

Course Syllabus

1	Course title	Pathophysiology for pharmacy
2	Course number	1203301
3	Credit hours	3 (theory)
	Contact hours (theory, practical)	3 (theory)
4	Prerequisites/corequisites	Prerequisite: (Physiology 2)
5	Program title	BSc in Pharmacy and PharmD
6	Program code	
7	Awarding institution	The University of Jordan
8	School	Pharmacy
9	Department	Biopharmaceutics & Clinical Pharmacy
10	Course level	Undergraduate
11	Year of study and semester (s)	Second semester of the 3 rd year
12	Other department (s) involved in teaching the course	N/A
13	Main teaching language	English
14	Delivery method	Face to face
15	Online platforms(s)	<input type="checkbox"/> Moodle <input checked="" type="checkbox"/> Microsoft Teams <input type="checkbox"/> Skype <input type="checkbox"/> Zoom <input type="checkbox"/> Others.....
16	Issuing/Revision Date	7/10/2023

17 Course Coordinator:

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18 Other instructors:

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19 Course Description:

This module explains the pathophysiological basis of common diseases such as diabetes, heart failure, and asthma. It provides an essential understanding of the mechanism of such diseases. The module will also cover both symptoms and disease progression.

20 Course aims and outcomes:

A- Aims:

1. To enhance student's knowledge of pathophysiological basis of common diseases such as cellular response to injury/stress, inflammation, and angiogenesis.
2. To provide students with the ability to correlate the symptoms and progression of diseases with the pathophysiology of these diseases.
3. To provide students with the ability to utilize the knowledge of the disease to interpret clinical data and determine promising therapeutic targets.
4. To provide the students with the basis for more advanced courses in pharmacotherapy.

B- Students Learning Outcomes (SLOs):

Upon successful completion of this course, students will be able to:

Disriptors	CLO No.	<div> <div>SLOs of the program (PLOs)</div> <div>SLOs of the course (CLOs)</div> </div>	Learner	Problem-Solver	Manufacturer	Professional
Knowledge	K1	To understand the basic pathophysiological processes behind a certain disease.				
	K2	To understand the clinical manifestations of diseases.				
Skills	S1	To predict the effect of certain factors on disease progression based on their pathophysiological knowledge.				
	S2	To expect what kind of long term complications can result from such pathophysiological changes.				
	S3	To identify potential targets for therapy based on their understanding of pathophysiological mechanisms.				
	S4	Analyse clinical cases based on their knowledge				
	S5	Predict the effect of certain parameters on common pathophysiological processes				
Competencies	C1	Critical thinking				
	C2	Communication				

21. Topic Outline and Schedule:

Week	Lecture	Topic	Student Learning Outcome (CLOs)	Learning Methods (Face to Face/Blended / Fully Online)	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods	Resources
1	1.1	Introduction	K1, K2 S1, S2 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
	1.2	Topic 1 Concepts of health and disease	K1, K2 S1, S2 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
	1.3	Concepts of health and disease	K1, K2 S1, S2 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
2	2.1	Topic 2 Cellular adaptation, injury, and death	K1, K2 S1, S2 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
	2.2	Cellular adaptation, injury, and death	K1, K2 S1, S2 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
	2.3	Cellular adaptation, injury, and death	K1, K2 S1, S2 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
3	3.1	Cellular adaptation, injury, and death	K1, K2 S1, S2 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
	3.2	Cellular adaptation, injury, and death	K1, K2 S1, S2 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts

Week	Lecture	Topic	Student Learning Outcome (CLOs)	Learning Methods (Face to Face/Blended / Fully Online)	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods	Resources
	3.3	Topic 3 Inflammation, tissue repair, and wound healing	K1, K2 S1, S2 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
4	4.1	Inflammation, tissue repair, and wound healing	K1, K2 S1, S2 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
	4.2	Inflammation, tissue repair, and wound healing	K1, K2 S1, S2 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
	4.3	Inflammation, tissue repair, and wound healing	K1, K2 S1, S2 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
5	5.1	Inflammation, tissue repair, and wound healing	K1, K2 S1, S2 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
	5.2	Inflammation, tissue repair, and wound healing	K1, K2 S1, S2 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
	5.3	Inflammation, tissue repair, and wound healing	K1, K2 S1, S2 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
6	6.1	Topic 4 Angiogenesis	K1, K2 S1, S2 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
	6.2	Topic 5 Rheumatoid arthritis	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts

