

THOMAS ADEWUMI UNIVERSITY OKO
COURSE OUTLINE

Faculty	Computing and applied science	
Department	Biological Sciences	
Course title	MEDICAL MICROBIOLOGY	
Year of study	4	
Course code	MCB 408	
Credit hours	3	
Contact hours	45	
Mode of delivery	CLASSROOM LECTURES	
Mode of assessment		WEIGHT%
Continuous assessment		30%
Final examination		70%
Total		100%
Course lecturers and Instructors	MRS F.J. OLAITAN-LECTURER	
Course description	<p>"Medical Microbiology" is a specialized course that focuses on the study of microbial pathogens affecting both plants and animals, with a specific emphasis on those prevalent in Nigeria. The course provides an in-depth exploration of the geographical distribution, isolation, identification, morphology, life cycle, sources of infection, transmission modes, and host interactions of various microbial pathogens. It offers insights into the ecology and clinical manifestations of specific bacterial, viral, and fungal pathogens in humans.</p>	
Course objectives	<p>This course will facilitate the understanding of:</p> <ol style="list-style-type: none"> 1. Understand the diversity and prevalence of microbial pathogens in Nigeria. 2. Identify and describe the key features of various microbial pathogens. 3. Analyze the life cycles and sources of infection of different pathogens. 4. Examine the mechanisms of transmission and host interactions of pathogens. 5. Explore the ecological context of pathogenic microorganisms. 	

	6. Recognize the clinical manifestations associated with bacterial, viral, and fungal infections in humans.
Learning outcomes	By the end of the course, students will be able to: 1. Describe the diversity and prevalence of microbial pathogens in Nigeria. 2. mention at least five features of various microbial pathogens. 3. explain the life cycles in connection with the sources of infection of different pathogens. 4. describe the mechanisms of transmission and host interactions of pathogens. 5. explain how these pathogens interact with their environment and other organisms, as well as the factors that contribute to their survival, proliferation, and potential to cause disease. 6. describe the pathophysiology and clinical manifestations associated with bacterial, viral, and fungal infections in humans.
Teaching and learning	The class will be taught for three hours a week.
Detailed course content	Study of some microbial pathogens of plants and animals with emphasis on those prevalent in Nigeria. The geographical distribution, isolation, identification, morphology, life cycle, source of infection, transmission and the host. Ecology, clinical manifestations of specific bacterial, viral and fungal pathogens of man.
Course content sequencing	
Weeks	
Week 1	Introduction to Medical Microbiology and Pathogens in Nigeria, Microbial Pathogens of Plants and Animals: Diversity and Characteristics
Week 2	Geographical Distribution and Prevalence of Pathogens in Nigeria
Week3	Isolation and Identification Techniques for Microbial Pathogens.
Week 4	Morphology and Life Cycles of Pathogenic Microorganisms
Week 5	Sources of Infection and Modes of Transmission
Week 6	Host-Pathogen Interactions and Disease Manifestations
Week 7	Phototrophic Metabolism.

Week 8	Ecology of Microbial Pathogens and Their Environmental Reservoirs
Week 9	Clinical Manifestations of Bacterial Pathogens in Humans
Week 10	Clinical Manifestations of Viral Pathogens in Humans
Week 11	Clinical Manifestations of Fungal Pathogens in Humans
Week 12	Revision
Recommended reading material	
<ol style="list-style-type: none"> 1. Joanne Willey and Kathleen Sandman and Dorothy Wood (2020). Prescott's Microbiology. 11th Edition. 2. Ryan, K.J. and Ray, C.G., Eds. (2004) Sherris Medical Microbiology, 4th Edition, McGraw-Hill Companies, Inc. DOI: 10.1036/0838585299. 3. David Greenwood, Mike Barer, Richard Slack (2012) Medical Microbiology. A Guide to Microbial Infections: Pathogenesis, Immunity, Laboratory Diagnosis and Control Eighteenth Edition, Churchill Livingstone, Elsevier. 	

Course code: MCB 408

Course title: MEDICAL MICROBIOLOGY

Preamble: "Medical Microbiology" is a specialized course that focuses on the study of microbial pathogens affecting both plants and animals, with a specific emphasis on those prevalent in Nigeria. The course provides an in-depth exploration of the geographical distribution, isolation, identification, morphology, life cycle, sources of infection, transmission modes, and host interactions of various microbial pathogens. It offers insights into the ecology and clinical manifestations of specific bacterial, viral, and fungal pathogens in humans.

A. Specific course objectives/learning outcomes.

The course will enable the understanding of the following:

1. Understand the diversity and prevalence of microbial pathogens in Nigeria.
2. Identify and describe the key features of various microbial pathogens.
3. Analyze the life cycles and sources of infection of different pathogens.
4. Examine the mechanisms of transmission and host interactions of pathogens.
5. Explore the ecological context of pathogenic microorganisms.
6. Recognize the clinical manifestations associated with bacterial, viral, and fungal infections in humans.

B. Learning activities/Course delivery methods: lectures and Practicals

C. Lectures: detailed content of course are taught in class

Course content: Study of some microbial pathogens of plants and animals with emphasis on those prevalent in Nigeria. The geographical distribution, isolation, identification, morphology, life cycle, source of infection, transmission and the host. Ecology, clinical manifestations of specific bacterial, viral and fungal pathogens of man.