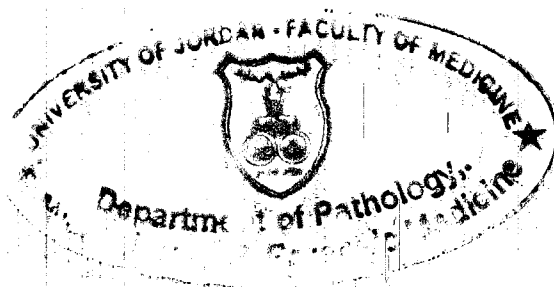


مركز الاعتماد والتأمين
الذي

The University of Jordan
Accreditation & Quality Assurance Center

COURSE Syllabus



1	Course title	Pathology for pharmacy
2	Course number	0534315
3	Credit hours (theory, practical)	2 theory
	Contact hours (theoretical practical)	2
4	Prerequisites/corequisites	0532201, anatomy and histology for pharmacy
5	Program title	Undergraduate, pharmacy
6	Program code	
7	Awarding institution	Jordan University
8	Faculty	medicine
9	Department	Histopathology, microbiology and forensic medicine
10	Level of course	Undergraduate
11	Year of study and semester (s)	first semester, 2017/18
12	Final Qualification	Bachelor degree in pharmacy and doctor of pharmacy
13	Other department (s) involved in teaching the course	None
14	Language of Instruction	English
15	Date of production/revision	2020

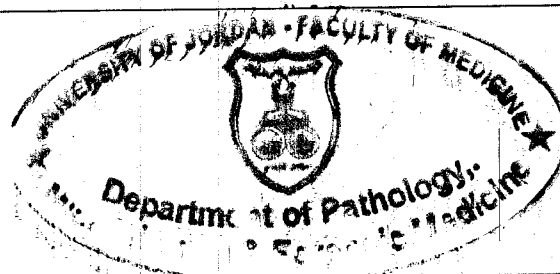
16. Course Coordinator:

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

*Dr Manar Hajeer, MD, FRCPath.
Office hours: Monday and Wednesday 10-12
Email: m.hajeer@ju.edu.jo, m.hajeer83@hotmail.com*

17. Other instructors:

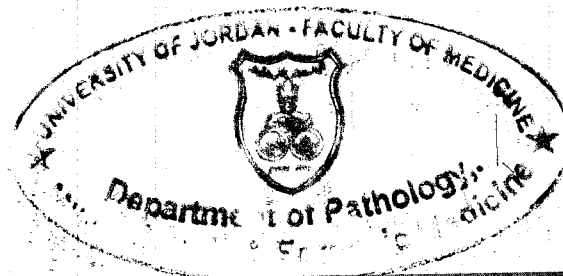
*Dr Maha shomaf
Dr Ahmad mansour
Dr Mousa abbadi
Dr Fatima obaidat*



18. Course Description:

As stated in the approved study plan.

This two credit hour course is mandatory for pharmacy students. The course is designed to introduce pharmacy students to pathology via covering the basic pathology including cell injury, inflammation, neoplasia, and circulatory disorders, in addition to diseases of the cardiovascular, respiratory, gastrointestinal, renal, female genital, musculoskeletal, endocrine and hematology systems.

19. Course aims and outcome

A- Aims:

The overall objective is to:

- 1) Learn the pathophysiology of cell injury, inflammation, neoplasia and circulatory disorders.
- 2) know the causes of cell injury, inflammation (acute and chronic) along with knowing the genetic basis and environmental causes of neoplasms.
- 3) To know the morphological changes of necrotic and apoptotic cells, acute and chronic inflammation and how to differentiate morphologically between benign and malignant neoplasms.
- 4) To link the pathophysiology of these disorders with the clinical manifestations.
- 5) To know some important cardiovascular, respiratory, hematological, endocrine, musculoskeletal, breast and gastrointestinal disorders.

