Faculty of Medicine

Major: Doctor of Medicine

Academic Year: 2023/2024

Subject: General Pathology

COURSE SYLLABUS

Students' Copy

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1. Course information:

Theory		Practical	
Course Title:	General pathology	**Course Title:**	General pathology
Course Code:	1001205	**Course Code:**	1001205
Co-Requisite:		**Co-Requisite:**	
Prerequisite:	General histology	**Prerequisite:**	General histology
Course Credit Hours:	4	**Course Credit Hours:**	4
Class Location:	Second year / semster1	**Class Location:**	Second year / semster1
Department:		Basic medical sciences	
Final Qualification:			

2. Instructor Contact Information:

Coordinator:	DR/ Hend salah Abo Safia	
Instructor(s):	Dr Luma Fayyad Dr Hend salah Abo Safia	
Email:	Hendsalah@isums.edu.jo Lumafayyad@isums.edu.jo	
Office:		
Office Hours:	Dr Hind: every day from8:30 to9:30 and at 11:30 Dr Luma: Tuesdays 12:30-1:00 pm, and 2:00-2:30 pm Wednesdays: 10:00-10:30 am	

3. Course Description:

This course aims to provide students with knowledge about cellular damage in terms of its forms, causes, and mechanisms of occurrence, cellular adaptation to growth and differentiation, inflammation in terms of its types and mechanisms, healing and cellular healing, and infections in terms of its causes and characteristics, tumors, carcinogenesis, types of cancer, mechanisms of its occurrence, causes, characteristics, and epidemiology, and circulatory disturbances, including edema, congestion, thrombosis, and infarction, and shock.

4. Resources Available to Students:

Robins' Basic Pathology Text book latest edition

5. Teaching Methods

a. Lectures.
b. Discussion and problem solving.
c. Individual and groups activities.
d. In- class coopetition.

6. Intended Learning Outcomes (ILOs):

Upon successful completion of this course students will be able to …

1. **Apply** the concepts of cell injury, adaptation, inflammation, repair, neoplasia, carcinogenesis, hemodynamic disorders.
2. **Recognize** the difference between necrosis and apoptosis, acute and chronic inflammation, neoplasia and hyperplasia, benign and malignant tumors and carcinoma and sarcoma.

3. **Diagnose** some granulomatous diseases as tuberculosis and sarcoidosis
4. **Integrate** some clinical knowledge with the pathological data to reach appropriate diagnosis.
5. **Understand** the specific mechanisms of some pathological processes as carcinogenesis, inflammation, necrosis and repair.
6. **Describe** the morphology of common pathological processes as necrosis, apoptosis, benign and malignant tumors

7. Course Policies:

To be explained to students at the first meeting:

1. **Attendance Policies:**

A. Attendance Policy (absences and tardiness for a traditional course):

a. Students must attend all classes of this course.

b. Any student with an absence of 15% of the classes of any course, will be ineligible to sit for the final exam and will result in a failing grade being assigned in this course.

c. Excused absences include documented illness, deaths in the family, and other documented crises, call to active military duty or jury duty, religious holidays, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have valid excuses. Consideration will also be given to students whose dependent children experience serious illnesses.

~~d.~~ Students with a legitimate reason to miss a required activity must request an approved absence through Student Academics. Unexcused absence from a scheduled examination or quiz may result in (0 %) being assigned for that assessment. Unexcused absence from an activity for which attendance is may be considered an issue of Professionalism.

e. Any student who arrives late will not be allowed to attend the class and will be marked absent.

B. Exam Attendance:

a. A student who is more than 10 minutes late, will not be permitted to submit the exam.

b. A student who is late more than 30 minutes will not be permitted to submit the final exam, and no student will be permitted to leave the exam center before the elapse of 30 minutes.

2. **Exams Policies:**

a. Students are expected to take their exams on time and as scheduled by their instructors.
b. Student who are unable to take (quiz, midterm or final) exam due to any reason should contact their instructor immediately.
c. Make-up exams are of the responsibility of faculty committee.
d. A final exam, paper, or project is required in all courses.
e. Seminars and workshops are included in evaluation criteria.
f. Only registered undergraduate and graduate credit students are allowed to take final exams.
g. If you are unable to take the final exam at the scheduled time without any acceptable excuse, you may not be allowed to rearrange the final exam separately (Make-up).
h. If you attend the final exam and do not submit the exam sheet, or do not complete the exam for any reason, you are not allowed to complete the final exam at another time or appeal for a final make-up exam and will be assigned falling for the final exam.
i. If you do not take your final exam and did not withdraw from the course by the withdrawal deadline you will assign a failing grade for the final exam.

3. **Cheating Policies:** Cheating is officially defined as giving or attempting to give, obtaining or attempting to obtain, information relative to an examination or other work that the student is expected to do alone and not in collaboration with others, or the use of material or information restricted by the instructor. Plagiarism is no lesser an offense than cheating, it means repeating another's sentences as your own, adopting a particularly apt phrase as your own, paraphrasing someone else's argument as your own, and presenting someone else's line of thinking in the development of a thesis as though it were your own.

4. **Penalty for cheating and plagiarism:** The failing grade, shall be assigned for that piece of work to any students cheating or plagiarizing.

5. **Mobiles:** Mobile phones should be kept turned off or silent while in class. Usage of mobile phones is not allowed in classes in any form (talking and/or texting).

