

Common Course Outline
MLTC 241
Directed Practice in Medical Laboratory Technology II
4 Credits

The Community College of Baltimore County

Description

Two (2) eight-hour (8) days a week. (Offered Fall, Spring) Prerequisites (Day Program): MLTC 240, BIOL 222, CHEM 223, CHEM 225, completed physical exam, current immunizations, and written permission of program coordinator. (Co-op Program): MLTC 240, MLTC 255, completed physical exam, current immunizations, and written permission of program coordinator.

Students are assigned for clinical internships, under supervision, in affiliated hospitals that have been approved by NAACLS (National Accrediting Agency for Clinical Laboratory Science). The student will spend a total of 28 days at the hospital. A weekly seminar for all students enrolled in this course is held on campus. Students must pass each area of the clinical experience in order to receive a grade for the course. Includes on-campus competency testing.

Overall Course Objectives

The clinical experience is designed for students to have an opportunity to develop cognitive & technical skills of the MLT profession and to develop their own identities as medical laboratory technicians. Development of cognitive and technical skills will be encouraged by observations and demonstrations, followed by student practice and concluded with feedback and evaluation of performance.

In addition, through psychosocial associations with working professionals, students will develop and demonstrate the following professional characteristics:

1. advance preparation for the day's work by completion of reading assignments
2. punctuality and dependability
3. proper dress and appearance
4. organization and efficiency
5. neatness
6. proper maintenance and care of equipment
7. initiative
8. polite, considerate, pleasant interrelationships with patients, co-workers, and phone contacts
9. willingness to follow directions and accept constructive criticism
10. calmness in stressful situations
11. maintenance of patient confidentiality
12. honesty in reporting results, admitting and correcting mistakes, repeating questionable results
13. adherence to all published safety regulations

Major Topics

- A. Specimen collection and handling. Students are expected to participate daily in phlebotomy team assignments until proficiency is attained.

- B. Urinalysis: 5 days
 - 1. specimen processing & storage
 - 2. operation and basic maintenance of strip reader, including interpretation of quality control results
 - 3. perform routine urine testing, including physical analysis, chemical analysis, and microscopic examination and all confirmatory testing required by procedure manual
 - 4. observe more complex urine testing such as porphobilinogen

- C. Microbiology: 10 days
 - 1. specimen processing, routine planting on proper primary media, including anaerobes, AFB, and fungal cultures
 - 2. operation & basic maintenance of blood culture instrument, routine culture instrument such as the Vitek, & CO₂ incubators
 - 3. perform and interpret all quality control procedures
 - 4. identify normal flora in selected cultures
 - 5. identify common pathogens in selected cultures
 - 6. perform & read selected stains, including Gram, acid-fast, and fungal

- D. Parasitology: 3 days
 - 1. specimen processing and storage – prepare stool specimens for ova and parasite examination
 - 2. maintain equipment and interpret quality control results
 - 3. identify common intestinal parasites
 - 4. identify malarial parasites in blood smears
 - 5. perform fecal occult blood testing

- E. Chemistry: 10 days
 - 1. specimen processing and storage
 - 2. operation and basic maintenance of chemistry analyzers
 - 3. perform and interpret quality control results
 - 4. prepare reagents and restock supplies as needed
 - 5. calculate anion gaps, creatinine clearance, dilutions, and 24 hour urine results
 - 6. observe more complex assays such as electrophoresis, osmolality, Schilling tests, etc.

Course Requirements

By the conclusion of the internship, students must meet the criteria for performance expected of an entry level medical laboratory technician. Evaluation will be primarily the domain of the clinical facility and will be based upon:

1. student performance check sheet
2. professional attitude assessment check sheet
3. written quizzes and practical exams given at the clinical site
4. on-campus competency testing for each major laboratory area. These tests will be scheduled by the student with the Program Coordinator and must be completed by the end of finals week each semester.
5. attendance & participation in a seminar held on campus.
6. Clinical Internship Grade
students must pass each area of the internship coursework in order to receive a passing grade for the course (MLTC240 or MLTC241).

Other Course Information

Prior to beginning the internship, students must present proof of current health insurance, hepatitis B vaccination certificate or waiver, and a completed physical examination form, including current titers or immunizations for communicable diseases.