



**Jordan University of Science and Technology**  
**Faculty of Applied Medical Sciences**  
**Allied Medical Sciences Department**

LM437 Viruses And Medical Fungi - JNQF Level: 7

First Semester 2023-2024

**Course Catalog**

2 Credit Hours. This is an introductory course in virology and mycology for the medical laboratory sciences students. It covers basic principles of viral and fungal classification, structures, replication, host-parasite interactions, pathogenesis, clinical diseases, treatment, and laboratory diagnostic methods.

**Teaching Method:** Blended

**Text Book**

<b>Title</b>	Jawetz, Melnick, & Adelberg's Medical Microbiology
<b>Author(s)</b>	Jawetz, Melnick, & Adelberg
<b>Edition</b>	27th Edition
<b>Short Name</b>	Ref #1
<b>Other Information</b>	

**Course References**

Short name	Book name	Author(s)	Edition	Other Information
Ref #2	Murray, Rosenthal, & Pfaller's Medical Microbiology	Murray, Rosenthal, & Pfaller	5th Edition	

**Instructor**

Name	<b>Prof. Samer Swedan</b>
Office Location	M5L-4
Office Hours	Sun : 09:00 - 11:00 Mon : 11:00 - 12:30 Tue : 10:30 - 11:30 Wed : 10:00 - 11:30
Email	sfswedan4@just.edu.jo

**Class Schedule & Room**

Section 1:  
 Lecture Time: Tue : 09:30 - 10:30  
 Room: NB49

<b>Tentative List of Topics Covered</b>		
<b>Weeks</b>	<b>Topic</b>	<b>References</b>
Week 1	Course Introduction	From <b>Ref #1</b> , From <b>Ref #2</b>
Week 1	Intro to Virology: Structure, cultivation, properties	From <b>Ref #1</b> , From <b>Ref #2</b>
Week 2	Intro: Replication cycle (general)	From <b>Ref #1</b> , From <b>Ref #2</b>
Week 2	DNA Viruses Replication	From <b>Ref #1</b> , From <b>Ref #2</b>
Week 3	RNA Viruses Replication	From <b>Ref #1</b> , From <b>Ref #2</b>
Week 3	Classification and Nomenclature of viruses	From <b>Ref #1</b> , From <b>Ref #2</b>
Week 4	Pathogenesis of Viral diseases	From <b>Ref #1</b> , From <b>Ref #2</b>
Week 5	Viruses and Host Immune Response	From <b>Ref #1</b> , From <b>Ref #2</b>
Week 5	Treatment and Prevention of Viral Diseases	From <b>Ref #1</b> , From <b>Ref #2</b>
Week 6	Adenoviruses	From <b>Ref #1</b> , From <b>Ref #2</b>
Week 7	Picomaviruses and Coronaviruses	From <b>Ref #1</b> , From <b>Ref #2</b>
Week 7	Orthomyxoviruses	From <b>Ref #1</b> , From <b>Ref #2</b>
Week 8	Paramyxoviruses	From <b>Ref #1</b> , From <b>Ref #2</b>
Week 8	Rubella virus and Rhabdovirus	From <b>Ref #1</b> , From <b>Ref #2</b>
Week 9	Pox viruses, Parvoviruses, and Prions	From <b>Ref #1</b> , From <b>Ref #2</b>
Week 9	Papillomaviruses	From <b>Ref #1</b> , From <b>Ref #2</b>
Week 10	Diagnostic Virology - Part 1	From <b>Ref #1</b> , From <b>Ref #2</b>
Week 10	Diagnostic Virology - Part 2	From <b>Ref #1</b> , From <b>Ref #2</b>
Week 11	Introduction to mycology, classification	From <b>Ref #1</b> , From <b>Ref #2</b>
Week 12	Laboratory Methods of Fungal Isolation and Identification	From <b>Ref #1</b> , From <b>Ref #2</b>

Week 12	Superficial and Cutaneous Mycoses	From <b>Ref #1</b> , From <b>Ref #2</b>
Week 13	Subcutaneous Mycoses	From <b>Ref #1</b> , From <b>Ref #2</b>
Weeks 13, 14	Systemic Mycoses caused by Endemic Dimorphic Fungal Pathogens	From <b>Ref #1</b> , From <b>Ref #2</b>
Week 14	Opportunistic Mycoses	From <b>Ref #1</b> , From <b>Ref #2</b>
Week 15	Revision	

<b>Mapping of Course Outcomes to Program Outcomes and NQF Outcomes</b>	<b>Course Outcome Weight (Out of 100%)</b>	<b>Assessment method</b>
Students will learn basic concepts in virology including virus structure, replication, classification, and pathogenesis. [1SLO1] [1L7K1]	25%	
Students will learn about the diseases caused by the medically important viruses. [1SLO1] [1L7K1]	20%	
Students will learn basic concepts in mycology including the structure, replication, classification, and pathogenesis of fungi. [1SLO1] [1L7K1]	10%	
Students will learn about the diseases caused by the medically important fungi. [1SLO1] [1L7K1]	10%	
Students will learn the techniques and appropriate clinical samples for diagnosis of virus infections [1SLO2, 1SLO3] [1L7S1]	10%	
Students will learn the techniques and appropriate clinical samples for diagnosis of fungal infections [1SLO2, 1SLO3] [1L7S1]	5%	
Students will learn how to apply quality assurance during analysis of clinical samples for identification of viral diseases [1SLO4] [1L7C1]	5%	
Students will learn how to apply quality assurance during analysis of clinical samples for identification of fungal diseases. [1SLO4] [1L7C1]	5%	
Students will understand interactions between the host and viral pathogens. [1SLO1] [1L7C4]	5%	
Students will understand interactions between the host and fungal pathogens. [1SLO1] [1L7C4]	5%	

<b>Relationship to Program Student Outcomes (Out of 100%)</b>																	
A	B	C	D	E	F	SLO1	SLO2	SLO3	SLO4	SLO5	SLO6	MSLO1	MSLO2	MSLO3	MSLO4	MSLO5	MSLO6
						75	7.5	7.5	10								

<b>Relationship to NQF Outcomes (Out of 100%)</b>			
L7K1	L7S1	L7C1	L7C4
65	15	10	10

<b>Policy</b>
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Attendance policy	<ul style="list-style-type: none"> <li>* Students are expected to attend at least 80% of lectures.</li> <li>* All absences will be entered electronically into the University site</li> <li>* If absence is more than 20% student will be banned from the course after electronic notification from the university through student e-mail.</li> </ul>
Feedback	<p>Concerns or complaints should be expressed in the first instance to the course instructor. If no resolution is forthcoming, then the issue should be brought to the attention of the Department Chair and if still unresolved to the Dean. Questions about the material covered in the lecture, notes on the content of the course, its teaching and assessment methods can be also sent by e-mail to the course instructor.</p>
Makeup Exams	<p>Any student who did not attend any of the scheduled exams and who requests taking a makeup exam must refer to the Dean's Assistant of the Faculty of Applied Medical Sciences to provide an official excuse letter supporting his absence (Medical report from the JUST medical center, etc.). Once the excuse has been accepted by the Dean's Assistant and the Dean, a student can take the makeup exam at a date no later than ONE week from the original exam date. Students must immediately contact and coordinate with the course instructor, and start the process of excuse acceptance at the Deanship.</p>

Date Printed: 2024-02-16