Jordan University of Science and Technology

Faculty of Medicine

Doctor Of Medicine (Md) Department

MED731 Pathophysiology - JNQF Level: 7

Second Semester 2023-2024

Course Catalog
3 Credit Hours. Advanced Pathophysiology course is implicated in studying the major mechanisms underlying disease development and progression at a cellular, tissue, and organ level. It builds upon foundational knowledge of normal physiology and explores the disruptions that occur in various diseases and conditions. This course aims to provide a comprehensive understanding of the pathophysiological processes involved in disease state by studying and discusion article related to diffirent diseases each secion. This course will in-depth focus on the mechanism of diseases that contributes to the functioning physiological systems. Students will comprehensively understand how the pathological changes in our systems will affect the function and the homeostasis. Each session will focus on one system by presenting a scientific paper in a journal club style. Knowledge acquired in this course will be implemented by
Teaching Method: On Campus

Text Book	
Title	Principles & Practice of Medicine by Davidson
Author(s)	Sir Stanley Davidson
Edition	18th Edition
Short Name	Davidson
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref#3	Articles presentation	Teachers	1st Edition	Teacher's choice

Instructor	
Name	**Prof. Nayef Al-Gharaibeh**
Office Location	M2 L-0

Office Hours	Sun : 11:00 - 14:00 Mon : 09:00 - 11:00 Wed : 11:00 - 12:00 Thu : 11:00 - 13:00
Email	nayef@just.edu.jo

Class Schedule & Room
Section 2: Lecture Time: Mon : 11:00 - 14:00 Room: LAB

Tentative List of Topics Covered

Weeks	Topic	References
Week 1	Introduction	From **Davidson**
Week 2	Basic Principles Defining the Major Concepts of altered Health States.	From **Davidson**, From **Ref#3**
Week 3	Mechanism of Disease; Cancer genetics & Autoimmunity	From **Davidson**, From **Ref#3**
Week 4	Blood Pathophysiology	From **Davidson**, From **Ref#3**
Week 5	Endocrine Pathophysiology I, Introduction; Pituitary; Thyroid, PTH	From **Ref#3**
Week 6	Endocrine Pathophysiology II, Endocrine Pancreas; Adrenal Cortex	From **Ref#3**
Week 7	First Evaluation	From **Davidson**, From **Ref#3**
Week 8	Cardiovascular Pathophysiology (ECG, Cardiac arrhythmias & Ischemic heart disease)	From **Ref#3**
Week 9	Cardiovascular Pathophysiology (Hypertension, Valvular Heart disease & Heart Failure)	From **Davidson**, From **Ref#3**
Week 10	Respiratory Pathophysiology	From **Davidson**, From **Ref#3**
Week 11	GIT Pathophysiology	From **Davidson**
Week 12	Second Evaluation	From **Davidson**, From **Ref#3**
Week 13	CNS Pathophysiology I (Alzheimer?s, EEG, Epilepsy & Sleep disorders).	From **Davidson**, From **Ref#3**
Week 14	CNS Pathophysiology II (MS & Parkinson Disease)	From **Ref#3**
Week 15	Renal Pathophysiology	From **Davidson**, From **Ref#3**
	Final Exam	From **Davidson**, From **Ref#3**

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
present scientefic data [1PLO1] [1L7K1]	20%	First Evaluation, Final Exam
Understand endocrine pathophysiology by interpreting research articles in molecular biology. [1PLO3] [1L7S1]	10%	First Evaluation
Explain the pathophysiological changes that occur within specific organ systems and how they contribute to clinical manifestations and complications. Understand cardiovascular pathophysiology by interpreting research articles in molecular biology. [1PLO8] [1L7C2]	20%	Second Evaluation, Final Exam
Identify and analyze the role of inflammation, immune responses, and genetic factors in the pathophysiology of diseases. [1PLO4] [1L7K1]	10%	Final Exam
Understand the CNS pathophysiology by interpreting research articles in molecular biology. [1PLO2] [1L7S3]	10%	First Evaluation, Second Evaluation, Final Exam
Critically analyze and interpret research studies, case studies, and clinical scenarios related to pathophysiology, integrating evidence-based practice in Understanding the hematology(anemias) pathophysiology by interpreting research articles in molecular biology. [1PLO12] [1L7K1]	10%	Final Exam
Demonstrate an in-depth understanding of the physiological processes and mechanisms that contribute to the development and progression of various diseases and conditions. Understand the effect of cancer treatment on the endocrine system Integrate acquired knowledge through the course and communication skills to present research. [1PLO1] [1L7K1]	20%	Second Evaluation, Final Exam

Relationship to Program Student Outcomes (Out of 100%)													
PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	PLO12	PLO13	PLO14
40	10	10	10				20				10		

Relationship to NQF Outcomes (Out of 100%)			
L7K1	L7S1	L7S3	L7C2
60	10	10	20

Evaluation	
Assessment Tool	**Weight**
First Evaluation	25%
Second Evaluation	25%
Final Exam	50%

Policy	
Advanced Pathophysiology	During this semester you will have 2 midterm evaluation (25 points each), 50 points will be allocated for the final exam.

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