

فإنجعل من أردن العرب جامعة للعرب

Faculty: Pharmacy

Department: Clinical pharmacy and Therapeutic department

Academic Year: 2018- 2019

Semester: Second semester

(Course Syllabus)

<i>Subject Name</i>	<i>Credit Hours</i>	<i>Course No.</i>	<i>Prerequisite</i>	<i>Concurrent course</i>
Clinical Biochemistry Laboratory	1	906429	0906428 Clinical Biochemistry	0906428 Clinical Biochemistry

<i>Coordinator Name</i>	<i>Lecturer/s</i>	<i>Room No.</i>	<i>E-mail</i>	<i>Course website</i>	<i>Office Hours</i>
MSc.Ghada A. Amara	MSc.Ghada Abu Amara	4213	gh_abuamara@asu.edu.jo	http://bio.asu.edu.jo/bio/index.jsp	According to the lecturer time schedule
	Dr Husam Abazed	4121	H_abazid@asu.edu.jo		
	MSc.Rajaa Al Qudah	4214	Ra_alqudah@asu.edu.jo		

Course Description:

The course intended to teach pharmacy students in the fourth year level the purpose and the aim of clinical biochemistry lab. This practical course will cover many topics within 10 lab-based experiments in the theoretical part.

Course Objectives

- 1) Link the practical part with the theoretical part of the clinical biochemistry.
- 2) Learn new skills related to clinical biochemistry about how to deal with biological samples and how to interpret results obtained by performing the clinical tests.
- 3) To make the students aware of the basic setup of laboratory, the procedure for sample collection and separation prior to the analysis.
- 4) The results of biochemical tests may be used in diagnosis and in the monitoring of treatment.
- 5) Biochemical test may also be of value in screening for disease or in assessing the prognosis once a diagnosis has been made.



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Intended Learning Outcomes

Following the successful completion of this course, the student should be able to:

A. Knowledge and understanding:

- A1. The student will understand new skills related to clinical biochemistry.
- A2. The student will be introduced to the reagent kits that are commonly used in medical and clinical laboratories.
- A3. The student will have a better understanding of the theoretical part of the clinical biochemistry.
- A4. The student should have the ability to interpret the results that are found through biochemical investigations.
- A5. The student should be able to investigate the exact parameters to identify certain diseases and then confirm the diagnosis of a disease .
- A6. The student will be able to understand and discuss the possible biochemical changes that may occur in diseases.
- A7. The student will have a good clinical background on a wide range of diseases and the required investigations mainly biochemical laboratory investigations, which helps in evaluation of the patient's case.

B. Subject specific skills:

- B1. Be able to interpret the results that are obtained from biochemical tests from patients and compare the result with normal and healthy person.
- B2. The student will learn new skills related to clinical biochemistry ,by using different instruments, to estimate and evaluate biochemical markers
- B3. The student will be introduced to the reagent kits that are commonly used in medical and clinical laboratories.
- B4. The student will have better relationships knowledge to the theoretical part of the clinical biochemistry.

C. Cognitive and Intellectual skills:

- C1. To have the ability to solve critical results of patients
- C2. To have the ability to interpret the different results and describe the possible therapeutic strategies
- C3. The ability to assess the values of biochemical tests and correlate these values to diseases
- C4. To have the ability to suggest the required biochemical tests for the major and most frequent illnesses.
- C5. To be able to understand the biochemical results of patients and make use of the results for solving the patient's case.



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D. Transferable Skills:

D1. Students should be able to interpret lab findings and then to apply these skills in subsequent courses such as clinical biochemistry.

D2. The student should be able to interpret the experimental results as well as describe and diagnose diseases.

D3. To have the ability to evaluate the different laboratory analyses requested by the clinician.

