



Philadelphia University  
Faculty of Pharmacy  
Department of Clinical Sciences  
2<sup>nd</sup> semester, 2017/2018

**Course Syllabus**

<b>Course Title: Clinical Biochemistry</b>	<b>Course code: 0510413</b>
<b>Course Level: 4<sup>h</sup> year</b>	<b>Course prerequisite: 0510215</b>
<b>Lecture Time:</b> 10.10-11, 12.10-13.00 S,T,T 11.15-12.45 M,W	<b>Credit hours: 3</b>

Name	Rank	Office Number and Location	Office Hours	E-mail Address
Abeer Shnoudeh	Assistant Professor	P 531 & 09 15307	1-2 S,T,T 10-11 M,W	ashnoudeh@philadelphia.edu.jo

**Course description:**

تشمل هذه المادة تدريس الطرق الحيوية لتشخيص الاضطرابات المختلفة لجسم الإنسان والنتيجة عن الأمراض المختلفة  
This course discuss the biological methods for the diagnosis of different metabolic disorders of human body that result from different diseases.

**Course objectives:**

This course will familiarize the student with the principles, limitations, and interpretation of certain clinical diagnostic procedures, and emphasize the biochemical mechanisms of specific disease states.

**Course /resources**

• **Books**

Clinical Chemistry: William J. Marshall and Stephen K. Bangert, Mosby, 2012, 7<sup>th</sup> edition

• **Supporting Materials**

Handouts, and case studies.

### **Teaching methods:**

Lectures, discussion groups.

### **Learning outcomes:**

- Knowledge and understanding

This course should enable the student to:

1. Interpret physicians order for:
  - a. Biochemical diagnostic assays
  - b. Endocrine function tests/therapy
2. Identify biochemical diagnostic agents or tests useful in:
  - a. Diagnosis
  - b. Monitoring response to therapy
3. Define, interpret, or apply biochemical terminology as it relates to:
  - a. Disease state
  - b. Metabolic functions (or organs)
  - c. Endocrine function
4. Interpret the clinical significance of biochemical lab test results

- Cognitive skills.

1. Explain molecular basis of diseases.
2. Relate the signs and symptoms to the molecular basis of diseases

Thinking and analysis skills will be developed through solving case studies.

- Communication skills.

In lecture, worksheets are given to students to enable them to develop team work and help them to improve their communication skills.

- Transferable skills

1. Select appropriate test to diagnose disorders of metabolism.
2. Select the tests to assess the abnormal changes in macromolecules in a disease

### **Assessment instruments**

- Exams (first, second and final)
- Quizzes, short reports and/ or presentations.

<b><u>Marks</u></b>	
<b>Assessment Instruments</b>	<b>Mark</b>
First examination	<b>20%</b>
Second examination	<b>20%</b>
Final examination	<b>40%</b>
Reports, Quizzes.	<b>20%</b>
Total	<b>100</b>

## Course academic calendar

week	Basic and support material to be covered	Chapter in the book	Quizzes and their due dates
1	Introduction Biochemical investigation in clinical medicine- Establishment and use of Normal Reference Values	Chapter 1 + supplement ary material	
2-3	Plasma proteins & Enzyme	Chapter13	3 <sup>rd</sup> week
4	The Liver	Chapter 5	4 <sup>th</sup> week
5-6 <b>First examination</b>	Hematology Disorder of Haemoprotein, Porphyrin and Iron	Chapter 17+ handouts	
7,8	The kidneys and electrolytes	Chapter 2	8 <sup>th</sup> week
9	General urine Tests	Chapter 4	
10 <b>Second Examination</b>	Disorder of carbohydrate metabolism	Chapter 11	
11	Lipids, lipoproteins and cardiovascular disease	Chapter 14	
12	Hypothalamus and pituitary gland	Chapter 7	12 <sup>th</sup> week
13	Thyroid function Tests Adrenal gland Function Tests	Chapters 8 and 9	
14	Disorders of purine metabolism Metabolic Aspects of Malignant Disease	Chapter 18 and Handouts	
15	Pregnancy & birth	Handouts	
(16)	<b>Final Examination</b>		

### Expected workload:

**On average students need to spend 2 hours of study and preparation for each 50-minute lecture/tutorial.**

### Attendance policy:

**Absence from lectures and/or tutorials shall not exceed 15%. Students who exceed the 15% limit without a medical or emergency excuse acceptable to and approved by the Dean of the relevant college/faculty shall not be allowed to take the final examination and shall receive a mark of zero for the course. If the excuse is approved by the Dean, the student shall be considered to have withdrawn from the course.**

### **Other Education Recourses:**

#### **Books**

Clinical Biochemistry : Lecture notes, by Geoffery Beckett, Simon Walker, Peter Rae, Peter Ashby, Blackwell publishing, 7<sup>th</sup> edition, 2005, ISBN, 978-1-4051-2959-6

Clinical Biochemistry: an Illustrated color text, by Allan Gaw, Robert Cowan, Denis O'Reilly, and Michael Stewart Edinburgh: Churchill Livingstone, 3<sup>rd</sup> Edition, 2004,. ISBN 0-443-07269-8

Clinical Chemistry: Principles, Procedures, Correlations by Michael L. Bishop, Edward P. Fody, Larry E. Schoeff Publisher: Lippincott Williams & Wilkins; 5th edition (July 6, 2004) ISBN: 0781746116

### **Journals**

Clinical Chemistry Journal, ( <http://www.clinchem.org/>)

### **Websites**

-<http://www.philadelphia.edu.jo/pharmacy/resources.html>