PhiladelphiaUniversity
Faculty of Pharmacy
Department of Clinical Sciences
1th semester, academic year 2016/2017

Course Syllabus

Course code: **0510414**	**Course Title:** **Clinical Biochemistry Practical**
Course prerequisite (s) and/or corequisite (s): (**0510214**) Pharmaceutical Biochemistry 1 (**0510215**) Pharmaceutical Biochemistry 2	**Course Level:** **4th year**
Credit hours: 1 hours	**Lecture Time:**

Academic Staff Specifics

Name	Rank	Office number	Office hours	E-mail address
Abeer Shnoudeh	**Assistant Professor**	**510**		**ashnoudeh@philadelphia.edu.jo**
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Course module description:

This course discusses via case-study analyses and experimental work the basic principles of quantitative analysis utilized in common clinical laboratory tests. An introduction to interpretation of abnormal clinical laboratory values is presented, and regulatory effects of various hormones are described.

Course module objectives:

This course aims to teach students the physiological and pathological principles regarding biochemical investigations, practical experience to measure different biochemical parameters, the interpretation of results and the clinical applications of such testing to the diagnosis. These parameters include proteins, enzymes, and metabolic products**.**

Course/ module components

- **Books (title , author (s), publisher, year of publication)**
  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**.**
- **Support material (s) (vcs, acs, etc).**
- **Study guide (s) (Laboratory manual and experimental sheets)**
- **Homework and laboratory guide (s) if (applicable).**

Teaching methods:

Tutorials, experimentation, problem solving, debates, etc.

Learning outcomes:

- Knowledge and understanding
  By the end of this course the student will be able to measure parameters about the following and interprets his measurement:
- Protein determination (Albumin).
- Enzyme determination: Plasma alkaline phosphatase
- Enzyme determination: C.K.MB
- Creatinine determination.
- Total and direct bilirubin determination.
- Carbohydrates: Determination Glycosylated hemoglobin
- Lipid profile determination.

• Cognitive skills (thinking and analysis).
Thinking and analysis skills will be developed through solving case studies and problems.

- Communication skills (personal and academic).

Through experiment work within the group

- Practical and subject specific skills (Transferable Skills).

Practical skills will be developed through experimentation work.

Assessment instruments

•Short reports and/ or presentations, and/ or Short research projects.
•Quizzes.
•Home works.
•Final examination: 40 marks

Allocation of Marks

Assessment Instruments	**Mark**
Reports	**30%**
Quizzes	**20%**
Practical Examination	**10%**
Final examination	**40%**
Total	**100**

Documentation and academic honesty
Documentation style (with illustrative examples) , Lecture notes .

Course/ academic calendar

week	Dates	Basic and support material to be covered	Homework/reports and their due dates
(1)	16-20/10	Safety rules Introduction	Will be given during the course
(2)	23-27/10	Protein determination (Albumin)	
(3)	30/10-3/11	Enzyme 1: determination of alkaline phosphatase	
(4)	6-10/11	Enzyme 2: determination of C.K.MB	
(5)	13-17/11	Total and direct bilirubin determination	
(6) First examination	20-24/11	----------	----------
(7)	27/11-1/12	Creatinine determination	
(8)	4-8/12	Ferritin determination	
(9)	11-15/12	Carbohydrates : HBA1C determination	
(10)	18-22/12	Determination of lipid profile	
(11) Second examination	25-29/12	----------	----------
(12)	8-12/1	Practical Examination	
(13)	15-19/1	Final examination	

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.

General Instructions:

1. Students must have their Manual of Clinical biochemistry during the labs.
2. Clean, white laboratory coat (gown) has to be worn before entering the lab. and taken off only when outside the lab. It also has to be zipped all the time.
3. Electronic calculator upon attendance of each lab.
4. Students are required to record all data, observations collected during the experiments and numbers resulting from measurements or calculations on the report sheets provided in the manual.
5. Questions in the report sheet should be answered and submitted to the lab's instructor.
6. Announced and unannounced quizzes will be given at any laboratory session.

Module references

Books

1. Manual of practical clinical Biochemistry, prepared by lecturer Hanan Asad. FROM: Clinical Chemistry: Principles, Procedures, Correlations by Michael L. Bishop, Janet Duben-Engelkirk, Edward P. Fody Publisher: Lippincott Williams & Wilkins; 2nd edition (November 1, 1991) ISBN: 0397548249
2. 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
3. Tietz Fundamentals of Clinical Chemistry by Carl A. Burtis, Edward R. Ashwood Publisher: W.B. Saunders Company; 5th edition (January 15, 2001) ISBN: 0721686346

Journals

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

Websites

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