
SECTION HEADING

MDLT 1105: Medical Microbiology I

Description

Medical Microbiology I course introduces the student to the microbial world. The course covers the study of the materials and methods used for identification of pathogenic organisms and the study of these in relation to their disease processes in humans. The course will present microbiology within an epidemiologic, diagnostic, and clinical framework. In the laboratory, the student will learn such techniques as gram staining, microscopy, culturing, identification of microorganisms and anti-microbial susceptibility testing.

Credits

3

Prerequisite

None

Corequisite

None

Topics to be Covered

1. Microscopy
2. Safety and infection control
3. Microscopic and colonial morphology
4. Medium used in microbiology
5. Specimen collection, transportation, and handling
6. Standard microbiology tests and procedures
7. Gram positive cocci of medical importance
8. Gram negative cocci of medical importance
9. Gram negative rods of medical importance

Learning Outcomes

1. Apply principles of safety, quality assurance, quality control in clinical microbiology
2. Properly collect, transport, and handle specimens using safe and sterile techniques
3. Describe colonial and microscopic morphology of microbes
4. Identify and classify microorganisms
5. Conduct the correct test to identify the bacteria based on gram stain, colonial morphology, and biochemical tests
6. Correlate bacteria, transmission of, and diseases caused by microorganisms
7. Understand antibiotic susceptibility and antibiotic resistant bacteria
8. Identify microbial and immunological methodologies are used in disease treatment and prevention
9. Select additional procedures based on preliminary results
10. Discuss molecular diagnostic techniques used to identify microorganisms
11. Discuss pathophysiology of microorganisms and virulent factors

Credit Details

Lecture: 1

Lab: 2

OJT: 0

MnTC Goal Area(s): None