

American University of Beirut
Faculty of Medicine
Department of Pathology and Laboratory Medicine
LABM 202
(*Clinical Chemistry II*)

Spring Semester AY/2019-2020

<i>Name</i>	Dr. Rose Daher Dr. Aimee Feghali	Course Credits: 3
Office Hours:		Meeting Location: VanDyk, Room 101
Office	AUBMC, 3 rd Floor	Meeting Time: 1:00-1:50 pm Tues, Wed, & Thur
Location:	Facing E320	
Extension	5223	
E-mail	rd02@aub.edu.lb af73@aub.edu.lb	

Course Description:

Clinical Chemistry courses I and II are designed to acquaint students with fundamentals of clinical chemistry, including basic physiological and biochemical processes, instrumentation, principles of analytical procedures, and methods used for reliable determination of clinical analytes. Correlation of laboratory results with clinical manifestation is also an integral part of these courses. LABM202 course is a continuation of LABM201 and will cover some aspects of routine clinical chemistry such as proteins, enzymes, lipids and lipoproteins, calcium metabolism, liver function tests as well as some advanced topics (hormones, therapeutic drug monitoring, toxicology) and specialized techniques like chromatography (HPLC and GC/MS) etc...

Specific Learning Outcomes:

Upon completion of this course, students should be able to:

1. Comprehend the principles of analytical techniques used in Clinical Chemistry laboratory.
2. Know the procedures used to set-up, assess and maintain the quality of laboratory analysis.
3. Be aware of the physiological and pathological processes that are affecting biochemical investigation done on samples from patients.
4. Realize the use of the results of Clinical Chemistry analysis in the diagnosis and management of common medical disorders.
5. Acquire the ability to communicate the knowledge rendered by Clinical Chemistry testing to colleagues and clinicians.

Course Content:			
Date	Topic	Lecturer	Time
Wed Jan 22	Nonprotein nitrogen compounds - Pathophysiology	Dr. A. Feghali	1 pm
Thur Jan 23	Nonprotein nitrogen compounds - Pathophysiology	Dr. A. Feghali	1 pm
Tues Jan 28	Uric Acid	Dr. A. Feghali	1 pm
Wed Jan 29	Lipids I	Dr. A. Feghali	1 pm
Thur Jan 30	Lipids II	Dr. A. Feghali	1 pm
Tues Feb 04	Lipids III	Dr. A. Feghali	1 pm
Wed Feb 05	Lipids IV	Dr. A. Feghali	1 pm
Thur Feb 06	Calcium, Phosphorous, Magnesium	Dr. A. Feghali	1 pm
Tues Feb 11	Calcium, Phosphorous, Magnesium	Dr. A. Feghali	1 pm
Wed Feb 12	Calcium, Phosphorous, Magnesium	Dr. A. Feghali	1 pm
Thur Feb 13	Liver Function Tests	Dr. A. Feghali	1 pm
Tues Feb 18	Liver Function Tests	Dr. A. Feghali	1 pm
Wed Feb 19	Liver Function Tests	Dr. A. Feghali	1 pm
Thur Feb 20	Introduction to hormones	Dr. A. Feghali	1 pm
Tues Feb 25	Thyroid function tests	Dr. A. Feghali	1 pm
Wed Feb 26	Review session	Dr. A. Feghali	1 pm
Thur Feb 27	Quiz I	Dr. A. Feghali	
Tues Mar 03	Proteins – Introduction & Measurement	Dr. R. Daher	1 pm
Wed Mar 04	Electrophoresis – Technique	Dr. R. Daher	1 pm
Thur Mar 05	Electrophoresis – Interpretation	Dr. R. Daher	1 pm
Tues Mar 10	Immuno-electrophoresis / Immunofixation	Dr. R. Daher	1 pm
Wed Mar 11	Capillary EP / Immunotyping	Dr. R. Daher	1 pm
Thur Mar 12	M-components in Pathological Conditions	Dr. R. Daher	1 pm
Tues Mar 17	Individual Proteins: Clinical Significance	Dr. R. Daher	1 pm
Wed Mar 18	Proteins – Urine	Dr. R. Daher	1 pm
Thur Mar 19	Proteins – CSF	Dr. R. Daher	1 pm
Tues Mar 24	Enzymes – Introduction	Dr. R. Daher	1 pm
Wed Mar 25	Holiday – No classes		
Thur Mar 26	Enzymes – Activity determination	Dr. R. Daher	1 pm
Tues Mar 31	Enzymes – Cardiac, Liver	Dr. R. Daher	1 pm
Wed Apr 01	Enzymes – Others / cases	Dr. R. Daher	1 pm
Thur Apr 02	Review session	Dr. R. Daher	1 pm
Tues Apr 07	Quiz II	Dr. R. Daher	
Wed Apr 08	Tumor Markers	Dr. R. Daher	1 pm
Thur Apr 09	Tumor Markers	Dr. R. Daher	1 pm
Tues Apr 14	Theory of Chromatography	Dr. R. Daher	1 pm
Wed Apr 15	High Performance Liquid Chromatography	Dr. R. Daher	1 pm
Thur Apr 16	Gas Chromatography / Mass Spectrometry	Dr. R. Daher	1 pm
Tues Apr 21	Chromatography Problems	Dr. R. Daher	1 pm
Wed Apr 22	Therapeutic Drug Monitoring I	Dr. R. Daher	1 pm
Thur Apr 23	Therapeutic Drug Monitoring II	Dr. R. Daher	1 pm
Tues Apr 28	Introduction to Toxicology	Dr. R. Daher	1 pm
Wed Apr 29	Analytical Techniques in Toxicology	Dr. R. Daher	1 pm