Week	Lecture	Topic	Student Learning Outcome (CLOs)	Learning Methods (Face to Face/Blended / Fully Online)	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods	Resources
	6.3	Rheumatoid arthritis	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
7	7.1	Topic 6 Disorders of homeostasis	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
	7.2	Disorders of homeostasis	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
	7.3	Disorders of homeostasis	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
8	8.1	Disorders of homeostasis	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
	8.2	Disorders of homeostasis	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
	8.3	Disorders of homeostasis	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
9	9.1	Topic 7 Respiratory diseases	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
	9.2	Respiratory diseases	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts

Week	Lecture	Topic	Student Learning Outcome (CLOs)	Learning Methods (Face to Face/Blended / Fully Online)	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods	Resources
	9.3	Topic 8 Endocrine diseases	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
10	10.1	Endocrine diseases	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
	10.2	Endocrine diseases	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
	10.3	Topic 9 Hypertension	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
11	11.1	Hypertension	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
	11.2	Topic 10 Ischemic heart disease	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
	11.3	Ischemic heart disease	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
12	12.1	Ischemic heart disease	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
	12.2	Topic 11 Heart failure	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts

Week	Lecture	Topic	Student Learning Outcome (CLOs)	Learning Methods (Face to Face/Blended / Fully Online)	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods	Resources
	12.3	Heart failure	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
13	13.1	Heart failure	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
	13.2	Topic 12 Arrhythmia	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
	13.3	Arrhythmia	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
14	14.1	Topic 13 Dyslipidemia	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
	14.2	Dyslipidemia	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts
	14.3	Dyslipidemia	K1, K2 S1-S5 C1, C2	Face to Face	Microsoft teams + Classroom		Exam	Textbook, handouts

22 Evaluation Methods:

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

Evaluation Activity	Mark	Topic(s)	CLOs	Period (Week)	Platform
Assignment	10	To be determined		5 th week	On campus
Midterm Exam	30	Till the end of the 7 th week of semester	K1, K2 S1, S2 C1, C2	8 th week	On campus
Quiz	10	To be determined		10 th week	On campus
Final Exam	50	All Topics	K1, K2 S1-S5 C1, C2	15 th week	On campus

23 Course Requirements

Students should have:

- Computer
- Internet connection
- Active university account on Moodle (e-learning) website
- Active university account on Microsoft Teams

24 Course Policies:

A- Attendance policies:

Attendance: Mandatory.

First warning – with 4 absences

Last warning – with 5 absences

Failing in the subject – with 6 absences

B- Absences from exams and handing in assignments on time: Will result in zero achievement unless health report or other significant excuse is documented.

C- Health and safety procedures: N/A

D- Honesty policy regarding cheating, plagiarism, misbehavior:

The participation, the commitment of cheating will lead to applying all following penalties together

1) Failing the subject he/she cheated at



- 2) Failing the other subjects taken in the same course
- 3) Not allowed to register for the next semester. The summer semester is not considered as a semester

E- Grading policy:

- Midterm exam (30%)
- Course work (20%)
- Final exam (50%)

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

- Classrooms
- Internet
- Moodle (e-learning) website
- Microsoft Teams institutional subscription
- Textbooks

25 References:

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

1. Pathologic basis of disease, professional edition. Robbins and Cotran. 10th Edition. Saunders Elsevier.
2. Pharmacotherapy; A pathophysiologic approach. Joseph T. DiPiro et al. Eighth Edition. McGraw Hill. 2011.

B- Recommended books, materials, and media:

- Up to date database

26 Additional information:

Students will work on an assignment about a less common disease and/or pathophysiological mechanisms that are not discussed within the wide frame of course topics.



Name of Course Coordinator: Hiba Al Fahmawi Signature: ----- Date: 7/10/2023
Head of Curriculum Committee/Department: ----- Signature: ----- ---
Head of Department: ----- Signature: ----- -
Head of Curriculum Committee/Faculty: ----- Signature: ----- -
Dean: ----- Signature: -----