</b>	<i>sunday</i>	Preterm labour	Polycystic ovarian syndrome
<b>Week 8</b>	<i>sunday</i>	Hypertensive diseases in pregnancy	Infertility
<b>Week 9</b>	<i>sunday</i>	Anemia in pregnancy	Benign and malignant ovarian tumour

**Skills each Thursday.**

<i>Skills</i>	<i>Day</i>	<i>Obstetrics</i>	<i>Gynecology</i>
<b>Week 1</b>	<i>Thursday</i>	The student will be able to observe major operations, like: caesarean section	Learn the students how to perform speculum examination and how to obtain high vaginal swabs, urethral and cervical swabs, wet smears, pap smears and to do bimanual examination.
<b>Week 2</b>	<i>Thursday</i>	Given the ultrasound film, the student will be able to recognize the normal pelvic organs, i.e. the uterus, ovaries and the bladder, and to recognize an early intrauterine gestational sac and fetus.	The student may observe if possible: Loop insertion, cervical biopsies, cervical cauterizations, examination under anesthesia, evacuation of retained products of conception, hysterosalpingography

<b>Week 3</b>	<b>Thursday</b>	The student will be given a chance under supervision to implement skills, such as starting IV drip, inserting urethral catheter, suture removal, change dressing, completing various forms, and checking vital signs	The student may observe if possible: Implanon insertion and mirena insertion
<b>Week 4</b>	<b>Thursday</b>	The student is expected to observe the following operations: cervical cerclage, antepartum and intrapartum fetal heart monitoring, episiotomy.	The student will be able to observe major operations, like: myomectomy, abdominal and vaginal hysterectomies, and pelvic floor repair
<b>Week 5</b>	<b>Thursday</b>	Student have to observe instruments used in instrumental delivery (forceps and ventouse)	The student will be familiar with gynecological instruments and their uses
<b>Week 6</b>	<b>Thursday</b>	Given u/s films in late pregnancies, the student will be able to diagnose the presenting part, localize and grade the placenta and how to assess the fetal wellbeing by the Bio Physical Profile.	The student may observe if possible: How to perform colposcopic examination .
<b>Week 7</b>	<b>Thursday</b>	Student have to observe how to manage obstetric emergencies like shoulder dystocia and uterine inversion	Slide show of various types of contraceptive methods
<b>Week 8</b>	<b>Thursday</b>	Student have to observe how to manage obstetric emergencies like eclamptic fit and cord prolapsed	Slide show of laparoscopic procedures (i.e ovarian drilling , ovarian cystectomy)
<b>Week 9</b>	<b>Thursday</b>	Student have to observe how to manage female presented post caesarean section	The student will have fair knowledge of utilization of ultrasound technology in the diagnosis of missed miscarriage early pregnancy ,retained products of conception, Ectopic pregnancy, uterine Leiomyoma, ovarian and Tubo-ovarian masses, and the use of serial ultrasound to monitor follicular growth and ovulation

### **3- Surgery**

#### **Aims of the course:**

- To provide the student with the knowledge, and skills which enable him/her to identify, analyze, manage and/or refer clinical surgical problems in order to provide efficient, cost effective and humane patient care.
- To provide the student with an appropriate background covering the common and/ or important surgical emergencies.
- To enable the student to detect cancer at an early stage.
- To enable the development and application of appropriate professional attitudes, ethical principles and communication skills.

#### **Learning objectives:**

##### **(Knowledge):**

1. Recognize basics of surgical ethics.
2. Describe the anatomy of surgically important structures, organs and regions.
3. Describe the histology of surgically important tissues.
4. Describe the physiology of surgically important organs and systems.
5. Describe the principles of molecular biology and wound healing.
6. Describe the microbiology and parasitology of surgically important pathogens and their treatment.
7. Describe the first aid and definitive management of surgical emergencies.
8. Describe the principles of surgical nutrition.
9. Describe the principles of organ transplantation.
10. Describe the epidemiology, etiology, pathophysiology, pathology, complications and prognosis of the various common and important surgical diseases and disorders.
11. Describe the clinical picture, investigations and differential diagnosis of the various common and important surgical diseases and disorders.
12. Identify the principles of early detection of cancer.
13. Describe the prophylaxis and treatment of the various common and important surgical diseases and disorders.
14. Describe the pharmacological basis of surgically important medications.

15. Describe prevention of HCV and HIV transmission, sterilization of metal and non-metal instruments, handling and preservation of specimens, and management of disposables.

16. Describe the procedures and minimally-invasive techniques used in the treatment of surgical diseases.

17. Describe the principles of operative intervention including indications for intervention, preoperative preparation, principles of general and local anesthesia, principles of the operations, and postoperative care and complications.

