Common Course Outline

MLTC *256*

Clinical Internship IV, Clinical Microbiology

Two Semester Hours

The Community College of Baltimore County

Description

MLTC *256* - Two credits - Clinical Internship IV, Clinical Microbiology
engages students to experience a 15-day internship at an affiliated hospital laboratory or reference laboratory. The course provides students the ability to gain practical skills in manual and automated microbiology procedures, including problem-solving, evaluation of quality control results, and instrument maintenance. 32 laboratory hours per week. Prerequisites: MLTC 201, and permission of Program Director.

Overall Course Objectives
Upon completion of this course, students will be able to:

1. comply with the standard operating procedures for specimen handling and distribution;

2. follow departmental protocol and demonstrate safe work practices;

3. perform, evaluate, and document quality control procedures;

4. perform the various periodic (daily, weekly) maintenance routines for each piece of equipment used during the clinical rotation in clinical microbiology;

5. state the confidentiality policy of the facility as related to testing procedures and reporting, according to HIPAA guidelines;

6. operate automated microbiology instruments with minimal supervision and produce results within acceptable ranges;

7. prepare and stain slides with Gram stain and read slides microscopically within acceptable ranges;

8. plate a variety of specimens on the correct media and incubate in the proper environment;

9. select, isolate, and identify suspected pathogenic organisms from a variety of media;

10. select and inoculate the proper biochemical media and interpret results to definitively identify suspected pathogens from a variety of specimen types;

11. recognize and identify normal flora from a variety of body sites;

12. perform correct inoculation procedures for suspected anaerobic organisms;

13. observe or perform correct inoculation and isolation techniques for viruses, fungi, and mycobacteria;

14. perform and interpret routine antibiotic susceptibility testing; and

15. perform concentration and staining techniques, and identify organisms present for fecal specimens tested for ova and parasites.

Major Topics

I. Microbiology Laboratory
   - A. Automated and Semi-automated Instrumentation
   - B. Quality Control
   - C. Safety
   - D. Specimen Preparation
   - E. Slide Preparation and Staining
   - F. Routine and Special Plating Media
   - G. Incubation Requirements
   - H. Routine Biochemical Testing
   - I. Antimicrobial Susceptibility Testing
   - J. Unusual Tests

II. Mycology (Fungi) and Mycobacteria
   - A. Automated and Semi-automated Instrumentation
   - B. Quality Control
   - C. Safety
   - D. Specimen Preparation and Staining
   - E. Routine Testing
   - F. Unusual Tests

III. Parasitology
   - A. Quality Control
   - B. Safety
   - C. Specimen Preparation and Staining
   - D. Identification of Intestinal and Blood Parasites

Course Requirements

Grading/exams: Grading procedures will be determined by the individual facility, but, at minimum, will include the following:

Technical Evaluation by clinical instructor (performance check sheets to be provided by MLT Program director)
Professional Evaluation by clinical instructor (performance check sheets to be provided by MLT program director)
1 written final exam
1 final performance-based proficiency evaluation

Other Course Information

This course is a Medical Laboratory Technology program core course.