Teaching and Learning Methods:

Development of ILOs is promoted through the following teaching and learning methods:

ILOs	Learning Methods	Evaluation Methods
A1 –A5 B1 –B2 C1 –C3 D1 –D2	Lectures (to explain the theoretical knowledge for each topic) Reading	Written Exams quizzes
A6 –A7 B3 –B4 C3–C5 D3	Case discussion (to apply the knowledge to solve patient cases)and written assignments	Case report discussion Home work Clinical/laboratory observation
B1 –B4 C1 –C5 D2 –D3	To apply the knowledge to solve patient cases in the theoretical clinical biochemistry In groups	Personal oral evaluation

Course Content:

Week	Date	Lecture number	Topic's Details	Exams/ /quizes/ holiday s	Main Reference (chapter)	ILOs achieved
1		2	Introduction to Clinical Biochemistry: Biological Fluids, blood and urine		Manual/General introduction	A1 –A3 B1 –B2 C1 –C2 D1 –D3
2		3	Electrolytes: Sodium(Na ⁺), Potassium(K ⁺)		Manual/Electrolytes	A1 –A3 B2–B4 C1 –C2 D2–D3
3		4	Blood Urea Nitrogen (BUN) Creatinine and Uric Acid		Manual/ Kidney Function Tests	A1 –A3 B1 –B2 C1 –C2 D1 –D3



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4	5	Bilirubin Aspartate amino Transferase(AST) Alanine amino Transferase(ALT)		Manual/ Liver Function Tests	A1 -A7 B1 -B4 C1 -C5 D1 -D3
			Off lab week		
5	7	Glucose:Fasting Blood Sugar Glycated Heamoglobin HbAcl		Manual/ Diabetes Mellitus	A2 -A3 B3-B2 C1 -C2 D2-D3
6	8	1-Thyroxine 2-Prolactin		Manual/ Principles of Immunoassays	A1 -A3 B1 -B2 C1 -C2 D1 -D3
7&8	9&10	Total Cholesterol Triglyceride HDL & LDL Creatine Kinase		Manual/ Lipid Profile Manual/ Ischaemic Heart Disease	A1 -A3 B1 -B2 C1 -C2 D1 -D3
			Off lab week		
9	12	Alkaline Phosphatase Calicum(Ca ⁺²)		Manual/Calcium&Bon e Disorders	A1 -A3 B1 -B2 C1 -C2 D1 -D3
10	13	Iron, Ferritin, Total iron binding capacity (TIBC)		Manual/ Iron	A1 -A3 B1 -B2 C1 -C2 D1 -D3
FINAL EXAM					

Grade Distribution:

Your course grade will be determined by the following:

Assessment Method	% of Final Grade	Due Date
Reports	10%	
Quizzes	20%	
Personal evaluation	10%	
Cases study	10%	
Final exam	50%	
Total	100%	

Distribution of examination material (may vary depending on material included)



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Course Policies:

A- Attendance policies:

Attendance: Mandatory.

Failing in the subject – with 3 absences

B- Absences from exams and handing in assignments on time:

According to University rules.

C- Health and safety procedures:

Students should follow laboratory safety rules strictly

D- Honesty policy regarding cheating, plagiarism, misbehavior:

According to University rules.

E- Grading policy:

Exams and Quizzes:50%

Final exam :50%

F- Available university services that support achievement in the course:

Classrooms, Laboratories

Required equipment:

Data show and internet connection, Laboratory equipment.

Make-up Exam Policy:

According to University rules.

Textbooks information:

Main Reference:

Manual of Clinical Biochemistry

Other References:

Clinical Biochemistry by: Simon Walker /Geoffery.Beckett /Peter Ashby/ Peter.Rae
9th Edition

Additional information:

No side talks during lecture

No mobile phones during lecture

Entering the lecture theatre after the instructor is not permitted.

Amman – Jordan 5232899 _

Fax: _ Tel :5609999

Form code: UF 130/1

24/233 Resolution number

Accreditation date: 31/01/2018



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Homework should be done by students independently and will be asked at the exams

Course Material and Announcements

Students need to use the e-learning page at the ASU website in order to get all lecture hand-outs and guidelines which will be uploaded there.

In addition, course related announcements and exam results will be posted on the e-learning page and is the responsibility of each student to check the site regularly.

Name of Course Coordinator: MSc.Ghada A. Amara

Signature:

أ. غادة أبو عمارة / 4/2019

Head of curriculum committee:

ر. ريم أبو تايه

Signature:

Head of Department:

Reem

Abu Tayeh

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Copy to:

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