18. Describe palliative care for untreatable surgical conditions.

19. Describe the theoretical basis of evidence based medicine (EBM).

20. Define principles of clinical audit.

**(Skills):**

1. Provide first aid measures for injured and critically-ill patients.

2. Perform an emergency-directed examination for patients with common surgical emergencies.

3. Compose an initial plan of management for stabilization of injured and critically-ill patients.

4. Take and record a structured patient-centered history in acute and chronic conditions.

5. Perform full physical examination appropriate to age and gender in acute and chronic clinical conditions.

6. Construct appropriate management plan for patients with common and important surgical diseases.

7. Write safe prescriptions of different types of drugs.

8. Order appropriate investigations.

Procedures and technical skills acquired under appropriate supervision during undergraduate training : By the end of the program, the graduate will acquire the model-based skills ( using manikin and simulators) required to:

1. Perform venepuncture and collect blood samples.

2. Insert a cannula into peripheral veins.

3. Practice enteral, parenteral, inhalational and topical methods for drug administration.
4. Perform suturing of superficial wounds.
5. Demonstrate competency in cardiopulmonary resuscitation and basic life-support. (b
6. Administer basic oxygen therapy.
7. Insert a nasogastric tube.
8. Perform bladder catheterization.
9. Perform and interpret basic bedside laboratory tests.
10. Adopt suitable measures for safety and infection control.

**(Attitudes):**

1. Adopt an empathic and holistic approach to patients and their problems, taking into consideration beliefs values, goals and concerns.
2. Respect the patient's right to know and share in decision making as well as dignity, privacy, information confidentiality and autonomy.
3. Understand and respect the different cultural beliefs and values regardless of their disabilities in the community they serve.
4. Recognize the important role played by other health care professions in patients' management, respecting their contributions in patient's management regardless of degree or occupation.
5. Apply the national code of ethics issued by the Iraqi Medical Syndicate.
6. Respect and follow the institutional code of conduct.
7. Counsel patients suffering from different conditions as well as their families.
8. Recognize one's own limitations of knowledge and skills referring patients to appropriate health facility at the appropriate stage.

**Teaching methods:**

1. Clinical classes
2. Lectures
3. Staff rounds
4. Illustrated lecture
5. skill laps

## 6. Tutorials

## 7. Emergency rounds

### Assessment methods:

#### 1. Attendance

- a. Behavioral & ethical attendance
- b. Logbook for clinical cases
- c. Attendance in emergency and operating rooms

The minimum accepted attendance is 70 % at the end of term examination.

#### 2. Assessment tools

- a. Written examination: for assessment of general knowledge & understanding.
- b. Oral examination by two members of teaching staff to assess how sixth year student deal with surgical case scenario problems.
- c. Clinical examination (long case exam) to medical student's attendance in managing clinical cases in apprehensive way.
- d. OSCE examination

### Course contents:

#### Course topics (Minimal clinical cases required ) summary

1 Abdominal pain
2 Abdominal swelling
3 Change in bowel habit / rectal bleeding
4 Vomiting blood
5 Difficulty swallowing / dyspepsia /dysphagia
6 Jaundice
7 Lumps in groin
8 Lumps in scrotum / scrotal pain
9 Pain in loin
10 Urinary retention or flow obstruction
11 Haematuria (including stones and tumours)
12 Leg ulceration
13 Painful and/or paralysed limb
14 Breast lumps and nipple discharge
15 Lumps in the neck
21 Fractures or dislocations with displacement or wound
22 Fractures without displacement
23 Swollen painful joint
24 Back pain and/or sciatica (including cauda equina)
25 Peripheral nerve injuries / palsies

26 Raised intracranial pressure / intracranial blood clots and intracranial mass lesions
28 Groin lump in child
29 Consent for surgery including mental capacity
30 Caring for the postoperative patient, including nutrition, enhanced recovery and the critically ill patient; advice re return to activities
31 Understanding wound healing
32 Trauma including head injury
33 Sepsis and infection
34 Surgical safety (WHO checklist, minimising complications, errors, communication and team-working)
35 Caring for the patient before and after surgery, including fitness

<b>1 Abdominal pain</b>
<ol style="list-style-type: none"> <li>1. Describe the symptoms, signs, and differential diagnosis for patients presenting with an acute abdomen.</li> <li>2. Discuss the investigations and management of patients with acute abdominal pain (including conditions such as peritonitis, obstruction and pancreatitis).</li> <li>3. Describe the pre and postoperative management of an acutely unwell patient who requires emergency surgery.</li> <li>4. Discuss the difficulties with fluid management and electrolyte derangements, including oliguria and acute kidney injury.</li> <li>5. State the essential pathology of: appendicitis, acute pancreatitis, acute cholecystitis, abdominal aortic aneurysm and diverticular disease.</li> </ol>
<b>2. Abdominal swelling</b>
<ol style="list-style-type: none"> <li>1. Compare and contrast pathophysiological causes of abdominal swelling and outline relevant investigations.</li> <li>2. Describe the aetiology, presentation and management of intestinal obstruction.</li> <li>3. Discuss the differential diagnosis, investigation and management of patients presenting with a left iliac fossa mass.</li> <li>4. Describe the pathophysiological causes of a swelling in the epigastrium (including those arising from the liver).</li> <li>5. Explain the appropriate imaging in the investigation of acute abdominal pain including: plain radiography (erect chest X-ray and abdominal X-ray), abdominal ultrasound scan, CT scanning and contrast studies.</li> <li>6. List differential diagnoses for small bowel obstruction.</li> <li>7. Summarise complications that can result from small bowel obstruction including: ischaemia, perforation and biochemical derangement.</li> </ol>
<b>3. Change in bowel habit / rectal bleeding</b>

