

## MED 206: Medical Microbiology

The course consists of integrated instruction between the College and an affiliated hospital laboratory. This is a comprehensive study of both theory and practical aspects of clinical microbiology. Emphasis is placed on the collection and handling of clinical specimens as well as the primary isolation and identification of the most frequently encountered bacteria pathogenic to humans. Other topics discussed include antimicrobial chemotherapy and host resistance. Prerequisite: BIO 239, CHM 116, MED 102, and MTH 119 ) all with a grade of C or better. This course includes 45 hours of lecture and 45 hours of teaching laboratory to be completed at the College during the first half of the semester. The clinical laboratory experience consists of 120 hours to be completed at an affiliate hospital laboratory and 6 hours of clinical seminar during the second half of the semester. Instructional Support Fee applies.

### Course Student Learning Outcomes

1. Describe the fundamentals of specimen collection including distinguishing between acceptable and unacceptable specimens, transportation, storage and processing. 2. Culture specimens from different body sites accounting for atmosphere, pH, temperature and nutritional requirements. 3. Examine clinical specimen growth using gram stain, biochemical testing and serology to identify commonly encountered organisms. 4. Describe the steps involved in culture workup and interpretation including appropriate media and growth requirements. 6. Use judgment to analyze test results to identify pathogen and normal flora. 7. Demonstrate the ability to recognize technical problems and suggest possible corrective actions. 8. Evaluate the methods of identifying Staphylococcus, Streptococcus, Neisseria, Hemophilus, Enterobacteriaceae, fastidious and non-fermenting gram negative and gram positive bacilli. 10. Discuss disease states associated with microorganisms studied. 11. Describe the mechanism of action of different antimicrobials and their targets of action. 13. Follow the program safety policies in the CLS laboratory. 14. Maintain patient confidentiality. 15. Discuss professionalism and the appropriate ethical conduct required to work in a clinical setting and in the delivery of health care to the diverse ethnic population in the service area. 16. Work cooperatively with fellow students, instructors and college staff.

**Credits:** 6

**Program:** Medical Laboratory Technology