The Hashemite University
Faculty of Science
Course Syllabus

Department of Biology and Biotechnology

Course Title: Virology
Pre-requisite: Microbiology
Designation: Required
Instructor's E-mail:
Office Hours:

Course Number: 1801041343
Credit Hours: 3
Instructor: Dr. Salem AL-Maloul

Course Description (Catalog): In this course, emphases are on gaining knowledge about the nature of viruses, understanding their interactions with host cells, viral replication, gene expression, and latency. The course also highlights the various viral families involved in diseases and different cultivation and detection methods.

Text Book: Basic virology 2nd ed., E.K. Wagner, Blackwell Pub – Oxford, 2004.

References: -

Major Topics Covered:

Topics	No. of Weeks	Contact Hours*
General Properties of Viruses	1	3
Cultivation & Assay of Viruses	1	3
Viral Multiplication	1	3
Viral Genetics	1	3
Effects of Viruses on Cells	1	3
Pathogenesis of Viral Infection	2	6
Host Responses to Viral Infections	2	6
Viral Persistence	1	3
Oncogenic Viruses	1	3
Immunization Against Viral Diseases	1	3
Chemotherapy of Viral diseases	1	3
Laboratory Diagnosis of Viral Diseases	2	6
Total	**15**	**45**

*Contact Hours include lectures and exams.

❖ **Specific Outcomes of Instruction (Course Learning Outcomes):**

After completing this course units, the students will be able to:

	Course Learning Outcomes (CLO)	(SO*)
CLO1.	Understand the general properties of viruses, the difference between viruses and cells and the methods and techniques behind propagation and detection of viruses.	(a, b & k)
CLO2.	Understand the genetic nature of viruses and the mechanisms of viral multiplication.	(c & d)
CLO3.	Understand the different biochemical and cellular effects of viruses on cells and their pathogenicity.	(e & f)
CLO4.	Understand the host responses to viral infection	(g)
CLO5.	Understand viral persistence and viral evading of the cellular immune response.	(h & i)
CLO6.	Understand the various strategies for viral infection control and the different types of antivirals.	(j)
CLO7.	Understand the various laboratory techniques for viral detection and diagnosis.	(k)

***(SO)** = Student Outcomes Addressed by the Course.

❖ **Student Outcomes (SO) Addressed by the Course:**

#	Outcomes Description Applied and Natural Sciences Student Outcomes	Contribution
(a)	Knowledge of the structure, classification of viruses, chemical composition of viruses and methods of virus inactivation	H
(b)	Knowledge of cultivation methods and various viral assays	H
(c)	Knowledge of the mechanism of viral multiplication	H
(d)	Knowledge of viral genetics and its influence on virus properties	
(e)	Knowledge of virus impact on bodily functions at cellular and subcellular levels	H
(f)	Understand the ways in which viruses produce disease	M
(g)	Understanding the host responses to viral infections	M
(h)	Understand the persistent viral infections, their pathogenic mechanisms and clinical manifestations	M
(i)	Knowledge of possible tumor-causing viruses	M
(j)	Knowledge of the different types of viral vaccines and antiviral agents	M
(k)	Knowledge of the different laboratory diagnostic techniques of viral diseases	H
H = High, **M** = Medium, **L** = Low		

Grading Plan:

First Exam:	30 points	To be announced later	
Second Exam:	30 points	To be announced later	-
Final Exam:	40 points	To be announced later	

General Notes: (Attendance Policy) students are expected to attend every class and arrive on time in compliance with HU regulations. In case you find yourself in a situation that prevents you from attending class or exam, you have to inform your instructor. If you miss more than 6 classes for the (Sunday, Tuesday, and Thursday model) or 4 classes for the (Monday and Wednesday Model), you cannot pass the course. Makeup excuses will be accepted only for very limited justified cases, such as illness and emergencies. Changing your section without informing your instructors is not accepted at all.