1. Describe the blood supply to the lower gastrointestinal tract.
2. List potential causes of change in bowel habit.
3. List potential causes of rectal bleeding.
4. Summarise the aetiopathology of the common causes of change in bowel habit, including: irritable bowel syndrome, coeliac disease, colorectal cancer, inflammatory bowel disease, thyroid disease, diverticular disease and bowel obstruction.
5. Explain the aetiopathology of the common causes of rectal bleeding including: colorectal cancer, diverticular disease, haemorrhoids, anal fissures and inflammatory bowel disease.
6. List the common causes of diarrhoea and constipation.
7. Recognise the signs and symptoms for colorectal cancer and its pathological development.
8. Explain the management for rectal bleeding, including relevant investigations and the indications for surgical intervention

#### 4. Upper gastrointestinal bleeding

1. Assess and appropriately resuscitate a patient with acute GI haemorrhage.
2. State the aetiopathology of the common causes of upper GI bleeding including: duodenal ulcer, gastric ulcer, gastric erosions, oesophageal varices, Mallory Weiss tear and oesphagogastric cancer.
3. Explain the role of oesophago-gastro-duodenoscopy (OGD) and colonoscopy in the management of GI bleeding.
4. List the risk factors for upper GI bleeding and the role of the GP in its prevention.
5. Discuss the role and indication for investigations, interventional radiology and surgery in the management of GI bleeding.

#### 5. Difficulty swallowing / dyspepsia /dysphagia

1. Explain the terms dysphagia and dyspepsia.
2. Identify the different causes of dysphagia, including strictures, malignancy, achlasia, and neurological causes.
3. Explain 'red flag signs' and the role of blood tests, endoscopy and contrast studies in the assessment of dysphagia.
4. Explain the presentation of and risk factors for oesophageal cancer.
5. List the medical and surgical treatment of oesophageal cancer including palliative care.
6. State the NICE clinical guideline for managing new-onset dyspepsia.
7. List the different causes of dyspepsia and identify their risk factors.
8. Describe the different causes of gastro-oesophageal reflux disease.
9. Describe the Los Angeles classification of GORD.
10. Describe the conservative, medical and surgical treatment of GORD.
11. State how to investigate and treat *H. pylori*.
12. Describe the aetiology, pathogenesis and pathology of Barrett's oesophagus.
13. Explain the management of Barrett's oesophagus and its complications.
14. Describe a hiatus hernia.

#### 6. Jaundice

1. Describe the physiology and anatomy of the liver and gallbladder.
2. List the causes of jaundice.
3. Describe the presentation of a patient with obstructive jaundice.
4. Explain the investigation and management of obstructive jaundice.

#### 7. Lumps in groin



1. List possible causes of groin lumps including: hernias, lymph nodes, saphena varix and femoral artery aneurysm.
2. Explain the anatomy of the inguinal canal with respect to the presentation and management of hernias.
3. List the different types and causes of hernias, and describe their surgical and non-surgical management.
4. Discuss the complications of hernia surgery.

## 8. Urol

### Lumps in scrotum / scrotal pain

1. Describe the anatomy of the testes including blood supply and contents of the spermatic cord.
2. Diagnose the different causes of scrotal lumps/swelling/pain including: varicocele, hydrocele, epididymal cysts, epididymo-orchitis, testicular torsion, hernias and cancer.
3. List the investigations that should be performed in patients presenting with scrotal lumps/swelling/pain.
4. Recognise testicular torsion as a urological emergency and understand its management.
1. Describe the symptoms and signs that can be used to distinguish between the different causes of loin pain.
2. State the role of urine microscopy and bedside urinalysis in determining the cause of loin pain.
3. Describe the role of a CT KUB in identifying radio-opaque renal stones, and the role of ultrasound in identifying hydronephrosis.
4. Discuss the role of conservative management and interventions, including lithotripsy, in managing renal calculi.
5. List the risk factors, aetiology, treatment and complications of acute pyelonephritis.
6. Explain the diagnosis, assessment and treatment of tumours arising within the urinary tract.

