



Jordan University of Science and Technology
Faculty of Pharmacy
Doctor Of Pharmacy (Pharm D.) Department

PHMD361 Clinical Biochemistry (For Pharm D Students)

First Semester 2023-2024

Course Catalog

3 Credit Hours. Clinical Biochemistry course will provide basic information related to biological and metabolic disturbances related to various disease states. The course will also provide information about biochemical diagnostic procedures that help in evaluating the efficiency of different body organs. Interpretations of biochemistry and the concentration of carbohydrates, lipids, proteins, electrolytes, and enzyme activities will be discussed. Clinical cases will be presented to help students to interpret laboratory findings.

Text Book

Title	Clinical Chemistry
Author(s)	William J. Marshall and Stephen K. Bangert
Edition	9th Edition
Short Name	Ref no. 1
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref #2	Clinical Biochemistry (Lecture Notes)	Peter Rae, Mike Crane and Rebecca Pattenden	10th Edition	

Instructor

Name	Prof. Mohammad Alkhatatbeh
Office Location	PH4 L-1 Phone ex 26005
Office Hours	
Email	khataatbeh@just.edu.jo

Class Schedule & Room

Section 1:
 Lecture Time: Sun, Tue : 11:30 - 12:30
 Room: D2203

Tentative List of Topics Covered

Weeks	Topic	References
Week 1	Biochemical investigation in clinical medicine	Chapter 2 From Ref no. 1
Weeks 2, 3	Water, sodium and Potassium	Chapter 3 From Ref no. 1
Week 4	Hydrogen ion homeostasis	Chapter 4 From Ref no. 1
Weeks 5, 6	The kidneys	Chapter 5 From Ref no. 1
Week 7	Calcium, phosphate, and Magnesium	Chapter 14 From Ref no. 1
Week 8	Bones and joints	Chapter 15 From Ref no. 1
Weeks 9, 10	Plasma proteins & enzymes	Chapter 16 From Ref no. 1
Week 11	The liver	Chapter 6 From Ref no. 1

Week 12	Lipids, lipoproteins and cardiovascular disease	Chapter 17 From Ref no. 1
Weeks 13, 14	Disorders of carbohydrate metabolism	Chapter 13 From Ref no. 1
Weeks 14, 15	Disorder of iron and porphyrin metabolism	Chapter 13 and 21 From Ref no. 1
Week 15	The gastrointestinal tract	Chapter 7 From Ref no. 1
Week 16	Revision	All chapters From Ref no. 1

Mapping of Course Outcomes to Program Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Describe the clinical significance of laboratory tests and their biochemical reference ranges [1PLO1.1]	3%	
Discuss theoretical knowledge about normal metabolism of organ functions and the significance of their pathological mechanisms in diagnosis. [1PLO1.1]	40%	
Identify appropriate biochemical investigations to monitor the function of various body organs. [1PLO1.1]	32%	
Explain the results of biochemical investigations in accordance with other clinical information to investigate metabolic and physiological disorders. [1PLO3.1]	25%	

Relationship to Program Student Outcomes (Out of 100%)															
PLO1.1	PLO2.1	PLO2.2	PLO2.3	PLO2.4	PLO3.1	PLO3.2	PLO3.3	PLO3.4	PLO3.5	PLO3.6	PLO4.1	PLO4.2	PLO4.3	PLO4.4	PLO5.1
75					25										

Evaluation	
Assessment Tool	Weight
First exam	25%
Second exam	30%
Active learning	5%
Final exam	40%

Policy	
Exams	The format for the exams is generally (but NOT always) in the form of multiple-choice questions. Grades will not be given out via e-mail.
Cheating	The commitment of the acts of cheating and deceit such as copying during examinations, altering examinations for re-grade, plagiarism of homework assignments, and in any way representing the work of others as your own is dishonest and will not be tolerated. Standard JUST policy will be applied. المادة 7: إذا ضُبط الطالب أثناء الامتحان أو الاختبار متلبساً بالغش فتوقع عليه العقوبات التالية مجتمعة: أ- اعتباره راسياً في ذلك الامتحان أو الاختبار. ب- الغاء تسجيله في بقية المساقات المسجل لها في ذلك الفصل. ج- فصله من الجامعة لمدة فصل دراسي واحد، و هو الفصل التالي للفصل الذي ضبط فيه.
Attendance	Excellent attendance is expected. JUST policy requires the faculty member to assign ZERO grade (35) if a student misses 20% of the classes. If you miss class, it is your responsibility to find out about any announcements or assignments you may have missed.
Communication with instructor	Students should communicate through their official JUST emails. Communication through personal email accounts (yahoo, Gmail, Hotmail, etc.) or social media will NOT be accepted, and no response will be provided. Students are required to check their emails and the E-learning page of the course regularly for announcements and notifications.
Active learning and students participation	Students are expected to actively participate in class discussions.

<p>Classroom Etiquette</p>	<p>Respect</p> <ul style="list-style-type: none"> o Respect people, places, and things. o Raise your hand to speak. o Listen respectfully. o Food and drink are not permitted in class. o Do not engage in aside conversations. <p>Participation or Disruption:</p> <ul style="list-style-type: none"> o Do not hesitate to ask questions at any time, especially if you are unsure of something. o Listen to other students' questions to avoid asking the same question five minutes later. o Allow your classmates to participate in class discussions and refrain from taking advantage of all opportunities for active participation. <p>Cell Phones and Electronic Devices:</p> <ul style="list-style-type: none"> o Texting is not permitted in class. o The use of cell phones, smartphones, or other mobile communication devices is disruptive and is therefore prohibited during class without permission. o Your phone should be turned off. If you must keep your phone on, you should set it to vibrate or silent mode and leave class if you receive an emergency call. o Except in emergencies, those using such devices must leave the classroom for the remainder of the class period. o Do not use your laptop in class for browsing the Internet or using social media while in class. Missing a Class o Do not miss classes. It is not appropriate to ask the professor if you missed anything important if you miss class. Obviously, something of importance was missed, you missed a whole class! o Whenever you are absent from class, it is your responsibility to make up the work and to get notes, not your professors. o If you need to leave early, notify the instructor. <p>Be Punctual</p> <ul style="list-style-type: none"> o Make sure you arrive to class on time.
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