

Common Course Outline
MLTC 101
Introduction to Medical Laboratory Technology
3 Credits

The Community College of Baltimore County

Description

Three (3) lecture hours a week. (Offered Fall, day only.) Prerequisites: Admission into the MLTC Program and a satisfactory score on the Mathematics Placement Test or enrollment in MATH 013 concurrent with the first semester in the MLTC Program.

Provides a brief survey of all areas of a clinical laboratory. Also includes laboratory safety procedures, basic laboratory calculations, and legal and ethical issues.

Overall Course Objectives

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

1. describe general safety procedures followed in a clinical laboratory, including standard precautions.
2. recognize hazard labels and interpret color-coded National Fire Prevention Association hazard warning labels.
3. calculate laboratory math problems in dilutions, solutions, molarity, normality, and quality control.
4. recognize and identify types of glassware used to prepare laboratory reagents.
5. evaluate the legal and ethical responsibilities of a laboratory professional, especially as related to computer access and patient confidentiality issues.
6. employ basic scientific literature use skills by locating a journal article in the Newpher library, writing a review of the article for submission to the instructor, and summarizing the article for an oral presentation to the class.
7. identify commonly used medical terms that are related to clinical laboratory work.
8. recall normal values for laboratory assays: WBC, HGB, HCT, glucose, electrolytes.
9. identify basic tests done in each area of a clinical laboratory and relate the results of those tests to patient conditions.
10. describe areas of a clinical laboratory in a written report following a tour of a hospital laboratory.
11. complete assigned homework.
12. select a relevant journal article and willingly share the article with the class.

13. participate in a discussion of the importance of following all laboratory safety rules.
14. participate in a discussion of ethics as related to patient confidentiality and computer access.

Major Topics

Safety in the Laboratory
Medical Terminology
Bibliographic Instruction-Library
Lab Math I Units, glassware, pipetting
Lab Math II Dilutions
Lab Math III Solutions
Lab Math IV Quality Control & Statistics
Introduction to Computers
Clinical Chemistry
Hematology
Coagulation
Urinalysis
Body Fluids
Microbiology
Immunology
Blood Bank
Journal Reports
Lab Tour-Site Visit
Ethics, Confidentiality Issues

Course Requirements

Students will be expected to submit
5 Math Homework Papers
1 Written Journal Article Review
1 Written Site Visit Report

There will be 3 unit examinations and a comprehensive final examination.

Other Course Information

Students are expected to begin the Hepatitis B vaccination series or sign a waiver during this semester.