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

LM324 Clinical Microbiology (2) - JNQF Level: 7
Second Semester 2023-2024

Course Catalog
3 Credit Hours. This course covers fundamental concepts and methods for diagnosing pathogenic microorganisms from clinical specimens, including agents of infectious diseases. It covers the collection, handling, detection, identification, treatment, and processing of specimens. Students learn about major medical bacteria groups, appropriate diagnostic specimen selection, and recovery procedures.
Teaching Method: On Campus

Instructor	
Name	**Dr. Muhamad Ali Shakhatreh**
Office Location	-
Office Hours	Sun : 14:30 - 14:30 Mon : 12:00 - 14:00 Wed : 12:00 - 14:00 Thu : 13:00 - 15:00
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Instructor	
Name	**Dr. Suhaila Shboul**
Office Location	# 20
Office Hours	Sun : 11:00 - 12:00 Mon : 10:30 - 12:00 Tue : 11:30 - 12:30 Wed : 10:30 - 12:30 Thu : 10:30 - 11:30
Email	sashboul@just.edu.jo

Class Schedule & Room

Section 1:
  Lecture Time: Sun, Tue, Thu : 10:30 - 11:30
  Room: NF38

Section 2:
  Lecture Time: Mon, Wed : 08:30 - 10:00
  Room: NB49

Tentative List of Topics Covered		
Weeks	**Topic**	**References**
Week 1	Introduction	
Week 2	Cultivation, isolation, and identification of microorganisms	
Week 3	Selection, collection, and transport of specimens	
Week 4	Microorganisms encountered in blood	
Week 5	Microorganisms encountered in cerebrospinal fluid	
Week 6	Microorganisms encountered in respiratory tract	
Week 7	Microorganisms encountered in the Gastrointestinal tract	
Week 8	Microorganisms encountered in urinary tract	
Week 9	Genital and sexually transmitted pathogens	
Week 10	Microorganisms encountered in wounds, abscesses, skin, and soft tissues	
Week 11	Anaerobic pathogens	
Week 12	Microorganisms encountered in bone marrow, and related fluids	
Week 13	Antimicrobial testing and antimicrobial effectiveness	
Week 14	Diagnostic aspects of fungal infections	
Week 15	New and non-traditional methods of microbial detection and identification	

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Identify bacterial pathogens by means of key characteristics of metabolism, morphology, and pathogenesis [1SLO1, 1SLO2] [1L7K1]	10%	
Recommend optimal specimen type and collection procedures for those specimens, given data in a case history. [1SLO2, 1SLO3] [1L7K1, 1L7S2]	10%	
Select optimal methods for the isolation and identification of common pathogens found in clinical specimens. [1SLO2, 1SLO3] [1L7S1, 1L7S2]	10%	

Apply appropriate laboratory techniques to the identification of pathogenic microorganisms isolated from clinical specimens. [1SLO5, 1MSLO1] [1L7S1, 1L7S2]	15%	
Demonstrate knowledge of the disease processes associated with specific etiologic agents, associating clinical findings with the agents of common diseases [1SLO1, 1SLO3] [1L7S2]	5%	
Discuss the mechanism of action of various antibiotics and antimicrobial agents. [1SLO3, 1MSLO1] [1L7S2]	5%	
Perform and interpret antimicrobial susceptibility testing procedures [1SLO4, 1SLO6] [1L7K1]	15%	
Practice safe laboratory procedures for the handling of biohazardous agents. [1SLO4] [1L7S3]	15%	
Practice quality control and quality assurance according to contemporary clinical laboratory standards [1MSLO4] [1L7S3]	15%	

Relationship to Program Student Outcomes (Out of 100%)											
SLO1	SLO2	SLO3	SLO4	SLO5	SLO6	MSLO1	MSLO2	MSLO3	MSLO4	MSLO5	MSLO6
7.5	15	15	22.5	7.5	7.5	10			15		

Relationship to NQF Outcomes (Out of 100%)			
L7K1	L7S1	L7S2	L7S3
30	12.5	27.5	30

Evaluation	
Assessment Tool	**Weight**
First exam	25%
Second Exam	25%
Final Exam	30%

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