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

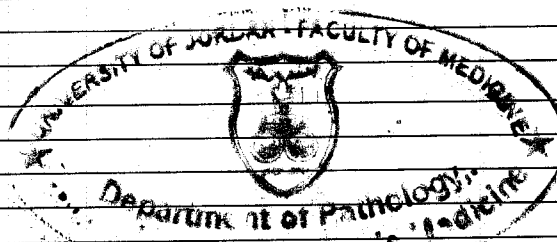
A. Knowledge and Understanding: Student is expected to

- A1- List causes of adaptations, reversible cell injury, necrosis, and apoptosis
- A2- To know the pathophysiology of reversible and irreversible cell injury in the form of necrosis and apoptosis
- A3- To differentiate between causes, pathophysiology and morphology of necrosis and apoptosis
- A4- To know the causes of inflammation
- A5- To know the pathophysiology of inflammation (acute and chronic)
- A6- To know the mediators of acute inflammation
- A7- To know outcomes and clinical manifestations of inflammation
- A8- To know the cells that are implicated in the pathogenesis of acute and chronic inflammation
- A9- know the definition of edema, hyperemia and congestion, thrombosis, and emboli
- A10- To know the causes and clinical manifestations of edema, and thrombosis
- A11- To know the types of emboli (thromboemboli, fat emboli and air emboli) and their clinical manifestations.
- A12- To differentiate benign from malignant tumors.
- A13 - To understand epidemiology of cancer.
- A14- To understand the basics of carcinogenesis.
- A15 - To know the main etiologic agents that cause cancer
- A16- To understand host defense mechanisms against cancer
- A17- To know the pathogenesis, complications and clinical manifestations of atherosclerosis
- A18- To know the causes of secondary hypertension
- A19- To know the types of aneurysms and dissection and their clinical manifestations
- A20- To know the pathogenesis of ischemic heart diseases
- A21- To know the definition of angina and its types
- A22- To know the pathogenesis of myocardial infarction and its clinical manifestation
- A23- To know the changes in the heart due to myocardial infarction
- A24- To know the causes and manifestations of left and right-sided heart failure.
- A25- To know different types and morphology of anemia.
- A26- To know the types of anemia of decreased production including iron deficiency anemia, vit B12 deficiency.
- A27- To know types of hemolytic anemia.
- A28- To know types of blood loss anemia.
- A29- To know the definition of different types of respiratory diseases, pathogenesis and clinical manifestations including atelectasis, obstructive lung disease such as emphysema, chronic bronchitis, bronchiectasis and asthma.
- A30- To know the pathogenesis, causes and clinical manifestations of pneumonia.
- A31- To know about different forms of esophagitis (reflux, chemical and infectious esophagitis)
- A32- To know in brief about esophageal cancer.
- A33- To know different types of acute and chronic gastritis.
- A34- To know about H pylori associated gastritis and autoimmune gastritis.

- A35- To know some points about gastric cancer.
- A36- To know how to differentiate between chronic inflammatory bowel disease (ulcerative colitis and crohn's disease).
- A37- To know in brief about benign and malignant tumors of the colon.
- A38- To know the main manifestations of bone and joint diseases
- A39- To know the main causes of bone and joint diseases .
- A40- To know the causes and consequences of osteoarthritis.
- A41- To know the causes and manifestations of rheumatoid arthritis.
- A42- To know the main features and causes of infectious arthritis.
- A43- To know about osteoporosis.
- A44- To know about osteomalacia and rickets.
- A45- To know about osteomyelitis
- A46- To know about main types of breast disease.
- A47- To be able to differentiate between benign and malignant breast masses.
- A48- To know about the main types of breast carcinoma.
- A49- To know in brief about fibrocystic disease, fibroadenoma, and mastitis.
- A50- To know about gynecomastia and causes.
- A51- To know about fat necrosis of breast.
- A52- To know about features of the TWO TYPES OF PRIMARY DIABETES
- A53. To know about the main acute complications of both types of diabetes melitus
- A54 To know about the chronic complications of DM.
- A55 To know about the main treatment options in DM.
- A56 To know about assessment of glycemic control in DM.
- A57 To know about the main diseases of the thyroid gland
- A58 To know about differences between hyper and hypothyroidism.
- A59 To know about diseases of the parathyroid gland
- A60 To know about diseases of the adrenal gland (cushing and Addison syndromes)