## 9. Urinary retention or flow obstruction

1. Explain the anatomy of the male urinary tract and the physiology of voiding.
2. Classify the causes of urinary outflow obstruction by the site of obstruction:
  - a. Within the lumen
  - b. Within the wall
  - c. Extrinsic compression
3. Distinguish between the symptoms of upper and lower urinary tract obstruction.
4. Describe the range of laboratory tests and imaging techniques used in the investigation of patients with urinary outflow obstruction, in particular the role of the PSA test.
5. Explain the pathology of the following common causes of urinary tract obstruction, and their medical or surgical management:
  - a. Urinary tract calculi
  - b. Benign prostatic hyperplasia
  - c. Malignant tumours of the urinary tract.
6. State the complications of untreated urinary tract obstruction.

## 10. Haematuria

1. Define and classify microscopic and macroscopic haematuria, and be able to describe the common causes of each.
2. State the NICE urgent referral guidelines for haematuria.
3. Interpret the results of a urine dipstick test in a patient with haematuria.
4. Discuss the range of laboratory tests and imaging techniques used in the investigation of patients with haematuria, and their specific indications.
5. Explain the pathology of the following common causes of haematuria, as well as their medical and surgical management:
  - a. Infective: cystitis; pyelonephritis; prostatitis; urethritis
  - b. Urinary tract calculi
  - c. Benign prostatic hyperplasia
  - d. Malignant tumours of the urinary tract
  - e. Glomerular diseases
  - f. Polycystic kidney diseases.

#### 11. Leg ulceration

1. List causes of chronic leg ulcers and describe differences in appearance.
2. Compare and contrast the presentation of venous and arterial leg ulcers.
3. Describe the pathogenesis of ischaemic, venous and diabetic ulcers.
4. Discuss appropriate investigations and treatment options for a patient with chronic leg ulcers including:
  - a. management of underlying cause
  - b. dressings and bandaging
  - c. reconstruction.
5. Describe the gangrene associated with chronic ischaemia.

#### 12. Chronic Limb Ischaemia:

1. Describe the symptoms and signs of chronic limb ischaemia.
2. Describe the pathogenesis of peripheral vascular disease.
3. List risk factors for the development of peripheral vascular disease and describe how each of these can be looked for and controlled.
4. Describe the investigations that should be performed to determine the presence and severity of peripheral vascular disease.
5. Discuss with a patient on improving symptoms, slowing progression and preventing complications of peripheral vascular disease.
6. List indications for percutaneous transluminal angioplasty and arterial reconstruction surgery.
7. Describe the percutaneous transluminal angioplasty and arterial reconstruction surgery to a patient, including risk of complications.
8. Discuss indications for limb amputation.
9. Describe types and process of limb amputation and list possible complications.
10. Discuss rehabilitation for patients following limb amputation and list mobility aids available.
11. Explain the options available for pain control and palliative support in a patient with intractable limb ischaemia.

#### 13. Acute Limb Ischaemia:

1. Describe the symptoms and signs .
  2. Discuss mechanisms leading to acute limb ischaemia.
  3. Explain the nature and timing of pathological changes that will occur in an acutely ischaemic limb if the ischaemia is not relieved.
  4. Describe the emergency investigation of a patient with acute limb ischaemia.
  5. Discuss the options available for emergency management of acute limb ischaemia including anticoagulation, thrombolysis, angioplasty and embolectomy.
- Compartment Syndrome:
1. Explain symptoms, signs, pathogenesis and management.

#### 14. Breast lumps and nipple discharge

1. Describe the anatomy of the breast including blood supply, venous drainage and lymphatics.
  2. Analyse presenting symptoms and management of benign breast disease.
  3. Explain the rationale in treatment decisions for patients with genetic predisposition to cancer.
  4. Discuss how and when to take a family history and to request genetic tests, to discuss the significance of this and how this guides surveillance and gene testing.
  5. Explain the patient pathway for breast screening and subsequent cancer management, including one-stop clinics, triple assessment and multidisciplinary team management.
  6. Identify staging of breast cancer including the principles behind sentinel node biopsy.
  7. Explain different types of surgical operations available and indications for mastectomy and breast conservation operations.
  8. Describe the scientific basis for current breast cancer therapies.
  9. Define the principles behind adjuvant / hormone therapy and radiotherapy.
  10. Explain the need and indications for oncoplastic breast surgery.
  11. List the reconstructive options available to patients undergoing mastectomy.
- 1 Describe the aetiology and pathology of common benign and malignant lumps occurring in the

#### 15 . Fractures or dislocations with displacement or open wound

1. State the general principles of fracture management.
2. Describe and classify different types of fractures.
3. Describe radiological principles in fracture diagnosis.
4. List complications from fractures.
5. Describe the basic surgical management fractures, including femoral neck fractures.
6. Describe the management of a dislocated joint.
7. Explain the management of open fractures and soft-tissue injury necessitating reconstructive surgery.

#### 16. Management of fracture

1. Describe the cellular process of fracture healing.
2. Describe the principles behind the general management of a fracture.
3. Explain the differences between different types of undisplaced fractures, eg stress, paediatric.
4. Summarise the concept of 'stability' of a fracture; explain that undisplaced fractures may not be benign fractures.
5. Describe the soft tissue component of a fracture.

