Syllabus: Pathophysiology (#1917021253)
First/Second Semester: Second Semester 2021 /2022

COURSE INFORMATION	
Course Name: Pathophysiology (face-to-face education) Semester: Second Semester Department: Clinical Pharmacy and Pharmacy Practice Faculty: Pharmaceutical Sciences	**Course** Code: 1917021253 Section: Depending on the class schedule Core Curriculum: 2013 Study Plan
Day(s) and Time(s): Depending on the class schedule **Classroom: Pharmaceutical Sciences**	**Credit Hours:** 3 **Prerequisites: 131702252**

COURSE DESCRIPTION

This course aims to introduce the basic terminology, concepts, aetiologias, and characteristics of altered function, causes, and complications of many diseases including cardiovascular, gastrointestinal, respiratory, liver, and renal diseases. In addition to pain pathogenesis.

DELIVERY METHODS

The course will be delivered through a combination of active learning strategies. These will include:

- PowerPoint lectures and active classroom-based discussion.
  Students will be encouraged to participate and be actively involved in the learning process. Lectures will start with questions to inquire about the students' prior knowledge of the topic and/or about the previous lecture. Other questions will also be asked at the end of the lecture to gain insight into the students' competencies (to verify whether students have completely understood the topic). In addition, connect the topic's main ideas during a lecture between this course and followed next courses, and this will help students to understand why they are taking these courses according to the core curriculum in a specific order.
- Video lectures on YouTube or animation shows to have a complete picture of the pathogenesis stages of certain diseases.
- Sound recordings of lectures; thus, allow students to return and listen to them as much as they need.

- Allowing students to be teachers and communicate verbally with their colleagues. This will enhance their confidence; by giving the students a chance to present background topics in front of their colleagues.

FACULTY INFORMATION

Names	**1- Dr. Amjad Zuhier Salem Alrosan** **2- Dr. Abdelrahim Mohammed Abdelrahim Alqudah**
Academic Title:	**Assistant Professors**
Office Location:	Third Floor
Telephone Number:	
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Office Hours:	***Please send an e-mail (as mentioned above) to meet at any other time on***

REFERENCES AND LEARNING RESOURCES

Required Textbooks:

1- Principles of Anatomy and Physiology

Gerard J. Tortora, Bryan H. Derrickson, Principles of Anatomy and Physiology, 16th Edition, 2020, ISBN: 9781119662686

2- Essentials of Pathophysiology: Concepts of Altered States

Carol Porth, Essentials of Pathophysiology: Concepts of Altered States, 5th Edition, 2020, ISBN-13: 9781975107192.

3- Robbins & Cotran Pathologic Basis of Disease (Robbins Pathology)

Vinay Kumar, Abul K. Abbas, Jon C. Aster, Robbins & Cotran Pathologic Basis of Disease (Robbins Pathology), 10th Edition, 2021, ISBN-13: 9780323531139

STUDENT LEARNING OUTCOMES MATRIX*

Core Curriculum Learning Outcomes	Program Learning Outcomes	Course Objectives	Course Student Learning Outcomes	Assessment Method
CC-LO-1 Foundational Knowledge	PHARM-LO-1: Develop, integrate, and apply knowledge from the course foundational science to build upon it thereafter more detailed specialist knowledge.	1- Understand the concept of pathophysiology in health and disease.	1.1 Understand the terminology used in disease state etiology. 1.2 Describe aspects of the altered disease process including etiology, pathogenesis, signs and symptoms, some mechanisms targeted by drugs, etc. 1.3 Explain the use of certain drug targets in the treatment of diseases.	• Exams. • Oral questions by choosing students to answer randomly (with no mark).
		2- Describe the pathogenesis and types of pain.	2- Understand the mechanism of inflammation and its relation to diseases.	• Exams. • Oral questions by choosing students to answer randomly (with no mark).
		3- Identify the possible complications of the diseases.	3- Ability to relate disease pathophysiology to the complications it may cause.	• Exams. • Oral questions by choosing students to answer randomly (with no mark).
	PHARM-LO-3: Articulate how knowledge in foundational sciences is integral to clinical reasoning.	4-Describe the mechanism of body reaction toward certain diseases including the cardiovascular system, respiratory, gastrointestinal, endocrine, liver, and renal diseases.	4.1 Ability to connect disease pathophysiology to the mechanism of action for the drugs used in treatment. 4.2 Communicate effectively and transfer knowledge to other health care professionals.	• Exams. • Oral questions by choosing students to answer randomly (with no mark).

ACADEMIC SUPPORT

It is The Hashemite University policy to provide educational opportunities that ensure fair, appropriate and reasonable accommodation to students who have disabilities that may affect their ability to participate in course activities or meet course requirements. Students with disabilities are encouraged to contact their instructor to ensure that their individual needs are met. The University through its Special Need section will exert all efforts to accommodate for individual's needs.

Special Needs Section:

Tel: 00962-5-3903333 **Extension:** 4209

Location: Students Affairs Deanship/ Department of Student Welfare Services

Email: amalomoush@hu.edu.jo

amalomoush@staff.hu.edu.jo

COURSE REGULATIONS

Participation

Class participation and attendance are important elements of every student's learning experience at The Hashemite University, and the student is expected to attend all classes. A student should not miss more than 15% of the classes during a semester. *Those exceeding this limit of 15% will receive a failing grade regardless of their performance*. It is a student's responsibility to monitor the frequency of their own absences. **Attendance record begins on the first day of class irrespective of the period allotted to drop/add and late registration. It is a student's responsibility to sign-in; failure to do so will result in a non-attendance being recorded.**

In exceptional cases, the student, with the instructor's prior permission, could be exempted from attending a class provided that the number of such occasions does not exceed the limit allowed by the University. The instructor will determine the acceptability of an absence for being absent. A student who misses more than 25% of classes and has a valid excuse for being absent will be allowed to withdraw from the course.

