

Common Course Outline

MLTC 254

Clinical Internship-Immunology and Blood Banking 2 Credits

Community College of Baltimore County

Description

MLTC 254 – Clinical Internship-Immunology and Blood Banking 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 immunology and blood banking procedures, including problem-solving, evaluation of quality control results, and instrument maintenance.

2 Credits: 15 day internship

Prerequisite: MLTC 150

Corequisite: MLTC 250

Overall Course Objectives

Upon completion of this course students will be able to:

1. comply with 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 procedures for each piece of equipment used during the clinical rotation in immunology and blood banking;
5. state the confidentiality policy of the facility as related to testing procedures and reporting, according to Health Insurance Portability and Accountability Act (HIPAA) guidelines;
6. operate automated and semi-automated immunology and blood banking instruments with minimal supervision and produce results within acceptable ranges;
7. perform manual immunology and blood banking techniques with minimal supervision and produce results within acceptable ranges;
8. calculate specimen dilution concentrations with no mistakes;
9. perform routine agglutination, precipitation, flocculation, immunodiffusion, and Enzyme-linked immunosorbent assay (ELISA) testing;
10. observe immunofluorescence techniques (if available at site);
11. perform Hepatitis B or C and Human Immunodeficiency Virus (HIV) testing;
12. perform ABO and Rhesus(Rh) testing without error;
13. investigate and identify the source of a positive antibody screen;
14. perform and interpret the results of a positive indirect antiglobulin test panel; and
15. perform and interpret the results of routine crossmatches and explain the possible causes of an incompatible crossmatch.

Major Topics

I. Immunology Laboratory

- A. Automated and semi-automated instrumentation
- B. Quality control
- C. Safety
- D. Specimen preparation
- E. Agglutination, precipitation, and flocculation testing
- F. Immunodiffusion, immunofluorescence, ELISA, and western blot testing
- G. Infectious disease testing
- H. Unusal tests

II. Blood Banking Laboratory

- A. Automated and semi-automated instrumentation
- B. Quality control
- C. Safety
- D. Specimen preparation
- E. ABO and Rh testing
- F. Other blood groups
- G. Direct and indirect antiglobulin testing
- H. Crossmatching
- I. Unusal tests

Course Requirements

Grading procedures will be determined by the individual faculty member but will include the following:

Grading/exams

- A technical evaluation/checklist
- A laboratory practical
- A clinical objective write-up
- A professional evaluation
- A post-internship exam

Written Assignments: Students are required to use appropriate academic resources.

Other Course Information

This course is a Medical Laboratory Technology program core course.

This course is part of a program sequence that requires admission to the program.

This course is offered in the fall only.