

American University of Beirut
Faculty of Health Sciences
Medical Laboratory Sciences Program
LABM 260 (Serology)
Spring 19/20

Lecturer

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Course Description

This course is part of a clinical laboratory rotation for medical laboratory technology students. The students will be exposed to the different serodiagnostic tests used for the diagnosis of infectious and autoimmune diseases. However they will not be able to perform or see all the available tests. In addition to this, students should learn about the usefulness, limitation and interfering factors for the different serological applications and relate them to the clinical condition of the patient.

Specific Learning Outcomes

Students should be able to:

- 1- Routine serological tests available for clinical microbiology diagnosis of infectious diseases
- 2- Apply antibody detection tests for the diagnosis of autoimmune diseases and allergies
- 3- Discuss the usefulness, limitation and interfering factors for the different serological applications

4- Interpret the results obtained by relating them to the clinical condition of the patient

5- Describe the principle of the miniVIDAS and Allergy UniCAP 100 machines that are available in the serology section.

Course Content

Week	Topics	Laboratory Activities
Week 1	<ul style="list-style-type: none"> · Miscellaneous (pregnancy test, <i>H. pylori</i>, CRP, ASO) · Miscellaneous (RF, <i>M. pneumoniae</i>, Leptospira and Hydatid disease) 	Perform latex agglutination and immuno-chromatography testing
Week 2	<ul style="list-style-type: none"> · Rubella virus · <i>Toxoplasma gondii</i> - Herpes Simplex Viruses (HSV I & II) Epstein Barr Virus (EBV) 	Do indirect and direct hemagglutination test
Week 3	Cytomegalovirus <ul style="list-style-type: none"> · Varicella Zoster Virus · - Parvovirus, Legionella, Influenza A/B 	Check the mini VIDAS and allergy UniCAP machine found in the serology section
Week 4	<ul style="list-style-type: none"> -Paramyxoviruses (RSV, Measles & Mumps) · Human Immunodeficiency Virus (HIV) · Syphilis 	Distinguish between the different ELISA techniques Perform both the direct and indirect florescent techniques
Week 5	<ul style="list-style-type: none"> · Hepatitis B virus (HBV) · Hepatitis viruses (HAV, HCV, HDV & HEV) 	-
Week 6	<ul style="list-style-type: none"> · Febrile agglutinins (Salmonella, Rickettsia, Francisella and Brucella) · Autoimmune diseases, Allergy 	-

Evaluation

Laboratory practical exam	40%
and personal evaluation	
Theoretical exam	60%

References and Books

1- Essentials of Immunology and Serology Jacqueline Stanley, 2002

Course Policy

1-Attendance: -This practicum course requires 80 contact hours in the Serology section at the American University Hospital. The student is responsible for arranging to make up for the missing work. Excused absences may be given if the student provides valid reasons to explain their absence.

-Students are expected to attend all classes. In case of absence from any class, you are responsible for the work done and for any announcements that are made in the missed sessions.

2-Exams: Students must take exams on set dates. Make-up exams will be given only in case of emergencies or major illness. Only Authorized medical reports will be accepted.

3-Dress Code: Students will be expected to follow a dress code at the laboratory that follows the safety measures.

6-Academic Integrity: 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 are 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 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