#### 17. Swollen painful joint

1. Describe the differential diagnosis of a swollen joint, including osteoarthritis, gout, pseudo gout, rheumatoid arthritis, neuropathic arthritis, septic arthritis and traumatic causes.
2. List the common pathological processes of a swollen joint.
3. Describe the systematic manifestations with some swollen joints.
4. State the logical assessment and principal investigations for patients with swollen joints.
5. Explain the emergency nature of an infected joint.
6. Describe the different management approach for native and prosthetic joints with infections.
7. Describe the principal non-operative and operative treatments of a swollen joint.
8. Summarise common complications of joint replacement surgery and how they might present.

## 18. Back pain and/or sciatica (including cauda equine syndrome)

1. List the common causes of back pain.
2. Describe red and yellow flag signs.
3. Discuss the causes of back pain, including mechanical, non-mechanical, inflammatory and other causes, as well as vertebral fractures and neoplasia.
4. Describe the clinical examination and investigations for back pain, including where there is nerve involvement.
5. Identify patients who may need referral to physiotherapy or similar therapy.
6. Describe the indications for imaging and for surgical management of back pain, particularly emergency surgical management of back pain.
7. Discuss the impact of chronic back pain on the individual, their family and society.

## 19. Peripheral nerve injuries / palsies

1. Describe the cellular process of peripheral nerve injuries.
2. List the different causes of peripheral nerve palsies and describe the Seddon Classification of peripheral nerve injury.
3. Compare and contrast symptoms and management of different mechanisms of peripheral nerve injury (eg the difference between upper and lower motor nerve lesions).
4. Describe the anatomy of the brachial plexus and its terminal branches.
5. Describe the dermatomal arrangement and corresponding terminal branches of sensory innervation to upper and lower limbs.
6. Explain compartmental motor innervation of the upper and lower limbs and important exceptions.
7. Describe physical features of radial, ulnar, medial and brachial plexus injuries, carpal tunnel syndrome and cubital tunnel syndrome.
8. Describe physical features of peroneal injuries and other causes of foot drop.

## 20. Raised intracranial pressure / Intracranial blood clots and intracranial mass lesions

1. List the symptoms and signs of raised intracranial pressure (eg vomiting).
2. Describe the pathophysiology of raised intracranial pressure (including the Munro-Kelly doctrine).
3. Explain the assessment of a patient with possible raised intracranial pressure, intracranial blood clot or mass lesion.
4. Describe monitoring and interventions that may be possible, including decompressive craniotomy.
5. Describe hydrocephalus, its causes and treatment including shunts and external drainage.
6. Summarise sub arachnoid haemorrhage.
1. List the symptoms and signs of raised intracranial pressure (eg vomiting).
2. Describe the pathophysiology of raised intracranial pressure (including the Munro-Kelly doctrine).
3. Explain the assessment of a patient with possible raised intracranial pressure, intracranial blood clot or mass lesion.
4. Describe monitoring and interventions that may be possible, including decompressive craniotomy.
5. Describe hydrocephalus, its causes and treatment including shunts and external drainage.
6. Summarise sub arachnoid haemorrhage

## 21. Groin lump in child

1. Assess and initiate management of a child presenting with groin pathology (including undescended testis, hernia, hydrocele and painful swellings of the genitalia), including appropriate communication with relevant family or carers.
2. Distinguish, through the history, physical examination and laboratory testing, testicular torsion, torsion of testicular appendices, epididymitis, testicular tumour, scrotal trauma and hernia.
3. Appropriately order imaging studies to make the diagnosis of the acute scrotum.
4. Determine which acute scrotal conditions require emergency surgery and which may be handled less urgently or electively.
5. Explain the descent of the testicles from the abdomen into the scrotum with the anatomical structures in this path of descent (eg, tunica vaginalis, epididymis).
6. Differentiate testicular tumour from a mass of inguinal origin (not possible to get above it, may reduce), cystic lesion (trans-illuminates), and a varicocele (easier to palpate with patient erect).
7. Describe the anatomy of the inguinal canal.

## 22. Consent for surgery including mental capacity

1. Explain the need for informed consent.
2. Apply the principles of informed consent.
3. Describe the elements necessary for mental capacity to give informed consent.
4. Check for mental capacity, and recognise when an individual does not have capacity to give consent.
5. State the importance of written documentation, both for giving consent and documenting the information given to the patient and their supporters.
6. List the exceptional circumstances when you can rely on oral consent, and the need to document this.
7. List the common risks associated with all surgery (for example blood loss, infection and reaction to drugs used in surgery).
8. Describe the potential risks and benefits for common surgical procedures. Be able to change your explanation to ensure patient understanding.
9. Discuss issues with consent in children, how to assess competence and what steps to take if the parents' wishes are not in the best interests of the child.
10. Select and know how to complete the appropriate consent form for adults, children, patients lacking capacity and local anaesthetic cases.