Thur Apr 30	Review session	Dr. R. Daher	1 pm
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Evaluation:

Written Exam: 3 Quizzes

You must always have your **own ruler and scientific calculator** during the **exams**.

Recommended References / Books:

- Moodle course
- Clinical Chemistry: Techniques, Principles, Correlations. Eighth Edition. Bishop, Fody, Schoeff. Lippincott Williams & Wilkins. ISBN 978-1-4963-3558-6, 2018.
- Any other clinical chemistry book available in the Library like: Teitz, Kaplan, Bishop

Course Policy:

1. Attendance: you are expected to attend all classes and participate in class activities. If you miss a class, it is your responsibility to make up for the material missed, and inquire about any announcements made. **If you miss more than one fifth of class sessions, you are subject to withdrawing from the course with a-w-grade. Please refer to the AUB catalogue.**
2. Exams: Examinations must be taken as scheduled. Make up exams will not be given unless a valid excuse is given. Only authorized medical reports will be accepted.
3. Withdrawal date: Please observe withdrawal dates set by the Registrar's Office.
4. Cheating and Plagiarism: Cheating and plagiarism will not be tolerated. Review the Student Code of Conduct in your handbook and familiarize yourself with definitions and penalties. If you're in doubt about what constitutes plagiarism, ask your instructor because it is your responsibility to know. The American University of Beirut has a strict anti-cheating policy. Penalties include failing marks on the assignment in question, suspension or expulsion from University and a permanent mention of the disciplinary action in the student's records.

'AUB strives to make learning experiences as accessible as possible. If you anticipate or experience academic barriers due to a disability (including mental health, chronic or temporary medical conditions), please inform me immediately so that we can privately discuss options. In order to help establish reasonable accommodations and facilitate a smooth accommodations process, you are encouraged to contact the Accessible Education Office: accessibility@aub.edu.lb; +961-1-350000, x3246; West Hall, 314'.

Non-Discrimination – Title IX – AUB: AUB is committed to facilitating a campus free of all forms of discrimination including sex/gender-based harassment prohibited by Title IX. The University's non-discrimination policy applies to, and protects, all students, faculty, and staff. If you think you have experienced discrimination or harassment, including sexual misconduct, we encourage you to tell someone promptly. If you speak to a faculty or staff member about an issue such as harassment, sexual violence, or discrimination, the information will be kept as private as possible, however, faculty and designated staff are required to bring it to the attention of the University's Title IX Coordinator. Faculty can refer you to fully confidential resources, and you can find information and contacts at www.aub.edu.lb/titleix. **To report an incident**, contact the University's Title IX Coordinator Mitra Tauk at 01-350000 ext. 2514, or titleix@aub.edu.lb. An anonymous report may be submitted online via Ethics Point at www.aub.ethicspoint.com.