

American University of Beirut
Faculty of Health Sciences
MEDICAL LABORATORY SCIENCES PROGRAM (MLSP)

General and Diagnostic Virology
MLSP 208 (2 credits)
Fall Semester AY/ 2023-2024

Course Instructor: Nada M. Melhem, PhD
Medicine II Lecture Hall, Basement, DTS; extension 4699

Class Time: T, W: 3:30 pm - 4:45 pm

Office Hours: by appointment

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Course Description, Objectives and Outcomes

MLSP 208 is a 2-credit course offered to students of the Medical Laboratory Sciences (MLS) Program. This course introduces students to the major virus families and the respective representative viruses of clinical importance. During the course, students will be introduced to the epidemiology, pathogenesis, modes of transmission, laboratory identification and recent prevention and control measures of pathogenic viruses. The main learning outcome at the end of this course is to understand the classification and pathogenesis of viruses of clinical importance.

Course Competencies

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

1. Understand the classification of viruses into different families
2. Identify the differences between the life cycles of clinically significant DNA- and RNA- viruses
3. Identify the major viruses in each family and their mode of transmission, epidemiology, pathogenesis and clinical significance
4. Demonstrate basic knowledge related to laboratory identification of clinically significant viruses, viral vaccines and the recent advances of antiviral treatment

Course Material and Text Book

Clinical Virology: (4th Edition by DD Richman, RJ Whitley and FG. Hayden)

The above book is recommended to students and is kept for students as a reference book at the Saab Medical Library (SML). The course material will include lecture handouts. The lecture handouts will be posted on Moodle.

Course Evaluation

Participation	5%	
Exam I (Week of October 19)	40%	Competencies 1-4
Exam II (Week of December 14)	55%	Competencies 1-4

Course Requirements

1. **Attendance/Participation:** You are urged to attend all classes. In case of absence, you will be responsible of the material missed and for any announcements made. Students who miss more than **one-fifth** of class sessions are subject to withdrawing from the course with a W-grade (AUB Catalogue: <https://www.aub.edu.lb/Registrar/catalogue/Pages/undergraduate-catalogue-2023-2024.aspx>). Participation will be monitored through engagement during classes.
2. **Exams:** You are urged to take exams on the assigned time. Make up exams will be given **only** in case of emergencies or major illness (authorized medical report is required/valid justification). The final exam will follow AUB scheduling.
3. **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.
4. **Students with Disabilities:** AUB strives to make learning experiences accessible for all. If you anticipate or experience academic barriers due to a disability (including learning difficulties, mental health, chronic or temporary medical conditions), please inform me immediately so that we can privately discuss options. In order to ensure that you receive the support you need and to facilitate a smooth accommodation process, you are encouraged to register with the Accessible Education Office (AEO): accessibility@aub.edu.lb; +961-1-350000, x3246; West Hall, 314'.
5. **Non-Discrimination – Title IX – AUB:** In line with its commitment to the principle of equal opportunity in education and employment, AUB policies protect you from discrimination on the basis of protected characteristics, including discriminatory harassment and sexual harassment. The University's non-discrimination policy applies to, and protects, all students, faculty, and staff. If you think you have experienced discrimination, discriminatory harassment, or sexual harassment, we encourage you to inform the Equity/Title IX Coordinator, Mitra Tauk at 01-350000 ext. 2514, titleix@aub.edu.lb, report to a Title IX deputy at your faculty or at any other faculty (www.aub.edu.lb/titleix), or report online (www.aub.ethicspoint.com). Reports may be submitted anonymously or not.
6. **Face Masks:** Face masks will be mandatory in indoor settings based on the new surge in the current numbers of cases.

Course Schedule		
Month	Day	Topic
August	Tuesday 29	Introduction
	Wednesday 30	Structure and Classification of Viruses (VOPP)
September	Tuesday 5	Virus Replication and Pathogenesis (VOPP)
	Wednesday 6	Introduction to Laboratory Diagnosis of Viral Infection (VOPP)
	Tuesday 12	Introduction to Antiviral Agents (VOPP)
	Wednesday 13	Introduction to Immune Responses and Immunization against Viral Diseases (VOPP)
	Tuesday 19	Vaccines (VOPP)
	Wednesday 20	Herpesviridae: Herpes Simplex Viruses (VOPP)
	Tuesday 26	Herpesviridae: Varicella Zoster Virus, Cytomegalovirus
	Wednesday 27	Prophet's Birthday – No Class (Tentative Date)
October	Tuesday 3	Herpesviridae (Continued): Epstein-Barr Virus Adenoviridae
	Wednesday 4	Papillomaviridae: Human Papillomavirus
	Tuesday 10	Hepadnaviridae: Hepatitis B Virus and Hepatitis D Virus
	Wednesday 11	Hepadnaviridae (Continued) and Poxviridae Family
	Tuesday 17	Caliciviridae: Norovirus
	TBD	EXAM I
	Wednesday 18	Reoviridae (Rotavirus) and Astraviridae (Astrovirus)
	Tuesday 24	Picornaviridae: Poliovirus, Hepatitis A Virus
	Wednesday 25	Orthomyxoviridae: Influenza
	Tuesday 31	Paramyxoviridae: Measles, Mumps
November	Wednesday 1	Retroviridae: HIV and related viruses
	Tuesday 7	Coronaviridae: SARS, MERS-CoV
	Wednesday 8	Coronaviridae: SARS-CoV-2 /COVID-19
	Tuesday 14	Flaviviridae: Zika, West Nile Virus (WNV) and Dengue
	Wednesday 15	Flaviviridae (continued): Hepatitis C Virus
	Tuesday 21	Filoviridae: Ebola Virus
	Wednesday 22	Independence Day – No Class
	Tuesday 28	Togaviridae: Rubella Virus, Chikungunya Virus
	Wednesday 29	Rhabdoviridae: Rabies
December	TBD	FINAL EXAM

August 29 – September 20: Classes will be voice over power point presentations (VOPP).