Sharing of course materials is forbidden. No course material including, but not limited to, course outline, lecture hand-outs, videos, exams, and assignments may be shared online or with anyone outside the class. Any suspected unauthorized sharing of materials will be reported to the university's Legal Affairs Office. If a student violates this restriction, it could lead to student misconduct procedures.

Plagiarism

Plagiarism is considered a serious academic offense and can result in your work losing marks or being failed. HU expects its students to adopt and abide by the highest standards of conduct in their interaction with their professors, peers, and the wider University community. As such, a student is expected not to engage in behaviours that compromise his/her own integrity as well as that of the Hashemite University.

Plagiarism includes the following examples, and it applies to all student assignments or submitted work:

- **Use of the work, ideas, images or words of someone else without his/her permission or reference to them.**
- **Use of someone else's wording, name, phrase, sentence, paragraph or essay without using quotation marks.**
- **Misrepresentation of the sources that were used.**

The instructor has the right to fail the coursework or deduct marks where plagiarism is detected

Student Complaints Policy

Students at The Hashemite University have the right to pursue complaints related to faculty, staff, and other students. The nature of the complaints may be either academic or non-academic. For more information about the policy and processes related to this policy, you may refer to the students' handbook.

Others

- At the beginning of the lectures, be on time and don't leave before the end of the lecture without an acceptable excuse.
- If you missed a class, it is your responsibility to find out about any announcements or assignments you have missed.
- For any clarification, please communicate with your instructor at his posted office hours or by appointment.
- Switch off your mobile or keep it silent throughout the lecture.
- Listen well to the lecture and avoid side discussions, if you have a question, ask your instructor and not your colleague.
- Exams are scheduled to be given three times throughout the semester; you are expected to attend all. If not, make-up exams will be offered for valid reasons. It may be different from regular exams in content and format.
- Cheating, academic misconduct, fabrication, and plagiarism will not be tolerated, and the university policy will be applied.

COURSE ASSESSMENT

Course Calendar and Assessment

Students will be graded through the following means of assessment and their final grade will be calculated from the forms of assessment as listed below with their grade weighting taken into account. The criteria for grading are listed at the end of the syllabus

Assessment	Grade Weighting	Deadline Assessment
First exam	30%	~ 6th week
Second exam	30%	~ 10th week
Final exam	40%	~ 15th /16th week

Description of Exams

Test questions will predominately come from the material presented in the lectures. Semester exams will be conducted during the regularly scheduled lecture period. The exam will consist of a combination of multiple-choice, true and false, and/or short answers.

No make-up exams will be given. Only documented absences will be considered as per HU guidelines. Make-up exams may be different from regular exams in content and format.

Grades are not negotiable and are awarded according to the following criteria*:

Letter Grade	Description	Grade Points
A+	Excellent	4.00
A		3.75
A-		3.50
B+	Very Good	3.25
B		3.00
B-		2.75
C+	Good	2.50
C		2.25
C-		2.00
D+	Pass	1.75
D	Pass	1.50
F	Fail	0.00
I	Incomplete	-

WEEKLY LECTURE SCHEDULE AND CONTENT DISTRIBUTION

"Lecture hours and weeks are approximate and may change as needed"

Note: For the 2 lecture periods per week (S/T), one lecture period covers 1.5 lecture hours (75 minutes). The course content specifies chapters of the textbook that will be included in exams.

Introduction	**Introduction to Pathophysiology**	**Week 1**	**1 lecture**
Topic 1	**Heart Diseases** 1. Introduction to cardiovascular function. **2.** Ischemic heart disease. 3. Heart failure. 4. Stroke. **5.** Arrhythmia.	**Week 1, 2,3**	**5 lectures**
Topic 2	**Vascular Diseases** 1. Hypertension. 2. Atherosclerosis. 3. Varicosis. **4.** Embolism.	**Week 3,4**	**4 lectures**
Topic 3	**Pathophysiology of coagulation**	**Week 5**	**1 lecture**
Topic 4	**Renal Diseases** 1. Acute and chronic renal failure. **2.** Urinary tract infection.	**Week 6**	**2 lectures**
Topic 5	**Liver Diseases** 1. Hepatitis. 2. Liver cirrhosis. 3. Liver cancer. **4.** Pancreatitis.	**Week 7,8**	**4 lectures**
Topic 6	**Respiratory Diseases** 1. Asthma pathophysiology. **2.** COPD.	**Week 9**	**2 lectures**
Topic 7	**Gastrointestinal Diseases** 1. Gastric ulcer. 2. Intestinal diseases. **3.** Colorectal cancer.	**Week 10**	**2 lectures**
Topic 8	**Endocrine diseases** **1.** Diabetes mellitus.	**Week 11**	**1 lecture**
Topic 9	**Nervous System** Somatosensory function, pain, and headache	**Week 11,12**	**2 lectures**
Topic 10	***Inflammation***	**Week 13**	**2 lectures**
Topic 11	***Cancer***	**Week 14**	**2 lectures**
University Final Exams		**Week 15**	