مركز الاعتماد
وضمان الجودة
ACCREDITATION & QUALITY ASSURANCE CENTER

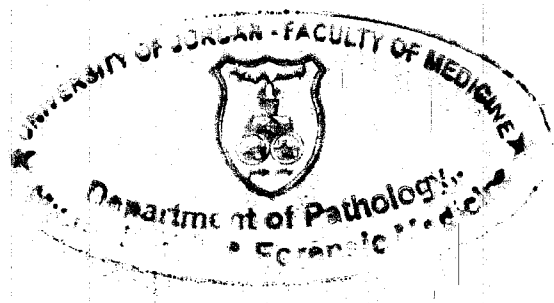
هذه نسخة غير معتمدة

The University of Jordan

Accreditation & Quality Assurance Center

Course Syllabus

Course Name: Introduction to Pathology



1	Course title	Introduction to Pathology
2	Course number	0504205
3	Credit hours (theory, practical)	2
	Contact hours (theory, practical)	14 week
4	Prerequisites/corequisites	1201354
5	Program title	Medical Doctor MD
6	Program code	
7	Awarding institution	The University of Jordan
8	Faculty	Faculty of Medicine
9	Department	Dept. of Pathology, Microbiology, & Forensic Medicine
10	Level of course	Undergraduate
11	Year of study and semester (s)	2nd year, 1st semester
12	Final Qualification	MD
13	Other department (s) involved in teaching the course	NA
14	Language of Instruction	English
15	Date of production/revision	2020

16. Course Coordinator:

Office numbers, office hours, phone numbers, and email addresses should be listed.

Name: mousa abbadi
Office Number: Faculty of Medicine 2, 103
Office Phone: 83/2654
E-mail:
Office hours: Sunday 8am-10am, 11am-noon
Monday 8am-9am, noon-1pm
Tuesday 8am-10am, 11am-noon
Wednesday 8am-9am

17. Other instructors:

Office numbers, office hours, phone numbers, and email addresses should be listed.

Dr. Heyam Awad JUH pathology dept. 3rd floor heyamawad2000@yahoo.com
Dr. Mousa Abbadi JUH pathology dept. 3rd floor
Dr Maha Shomaf

18. Course Description:

As stated in the approved study plan.

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

19. Course aims and outcomes:

A- Aims:
Acquire and synthesize knowledge regarding pathogenesis of disease, molecular mechanisms, and morphological changes associated with disease. The course also aims to introduce students to the clinical manifestations of disease, patient presentation, diagnostic methods, and patient outcome.

B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to ...

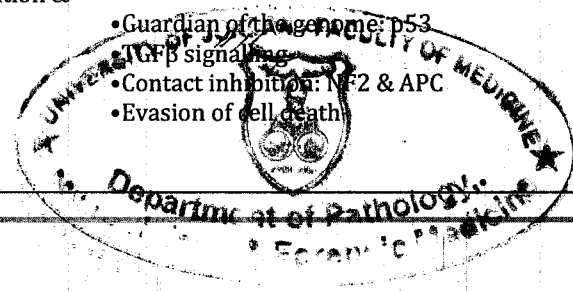
A. Knowledge and Understanding:
A1 Learn the basics of etiology and pathogenesis of disease
A2 Understand the unifying molecular mechanisms behind various diseases and the specifics related to cell death, inflammation, repair, and neoplasia
A3 Learn the morphological changes, gross and microscopic associated with the disease examples presented throughout the course
A4 Learn the laboratory methods required to diagnose disease
B. Intellectual Analytical and Cognitive Skills:
B1 Recognize unifying molecular themes of disease
B2 Recall the molecular etiologies described and how they apply to multiple diseases
B3 Pick the most appropriate diagnostic technique(s) for the diseases presented
B4 Give a rudimentary diagnosis based on gross and microscopic morphological changes associated with disease
C. Subject-Specific Skills:
C1 Identify biopsy types required for the diseases presented

20. Topic Outline and Schedule:

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
Homeostasis, Adaptation & Cell death	1-3	Dr. Heyam Awad	A,B,C	In class oral quizzes Midterm exam Final exam	Robbins Basic Pathology 9th Edition
Inflammation & repair	3-8	Dr Mousa Abbadi	A,B,C		
Neoplasia	9-end	Dr Maha Shomaf	A,B,C		

Topics		Ch/Pg
1. Course Orientation & Introduction 2. Homeostasis, Adaptation, & Cell Death	•Principles •Adaptive Responses (Hypertrophy, Hyperplasia, Atrophy, Metaplasia) •Cell Injury (reversible/irriversible) •Cell Death •Morphology of Cell Death	**Ch1** Pg. 1-5 Pg. 8-11
3. Cell Injury & Death	•Causes •Principles & mechanisms (Mitochondria, Ca2+, Free radicals & ROS, Membrane damage) •Mechanisms in practice (Hypoxia Ischemia, Reperfusion, Chemical)	Pg. 6-7 Pg. 11-18
4. Apoptosis	•Definition •Principles •Causes •Mechanisms (Mitochondrial, Death receptor) •Mechanisms in practice (Growth factor deprivation, DNA damage, Protein damage, role in immunity) •Necroptosis	Pg. 18-22
5.	•Autophagy •Intracellular accumulations •Pathologic calcification •Cellular aging	Pg. 22-28
6. Inflammation	• Overview of inflammation and • Vascular changes	**Ch2** Pg. 29-34
7. inflammation	• Cellular events in inflammation	Pg. 35-40
8. Chemical mediators..1	• Cell derived mediators	Pg. 44-50
9. Chemical mediators 2	• Plasma derived mediators • Morphology of acute inflammation	Pg. 50-53 Pg. 43-44
10. Chronic inflammation and systemic effects of inflammation		Pg. 53-59
11. Cell proliferation in tissue repair	•Overview of tissue repair •Cell proliferation •Stem cells •Growth factors	Pg. 58-62