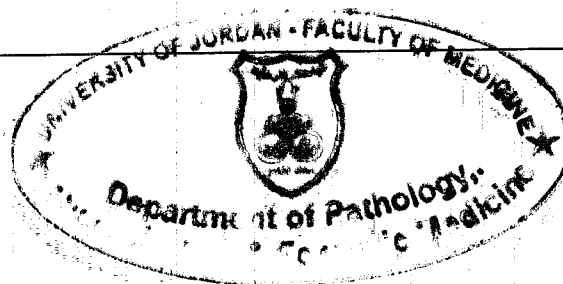
B. Intellectual Analytical and Cognitive Skills: Student is expected to

- B1- Ability to understand pathophysiology of diseases
- B2- Ability to make approach to disease from clinical signs and symptoms
- B3- Ability to differentiate diseases from each other



20. Topic Outline and Schedule:

Topic	Number of lectures	Instructor	Achieved ILOs	Evaluation Methods	Reference
Cell damage	(2 lectures)	Dr M. Hajeer	A1-A3,	exam	Robbins basic pathology
Inflammation	(3 lectures)	Dr M. Hajeer	A4-A8,	exam	Robbins basic pathology
neoplasia	3 lectures)	Dr M. Shomaf	A12-A16	exam	Robbins basic pathology
Circulatory system and hemodynamics	(2 lectures)	Dr M. Hajeer	A9-A11	exam	Robbins basic pathology
Blood vessels	(1 lecture)	Dr A. mansour	A17-A19	exam	Robbins basic pathology
Heart	(1 lecture)	Dr M Hajeer	A20-A24	exam	Robbins basic pathology
Hematology	(1 lectures)	Dr A. mansour	A25-A28	Exam	Robbins basic pathology
Respiratory	(2 lectures)	Dr M. Abbadi	A29-A30	Exam	Robbins basic pathology
Bone and joint diseases	(2 lectures)	Dr M Hajeer	A31-A37	Exam	Robbins basic pathology
			A38-A42	Exam	Robbins basic pathology
Diabetes melitus	(2 lectures)	Dr M Hajeer			
Breast pathology	1 lecture	Dr m. hajeer			
Endocrine system	1 lectures	Dr F. obaidat			
Musculoskeletal system	2 lecture	Dr manar hajeer			
Gastrointestinal disorders	2 lectures	Dr manar hajeer			



21. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:

Lectures.
Exams

22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

Three exams : midterm(30%) , quiz(20%) and final(50%)
All MCQ style

23. Course Policies:

A- Attendance policies:

According to the faculty and university regulations.

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

According to the faculty and university regulations

C- Health and safety procedures:

No issues related t safety

D- Honesty policy regarding cheating, plagiarism, misbehavior:

According to the faculty and university regulations

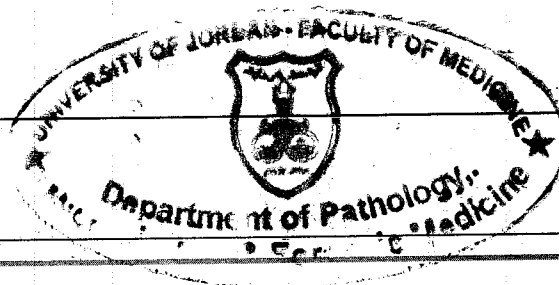
E- Grading policy:

According to the faculty and university regulations

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

24. Required equipment:

none



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25. References:

A- Required book (s), assigned reading and audio-visuals: Robbins Basic Pathology: 10th edition. Vinay Kumar, Abul k Abbas. Jon C Aster
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26. Additional information:

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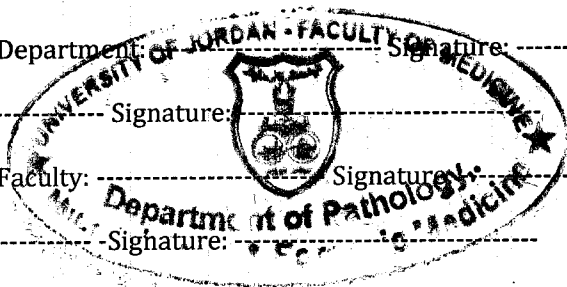
Name of Course Coordinator: -Dr Manar Hajeer-----Signature: ----- Date: 6/12/2017

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

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

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

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



Copy to:
Head of Department

Assistant Dean for Quality Assurance
Course File