8. Course Grading System:

Assessment Tools	Weight (100%)	Description
Exams (Midterm and Final)	80% (each 40%)	- MCQs (problem-based questions and short stem questions) - .
Practical exam	20%	- MCQs and fill in the space questions - Identifying structures in drawings

9. Course Outlines/ Schedule:

Week	Topic	Chapter	Reference	Estimated number of hours	Teaching method		ILOs
					Theoretical Lectures	Practical Laboratories	
1	**Introduction to pathology** **Cell injury** **& cell death**	**1** **1**	1.Robbins Basic Pathology – Latest edition	**1** **1**	**1** **1**	**0** **0**	Understand the general outline of the course. Be familiar with the modalities of teaching Be familiar with the grading system

							and passing requirements of the course. Understand the definitions of pathology, etiology & pathogenesis List causes of cell injury, Understand the concept of reversible and irreversible. Describe the morphological changes in reversible and irreversible injuries Define necrosis, and apoptosis. Describe the morphology of necrosis List types of necrosis with examples
2	**Cell death** **Cell adaptation to stress**	**1**	1.Robbins Basic Pathology – Latest edition	**2**	**2**	**2**	Describe the morphology and mechanism of apoptosis, list causes of

							apoptosis with example. Describe autophagy Describe mechanisms of cell injury and cell death and sites of action of the injurious factors in the cell (cell membrane, mitochondria, endoplasmic reticulum, DNA) with description of types of subcellular alterations Describe reactive oxygen species and compare and contrast the following types of cell injury: free radical-induced, chemical in terms of biochemical and molecular mechanisms Compare and contrast ischemia and hypoxia and

							discuss the time course of the molecular events that occur in a cell in response to lack of oxygen, emphasizing the events that distinguish reversible from irreversible injury. Define adaptation and list the most common types Define hyperplasia, hypertrophy, atrophy, metaplasia and list causes with example.
3	**Intra & Extracellular Depositions & Cell Aging** **Inflammation**	**1** **2**	1.Robbins Basic Pathology – Latest edition	**1** **1**	**1** **1**	**1** **1**	Describe lipid, protein and glycogen accumulation in cells. List endogenous and exogenous pigments. List examples of dystrophic

							and metastatic calcification Describe theories of aging, mechanisms. Describe replicative senescence, telomeres and telomerases. List the five cardinal signs of inflammation. Describe the events that occur during acute inflammation. List chemical mediators that are involved in inflammation. List possible outcomes of acute inflammation.
4	**Suppurative Inflammation**	**2**	1.Robbins Basic Pathology – Latest edition	**1**	**1**	**1**	List examples of serous inflammation. Be able to define: pus, an

	Chronic inflammation	**2**		**1**	**1**	**0**	abscess, and an ulcer. Describe the morphology of an ulcer. List the systemic effects of inflammation. List causes of chronic inflammation. Describe the morphology of chronic inflammation.
5	**Granulomatous inflammation (T.B)**	**2**	1.Robbins Basic Pathology – Latest edition	**1**	**1**	**1**	Describe the morphology of granulomatous inflammation. Describe two types of giant cells. List causes of granulomatous inflammation.
	Amyloidosis	**5**		**1**	**1**	**0**	Pathogenesis of amyloid deposition, classification & mechanidsms of formation

6	**Repair**	**2**	1.Robbins Basic Pathology – Latest edition	**2**	**2**	**1**	Describe two types of tissue repair. Define and give examples of labile, stable and permanent cells. Define stem cells, know their main types, giving examples, and list some of their applications in medicine. Understand function, structure and components of the extracellular matrix. Describe liver regeneration Describe angiogenesis, fibrosis and scar formation. Describe healing by first and second intention. List local and systemic

							factors that interfere with tissue repair. Complications & defects of healing.
7	**Revision**	**1&2**		**2**	**2**	**0**	
8	**Midterm exam**						
9	**Neoplasia1** **Neoplasia2**	**3** **3**	1.Robbins Basic Pathology – Latest edition	**1** **1**	**1** **1**	**0** **1**	Nomenclature Characteristics of Benign and Malignant Neoplasms Epidemiology Genetic Lesions in Cancer Epigenetic Modifications and Cancer
10	**Neoplasia3** **Neoplasia 4**	**3** **3**	1.Robbins Basic Pathology – Latest edition	**1** **1**	**1** **1**	**1** **1**	Carcinogenesis: A Multistep Process Hallmarks of Cancer Self-Sufficiency in Growth Signals Insensitivity to Growth Inhibitory Signals: Tumor Suppressor Genes

							Altered Cellular Metabolism Genomic Instability as an Enabler of Malignancy Tumor-Promoting Inflammation as an Enabler of Malignancy
11	**Neoplasia 5** **Neoplasia 6**	**3** **3**	1.Robbins Basic Pathology – Latest edition	**1** **1**	**1** **1**	**1** **1**	Etiology of Cancer: Carcinogenic Agents Chemical Carcinogens Radiation Carcinogenesis Viral and Microbial Oncogenesis Clinical Aspects of Neoplasia Effects of Tumor on the Host Grading and Staging of Cancer

							Laboratory Diagnosis of Cancer
12	**Hemodynamic disorders 1** **Hemodynamic disorders 2**	**4** **4**	1.Robbins Basic Pathology – Latest edition	**1** **1**	**1** **1**	**1** **1**	Hyperemia and Congestion Edema Increased Hydrostatic Pressure Reduced Plasma Osmotic Pressure Lymphatic Obstruction Sodium and Water Retention Hemorrhage
13	**Hemodynamic disorders 3** **Hemodynamic disorders 4**	**4** **4**	1.Robbins Basic Pathology – Latest edition	**1** **1**	**1** **1**	**1** **0**	Hemostasis and Thrombosis Hemostasis Platelets Coagulation Factors Endothelium Thrombosis Disseminated Intravascular

							Coagulation (DIC) Embolism Infarction Shock
14	**Practical revision**						
15	**Revision**						
16	**Final written and practical exam**						