

TISHK INTERNATIONAL UNIVERSITY
FACULTY OF APPLIED SCIENCE
Department of PHYSIOTHERAPY,
2023-2024 Spring
Course Information for PT 212 Medical Microbiology

Course Name:	Medical Microbiology				
Code	Regular Semester	Theoretical	Practical	Credits	ECTS
PT 212	4	2	-	2	3
Name of Lecturer(s):	Salah Balaky				
Teaching Assistant:	Salah Tofik Jalal				
Course Language:	English				
Course Type:	Main				
Office Hours	Wednesday 10am-3pm				
Contact Email:	salah.balaky@tiu.edu.iq				
	Tel:07507104024				
Teacher's academic profile:	BSc (Biology) at Salahaddin University M.Sc. in Microbiology at Salahaddin University PhD in Molecular Microbiology at Durham University, UK				
Course Objectives:	<p>Medical Microbiology is a science that deals with the study of living organisms that can not be seen by the naked eye and cause diseases in humans. Medical Microbiology is a large and diverse group of microscopic organisms that exist as single cells or cell clusters; it also include viruses, which are microscopic but not cellular. This course provides learning opportunities in the basic principles of medical microbiology and infectious disease. It covers mechanisms of infectious disease transmission, principles of aseptic practice, and the role of the human body's normal microflora. The biology of bacterial, viral, fungal, and parasitic pathogens and the diseases they cause are covered. Medical microbiology, also known as clinical microbiology, is a subdiscipline of microbiology dealing with the study of microorganisms (parasites, fungi, bacteria, viruses, and prions) capable of infecting and causing diseases in humans. Medical microbiology is essentially a response to clinical needs. At its core is the study of the pathogenesis and epidemiology of these microorganisms, and its practical applications lie in the form of diagnostic and therapeutic guidance – intrinsically a supportive role in clinical practice. Today, virtually all hospitals worldwide will have an in-house microbiology laboratory to provide diagnostic services for infectious diseases.</p>				
Course Description (Course overview):	<p>Medical Microbiology is a science that deals with the study of living organisms that can not be seen by the naked eye and cause diseases in humans. Medical Microbiology is a large and diverse group of microscopic organisms that exist as single cells or cell clusters; it also include viruses, which are microscopic but not cellular. This course provides learning opportunities in the basic principles of Medical Microbiology and infectious disease. It covers mechanisms of infectious disease transmission, principles of aseptic practice, and the role of the human body's normal microflora. The biology of bacterial, viral, fungal, and parasitic pathogens and the diseases they cause are covered.</p>				

COURSE CONTENT

Week	Hour	Date	Topic
1	2	28/1-1/2/2024	Coursebook, Introduction to Medical Microbiology
2	2	4-8/2/2024	Main divisions and groups of Microbiology
3	2	11-15/2/2024	Human Normal Flora
4	2	18-22/2/2024	Pathogenesis of Bacterial infection
5	2	25-29/2/2024	Introduction to Immunology
6	2	3-7/3/2024	Mycology
7	2	24-28/3/2024	Microscope and Sterilization in the Lab
8	2	31/3-4/4/2024	Event
9	2	14-18/4/2024	Midterm Exam

10	2	21-25/4/2024	Bacterial growth
11	2	28/4-2/5/2024	Antimicrobial agents
12	2	5-9/5/2024	Antibiotic resistance
13	2	12-16/5/2024	Introduction to Medical Mycology
14	2	19-23/5/2024	The structural components of Bacterial cell
15	2	26-30/5/2024	Introduction to virology
16	2	2-6/6/2024	Final Exam

COURSE/STUDENT LEARNING OUTCOMES

- 1 Understanding pathogenic microorganisms
- 2 The mechanisms by which microorganisms cause disease in the human body
- 3 Normal microbial flora and their role in human body system
- 4 Infection and immunity
- 5 Antimicrobial agents

COURSE'S CONTRIBUTION TO PROGRAM OUTCOMES

(Blank : no contribution, I: Introduction, P: Proficient, A: Advanced)

Program Learning Outcomes

Cont.

1	1. Demonstrate knowledge of the underlying concepts and principles associated within the context of health.	I
2	Demonstrate an ability to present, evaluate and interpret qualitative and quantitative data to develop lines of argument and make sound judgments in accordance with basic theories and concepts relevant to health.	I
3	3. Evaluate the appropriateness of different approaches to solving problems related to health.	P
4	4. Assess the qualities and transferable skills necessary for employment requiring the exercise of some personal responsibility.	I
5	5. Apply knowledge and critical understanding of the principles of health and the way in which these have developed	
6	Demonstrate an ability to apply underlying concepts and principles outside the context in which they were first studied.	I
7	Use a range of established techniques to initiate and undertake critical analysis of information, and to propose solutions to problems arising from that analysis	I
8	8. Work as a member of the multi-disciplinary team within diverse settings providing an inter-agency and cross-boundary approach to person-centered health and social care.	
9	9. Demonstrate personal transferable key skills in problem solving, critical thinking, written and verbal communication, team working, professional autonomy.	I
10	Demonstrate knowledge and understanding of human function and dysfunction, the theory and practice of physiotherapy.	
11	Develop clinical reasoning and problem-solving skills to assess problems and plan interventions to meet service user and career goals.	
12	Apply therapeutic skills in response to the physical, psychological, social and cultural needs of individuals or groups using critical evaluation of the available evidence	I

Prerequisites (Course Reading List and References):	Microbiology Text book by Prescott, Harley and Klein Medical Microbiology Text book by Jawetz, Melnick and Adelberg's Online Journal Articles
Student's obligation (Special Requirements):	Students must attend to lectures and participate in class activities. Mobile phones must be switched off. Participation of students is very important and accounts as a daily activity for course grading.
Course Book/Textbook:	Microbiology Text book by Prescott, Harley and Klein Medical Microbiology Text book by Jawetz, Melnick and Adelberg's Online Journal Articles
Other Course Materials/References:	online journal articles
Teaching Methods (Forms of Teaching):	Lectures, Presentation, Seminar, Assignments, , ,

COURSE EVALUATION CRITERIA

Method	Quantity	Percentage (%)
Attendance	1	5
Participation	1	5
Quiz	2	5
Homework	1	10
Midterm Exam	1	30
Final Exam	1	40
Total		100

Examinations: Essay Questions, True-False, Fill in the Blanks, Short Answers, , ,

Extra Notes:

ECTS (ALLOCATED BASED ON STUDENT) WORKLOAD

Activities	Quantity	Workload Hours for 1 quantity*	Total Workload
Theoretical Hours	16	2	32
Practical Hours	16	0	0
Final Exam	1	10	10
Attendance	1	1	1
Participation	1	10	10
Quiz	2	10	20
Homework	1		0
Midterm Exam	1		0
Total Workload			73
ECTS Credit (Total workload/25)			3

Peer review

Signature:
Name:
Lecturer

Signature:
Name:
Head of Department

Signature:
Name:
Dean