

*American University of Beirut*  
Faculty of Medicine  
Department of Pathology & Laboratory Medicine  
Course Number: LABM231  
**(Clinical Laboratory Quality Systems)**

Spring Semester AY/2019-2020

<b>Faculty:</b>	Dr. Rose Daher (coordinator) Dr. George Araj Dr. Elizabeth Baz Dr. Rami Mahfouz	<b>Course Credits:</b>	1 Credit
<b>Office Hours:</b>		<b>Meeting Location:</b>	VanDyk, Room 103
<b>Office: Location:</b>	AUBMC 3 <sup>rd</sup> Floor Facing E320	<b>Meeting Time:</b>	<b>Wednesday: 08:00-08:50 am</b>
<b>Extension:</b>	5223		
<b>E-mail</b>	<a href="mailto:rd02@aub.edu.lb">rd02@aub.edu.lb</a>		

**Course Description:**

This course is intended to give Medical Laboratory Sciences students a thorough understanding of the quality systems used for implementation of total quality management in the clinical laboratories. The course covers all the basic elements and tools required to implement the quality system essentials across all phases of the laboratory workflow: pre-analytical, analytical, post-analytical. In addition, it will include focused lectures related to quality and safety standards required in specialized areas such as blood bank, clinical microbiology, and molecular diagnostics. Practical examples from the laboratory setting will be part and parcel of the lecturers to help students relate theory to practice.

**Specific Learning Outcomes:**

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

1. Understand the quality requirements to properly and safely operate a laboratory in all phases: pre-analytical, analytical, and post-analytical processes.
2. Become aware of the basic documents needed in the laboratory.
3. Describe the basic laboratory statistics used for evaluation of quality control data and method comparisons.
4. Be familiar with the elements of a safety program that is required in a clinical laboratory.
5. Understand the value of internal quality control and external quality assessment in ensuring precise and accurate release of laboratory results.
6. Understand the principles and tools of performance improvement as applied to Clinical Laboratories.

<b>Course Content:</b>		
<b>Topic</b>	<b>Date=Wednesday (time = 8:00-8:50 am)</b>	<b>Lecturer</b>
<i>Introduction to Quality Systems</i>	January 24 (Friday)	Dr. R. Daher
<i>Elements of a Quality System</i>	January 29	Dr. R. Daher
<i>Patient Test Management</i>	February 05	Dr. R. Daher
<i>Quality Control Statistics</i>	February 12	Dr. R. Daher
<i>Internal Quality Control</i>	February 19	Dr. R. Daher
<i>External Quality Control and Proficiency Surveillance</i>	February 26	Dr. R. Daher
<i>Method Evaluation</i>	March 04	Dr. R. Daher
<i>Introduction to six-sigma metric</i>	March 11	Dr. R. Daher
<b>Quiz</b>	<b>TBA</b>	
<i>Safety Program</i>	March 18	Dr. R. Daher
<b>Holiday</b>	March 25	
<i>Total Quality Management: Principles and Tools</i>	April 01	Dr. R. Daher
<i>Quality Control in Molecular Diagnostics</i>	April 08	Dr. R. Mahfouz
<i>Quality Control in the Clinical Microbiology Laboratory</i>	April 15	Dr. G. Araj
<i>Safety in the Clinical Microbiology Laboratory</i>	April 22	Dr. G. Araj
<i>Quality Management in the Blood Bank</i>	April 29	Dr. E. Baz
<b>Final</b>	<b>TBA</b>	
<b>Total hours</b>	14	

#### Evaluation:

Written Exam: **Two quizzes**  
Oral Exam:  
Practical Exam:  
Practical Training Evaluation:  
Others

#### 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](mailto: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](http://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](mailto:titleix@aub.edu.lb). An anonymous report may be submitted online via Ethics Point at [www.aub.ethicspoint.com](http://www.aub.ethicspoint.com).