## 23. Caring for the postoperative patient, including nutrition, enhanced recovery and the critically ill patient; advice re return to activities

1. Describe the major fluid compartments of the body, the effect of osmolality and explain what may happen in common conditions (eg acute blood loss, dehydration, excessive fluid replacement).
2. Describe the clinical (bedside) assessment of hypovolaemia and hydration.
3. Discuss the rationale for routine intravenous fluid replacement in surgical patients and describe the commonly prescribed intravenous fluids.
4. Discuss the principles of blood transfusion of a surgical patient.
  1. Describe the process and stages of wound healing.
  2. State primary, secondary and tertiary wound healing.
  3. Explain the reasons for conducting a wound assessment.
  4. Identify wound bed tissue types.
  5. Describe the skin surrounding the wound and how this gives you information about the underlying disease and the effectiveness of current treatments.
  6. Measure a wound.
  7. State the need to assess pain in wound care.
  8. Explain extrinsic and intrinsic factors which impact on wound healing eg nutrition.
  9. State the basic principles of wound dressing.

10. Identify patients at risk of pressure sore development using the Waterlow score.
11. Summarise pressure ulcer classification.

#### 24. Trauma

1. List the interventions that may be required for head injury.
2. Explain the importance of nerve or vessel injury in trauma.
3. Describe the physiological response to injury.
4. State the principles of surgical treatment in a multi-injured patient.
5. Assess priorities during all phases of management following *ATLS* principles.
6. Know the importance of re-assessment of the patient with regards to earlier interventions.
7. Know the meaning and significance of a patient with polytrauma.
8. Discuss issue of missed injuries, management and documentation.
9. Explain primary and secondary survey.
10. Define triage and its importance.
11. State the importance of analgesia in the management of these patients.
12. Explain the different mechanisms of trauma injury (blunt v penetrating v crush v blast).
13. Discuss the importance of a continuum of care for the injured patient by a multidisciplinary team in which responsibility is actively shared.
14. Explain the importance of the *ATLS* strategy and systematic approach: rapid primary survey, concurrent resuscitation, secondary survey, continued reevaluation and monitoring, investigation and definitive care.
15. Explain the role of radiological investigations (eg CT scanning) and interventions.
16. Explain the role of investigation and treatment is dependent on the haemodynamic status of the patient

#### 25. sepsis

1. Define the following terms: systemic inflammatory response syndrome (SIRS), sepsis, severe sepsis, septic shock, and acute respiratory distress syndrome (ARDS).
2. Differentiate between SIRS, sepsis, severe sepsis and septic shock.
3. Explain the seriousness of sepsis.
4. Describe the typical clinical presentation, including signs, symptoms, vital signs, haemodynamic measures and laboratory tests, for each condition above.
5. Describe the microbiological causes of sepsis.
6. Describe the pathophysiology and mechanism of sepsis.
7. Describe the priorities for treatment of sepsis.
8. Give a description of a patient with sepsis, and select the most appropriate treatments.
9. Determine appropriate fluid resuscitation for sepsis with colloids or crystalloids.
10. Recommend an appropriate antibiotic regimen for treatment of sepsis based on patient characteristics and site of primary infection.
11. Explain the role of vasoactive agents in supporting the physiological function of a patient with sepsis, and be able to select the appropriate agent, given details of a patient's condition.
12. Describe an appropriate monitoring programme for patients with sepsis.
13. List the principles of diagnosis and management of sepsis.
14. State when to involve the infection control team.
15. State when to take appropriate microbiological specimens.
16. Follow local guidelines/protocols for antibiotic prescribing.
17. Carry out Sepsis 6 (BUFALO) recommendations within the first hour to reduce mortality (Sepsis UK)

**B – blood cultures**

**U – urine output**

**F – fluid**

**A – antibiotics**

**L – lactate (and haemoglobin)**

**O – oxygen**

26. Surgical safety

1. Discuss the importance of a culture of safety: WHO checklist, minimising complications, learning from errors, communication and team-working, mortality and morbidity (M&M) meetings and how to manage a complication with the patient and family.

### **Fluid optimisation**

1. Identify patients in need of fluid optimisation, especially pertaining to:

- acute presentations with diarrhoea and vomiting
- acute presentations where the patient has been immobile / debilitated for a prolonged period prior to admission (which has decreased fluid intake)
- elderly patients with reduced renal function that makes fluid balance maintenance more challenging
- drugs that lower renal fluid exchange functions
- low BMI patients in whom 'normal' fluid loss volumes will be more significant.

2. Recognise the different types of fluid used for optimisation, especially Hartmann's, Normal 0.9% Saline and Dextrose.

3. Determine the correct volume and rate of administration.

4. Assess the volume of body fluid depletion, and how to administer fluid resuscitation to patients especially according to them being elderly / unfit / with impaired cardiac and/or renal function.

