

**Common Course Outline**  
**MLTC 255**  
**Clinical Internship III, Clinical Chemistry and Urinalysis/Body Fluids**  
**Two Semester Hours**

**The Community College of Baltimore County**

**Description**

**MLTC 255 - Two credits - Clinical Internship III, Clinical Chemistry and Urinalysis/Body Fluids**

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 clinical chemistry and urinalysis/body fluid procedures, including problem-solving, evaluation of quality control results, and instrument maintenance. 32 laboratory hours per week. Prerequisites: MLTC 200 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 procedures for each piece of equipment used during the clinical rotation in clinical chemistry and urinalysis/body fluids;
5. state the confidentiality policy of the facility as related to testing procedures and reporting, according to HIPAA guidelines;
6. operate automated chemistry and urinalysis instruments with minimal supervision and produce results within acceptable ranges;
7. prepare reagents, calibrators, and control materials, obtaining results within acceptable quality assurance limits and properly documenting results;
8. demonstrate the ability to organize workflow;
9. recognize reference ranges and critical values for routine chemistry tests;

10. calculate dilutions, anion gap, 24-hour creatinine clearance, and low density lipoprotein (LDL);
11. perform routine urinalysis, including physical examination, chemical examination, and microscopic examination; and
12. discuss or perform cerebrospinal fluid analysis, fecal occult blood, urine/serum pregnancy testing, and analysis of other body fluids.

### **Major Topics**

- I. Clinical Chemistry Laboratory
  - A. Automated and Semi-automated Instrumentation
  - B. Quality Control
  - C. Safety
  - D. Specimen Preparation
  - E. Electrolyte Analysis and Calculation of Anion Gap
  - F. Routine Chemistry Testing
  - G. Unusual Tests
- II. Urinalysis Laboratory
  - A. Automated and Semi-automated Instrumentation
  - B. Quality Control
  - C. Safety
  - D. Specimen Preparation
  - E. Routine Urinalysis Testing
  - F. Unusual Tests
- III. Other Body Fluids
  - A. Quality Control
  - B. Safety
  - C. Specimen Preparation
  - D. Routine Fluid Testing

### **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.