12. Role of the ECM in tissue repair	•Extracellular matrix •Structure •Components •Function •Regeneration in tissue repair •Overview of tissue response to injury - revisited	Pg. 63-65
13 & 14 Scarring & Fibrosis	•Steps •Angiogenesis •Activation of fibroblasts & ECM deposition •Maturation & remodelling •Factors influencing tissue repair •Clinical examples	Pg. 66-72
15. Neoplasia	•Definition & Nomenclature •Benign & Malignant neoplasia •Characteristics •Differentiation & Anaplasia •Rate of growth •Local invasion •Metastasis	**Ch5** Pg. 161-169
16. Epidemiology & introduction to the molecular biology of cancer	•Epidemiology •Environment •Age •Heredity •Acquired pre-neoplastic lesions	Pg. 169-173
17. Genetics & epigenetics of cancer	•Molecular Biology of Cancer (introduction) •Karyotypic changes •Translocation •Deletion •Amplification •Aneuploidy •miRNA •Epigenetic changes (methylation) •Molecular Biology of Cancer (initiation & progression) •Hallmarks of Cancer (introduction)	Pg. 173-178
18. Hallmarks of Cancer - Growth & Growth inhibition	•Growth factors & their receptors •Signal transduction & transcription •Cell cycle control (cyclins & CDKs) •The first tumor suppressor gene: RB	Pg. 178-184
19. Hallmarks of Cancer - Growth inhibition & Evasion of death	•Guardian of the genome: p53 •TGFβ signaling •Contact inhibition: NF2 & APC •Evasion of cell death	Pg. 185-190



20. Hallmarks continue	•Limitless replicative potential •Development of sustained angiogenesis •Ability to invade and metastasize	Pg. 190-195
21. New Hallmarks	•Reprogramming Energy Metabolism •Evasion of the Immune System •Genomic instability •Inflammation	Pg. 195-198
22. Etiology of cancer	•Chemical •Radiological •Microbial •Oncogenic viruses •*H. Pylori*	Pg. 198-204
23. Tumor immunity	•Tumor antigens •Cell mediated immunity •Immune surveillance & evasion	Pg. 204-207
24. Clinical aspects of neoplasia	•Systemic effects •Grading & staging •Lab diagnosis including molecular methods	Pg. 207-213

21. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:
Lectures, Discussions, Oral quizzes, Learning through examination

22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:
, Midterm exam, Final Exam

23. Course Policies:

A- Attendance policies:

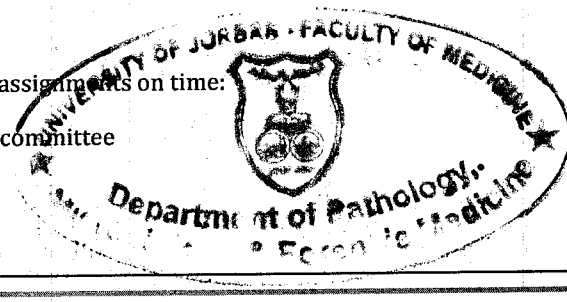
Standard university attendance policy

B- Absences from exams and handing in assignments on time:

Exam absence is handled by the excuses committee

C- Health and safety procedures:

NA



D- Honesty policy regarding cheating, plagiarism, misbehavior:

Cheating is not tolerated and university policy is enforced.

E- Grading policy:

Curve based on standard deviation and faculty policy regarding percentage of students per grade and grade cutoffs

F- Available university services that support achievement in the course:

eacademic faculty member website contains course material & announcements

24. Required equipment:

NA

25. References:

A- Required book (s), assigned reading and audio-visuals:

Robbins Basic Pathology 9th Edition

B- Recommended books, materials, and media:

Presentation slides act as a visual study aid.

26. Additional information:

Expected workload:
On average you should expect to spend between 3 and 5 hours per week on this course.

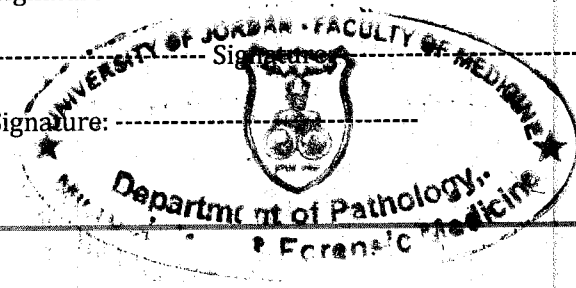
Name of Course Coordinator: Dr. heyam awad Signature: HA Date:6/12/2017

Head of curriculum committee/Department: ---------- Signature: ----------

Head of Department: ---------- Signature: ----------

Head of curriculum committee/Faculty: ---------- Signature: ----------

Dean: ---------- Signature: ----------



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Assistant Dean for Quality Assurance
Course File