5. Monitor the progression of fluid optimisation.

### **Nutritional optimisation**

1. Identify patients in need of nutritional optimisation, especially pertaining to BMI, serum albumin, frailty or triceps skin fold thickness.

2. List the physiological effects of protein-calorie malnutrition.

3. Identify the different types of nutritional support – oral, nasogastric, gastro/jejunostomy and parenteral.

4. Describe what total parenteral nutrition (TPN) entails, its associated risks, and the additional and particular parameters of care for these patients.

### **Safety Issues and Booking Patients for surgery**

1. List the administrative steps to book a patient into the operating theatre and most recent investigation results (as well as drug chart and consent form details).

2. Describe the details of operative site marking.

3. Explain details of any specific patient preparation including whether cross matched blood is needed.

4. List the different types of bowel preparation indicated for operations to the large bowel or its surrounding tissues.

5. Describe the principles of and drugs used for anaesthetic premedication.

## **27. Antibiotic Thromboprophylaxis**

1. Explain the principles behind antibiotic prophylaxis (including the specifics relating to high-risk patients) and the typical course duration.

2. State the standard prophylactic regimens established for particular operative procedures, and appreciate that these may be specific to the individual hospital trust policies and protocols.

3. Identify the types of thromboprophylaxis – mechanical, drugs (heparin / LMWH + doses), and antiplatelet or indirectly acting medications.

4. Identify the group of patients at highest risk for deep vein thrombosis.

5. Discuss the factors such as the specific procedure as well as the specific comorbidities that increase

risk, and subsequently categorise patients according to these as low, medium or high risk.

## **28. The aims of pre-operative assessment**



1. Including explaining procedures, their associated risks and aftercare so that patients can make informed decisions.
2. Identifying co-existing medical conditions and how to optimise the patient's health, while appreciating the urgency of their operation.
3. Discuss improvable factors to help support patients to be as fit as possible (including smoking cessation, reducing alcohol, better nutrition and taking regular moderate physical exercise).
4. Identify patients with a high risk of perioperative complications and identifying their appropriate level of postoperative care.
5. Describe the process of discharge planning.
6. Identify the variables that provide prognostic information for all patients planning to undergo surgery.

#### 29. Preoperative preparation

#### **Explain the details of the preoperative anaesthetic history and assessment, including airway assessment, previous anaesthesia exposure (and any adverse reactions)**

1. List the basics of the ASA (American Society of Anaesthesiologists) Classification especially pertaining to individual comorbidities (such as angina, hypertension, diabetes, COPD, asthma) and understand that this accurately predicts morbidity and mortality or more broadly the 'fitness of patients' prior to surgery.
2. State the basics of assessing functional capacity and mouth opening.

#### **Pre-operative Investigations**

Identify the essential pre-operative investigations required for all surgical patients, including: blood tests

(FBC, U+Es, creatinine) and ECG, also pregnancy test, sickle cell test and chest x-ray if appropriate.

1. Identify and explain the more specific pre-operative investigations required for individual patients according to condition, comorbidities or procedure being performed.
2. State the basic fasting guidelines for children and adults.
3. Explain the essential management of associated medical conditions, especially pertaining to the following conditions:  
difficult airway, obesity, cardiac disease, respiratory disease, gastrointestinal disease, renal failure, diabetes, haematological disorders, obstructive jaundice, anaemia, sickle cell anaemia, allergic reactions, and those rendering patients at high risk; includes the appropriate additional investigations for specific illnesses – such as cardiopulmonary exercise testing to evaluate both cardiac and pulmonary function, as well as survival prediction indices – age, socioeconomic status and aerobic fitness.

## **4- Pediatrics:**

### **Aims of the course:**

- To provide the students with basic knowledge of normal and abnormal growth and development (physical, physiologic, psychosocial) and its clinical application from birth till adolescence.
- To enable students to provide basic health care for Pediatric age group (neonates, infants, children and adolescents).
- To provide students with appropriate knowledge and skills needed for management of the common and important pediatrics emergencies and diseases.
- To provide the students with appropriate professional attitude and communication and problem solving skills.
- To enable the students to acquire lifelong learning competencies necessary for continuous professional development.

### **Learning objectives:**

#### **(Knowledge):**

- 1-Describe normal growth and development during infancy, childhood and adolescence.
- 2-Identify abnormalities of growth and development during infancy and childhood.
- 3-Describe appropriate management for abnormalities affecting growth and development.
- 4-Identify common genetic diseases and their impact on children and families.
- 5-Determine the nutritional requirements and the most common nutritional disorders affecting infants and children.
- 6-Describe appropriate management of nutritional disorder.
- 7-Describe the indications, contraindications, administration and precautions of the immunization necessary for infants and children according to the national schedule and the condition of the child.
- 8-Recognize the most important behavioral and social issues during childhood and adolescence.
- 9-Describe appropriate measures for health promotion as well as prevention of diseases and injury in infants, children and adolescents.
- 10-Describe the causes, pathogenesis, clinical symptoms, signs, investigations, treatment and prognosis of the most important neonatal and pediatric problems.

11-Set the management priorities for different neonatal and pediatric emergency.

12-Describe the theoretical basis of professional practical skills and evidence based medicine (EBM).

13-Recognize basis of ethics, medicolegal aspects of health, problems malpractice and common medical errors.

14-Recognize basics of health and patient, s safety and safety procedures during practical and clinical years.

**(Skills):**

1-take and record a structured patient-centered medical history.

2-check vital signs in neonates, infants, children and adolescents.

3-asses physical and mental development in neonates, infants, children and adolescents according to standard milestones and recognize abnormalities.

4-perform appropriate clinical and anthropometric assessment of the nutritional status of infants and children.

5-perform an adequate clinical examination for a patient in the pediatric age group and identify deviations from normal.

6-construct appropriate management strategies both diagnostic and therapeutic for patients with common acute and chronic pediatric diseases.

7-assess, classify and describe appropriate treatment for sick children below the age of five years according to the principles of Integrated Management of Childhood Illness(IMCI).

8-compose an initial plan of management for stabilization for different neonatal and pediatrics emergencies.

9-work out drug dosage based on patient,s criteria and health condition.

10-write safe prescriptions of different types of drugs.

**(Attitudes):**

1-adopt an empathic and holistic approach to the patients and their problems taking into consideration beliefs, values, goals and concerns.

2-respect the patients, families right to know and share in decision making as well as dignity, privacy, information confidentiality and autonomy.

3-understand and respect the different cultural beliefs and values regardless of their disabilities in the community theyserve.

4-recognise the important role played by other health care professions in patients, management regardless of degree or occupation.

5-counsel patients suffering from different conditions as well as their families.

6-recognize one's own limitations of knowledge and skills referring patients to appropriate health facility at the appropriate stage.

**Teaching methods:**

5 days per week

6 hours per day

Clinical /small group teaching, students are divided to small group for training in pediatrics wards and emergency room and neonatal care unit in the Maternity and Children Teaching Hospital , and Thalassemic center.By these small groups the students will learn communication skills ,history taking ,physical exam ,written and verbal presentation ,clinical reasons, and advanced clinical skills .students have a clinical round at the ward and daily patient attachments, there is daily case presentation and PBL and discussion of pediatric subject according to plan of teaching. Also there is seminar once a week (presented by the students followed by discussion). Also there is session once per week for Xray or slides or ECG in common pediatric subject.

**Assessment methods:**

Marks allocated	examination	parameters
<b>course</b>		
20 degree	End of the course/Clinical exam	OSCE,short cases, Slides,oral,Logbook
40 degree	Final written exam	Short essay in the form of clinical cases , MCQ pediatric cases ,most appropriate ,matching
40 degree	Final clinical exam	Long case ,OSCE, slides ,short cases

**Course contents:**

neonatal jaundice

\*convulsions(seizure)

- \*cerebral palsy
- \*fluid therapy
- \*approach to anemia
- \*malnutrition
- \*chronic diarrhea
- \*DM
- \*rickets
- \*PUO
- \*meningitis
- \*infectious diseases
- \*growth and development
- \*asthma and bronchiolitis
- \*pneumonia
- \*RDS, TTN
- \*hemorrhagic disease of newborn
- \*birth asphyxia
- \*neonatal seizure
- \*kala-azar
- \*AGE
- \*vaccination
- \*thalassemia
- \*UTI
- \*HSP
- \*nephrotic syndrome
- \*haemophilia
- \*CHD ,HF
- \*neonatal sepsis
- \*acute and chronic renal failure
- \*TB in children

\*drugs in pediatrics

\*abdominal pain

\*arthritis

\*lymphadenopathy

\*AFP

**EMERGENCY:**

\*dehydration

\*anaphylaxis

\*seizure

\*severe asthma

\*poisoning

\*drowning

\*foreign body inhalation

\*DKA

\*snake bite and scorpion bite

**SEMINARS:** ( one seminar per week)

Seminar prepared by group of students(change every week)and after presentation ;discussion started with questions and answers.

Topics of the seminars:

1.acute and chronic renal failure.

2.D.M. in children.

3.drugs therapy in children.

4.pediatrics emergency.

5.arthritis.

6.fluid therapy and electrolyte disturbances.

7.chromosomal abnormalities, genetic counseling.

8.T.B.in children.

9.F.T.T.

10.pediatrics arrhythmia.

## **MODEL-BASED PROCEDURES AND TECHNICAL SKILLS:**

- 1-perform veinpuncture and collect blood sample.
- 2- insert a cannula into peripheral veins.
- 3-practice entral , parentral, inhalational and topical methods for drug administration.
- 4-demonstrate competency in cardiopulmonary resuscitation and basic life –support.
- 5-use a nabalizar for administration of inhalation therapy.
- 6-administer basic oxygen therapy.
- 7-insert a naso-gastric tube.
- 8-perform bladder catheterization.