

COURSE INFORMATION

Course Prefix No.: MLT 101

Course Title: INTRODUCTION TO MEDICAL LABORATORY TECHNOLOGY

Lecture hrs/wk: 2.0

Lab hrs/wk: 0

Credit hrs/sem: 2.0

[DL Attendance/VA Statement](#)

[Textbook Information](#)

Entry Level Skills: The student should display basic reading, writing, and mathematical skills.

Prerequisites: None

Corequisites: None

Course Description:

This course provides an introduction to laboratory medicine, including techniques for routine laboratory procedures, medical terminology, safety, and an overview of each area within the laboratory.

Course Competencies:

Upon completion of this course the student will be able to:

1. Describe the hospital clinical laboratory including departments, personnel and educational requirements.
2. Associate other hospital departments with the function of the clinical laboratory.
3. Recognize the fiscal aspects of the laboratory.
4. Identify elements of professionalism in the clinical lab.
5. Describe several professional organizations affiliated with Medical Laboratory Technology.
6. Perform laboratory calculations.
7. Describe basic equipment and/or instrumentation used in the clinical lab.
8. Identify and/or define prefixes, suffixes and terms used in the clinical lab.
9. Recognize safety precautions in the clinical laboratory.
10. Perform routine phlebotomy.
11. Describe quality control and its use in the clinical lab.

12. Demonstrate effective oral and written communication techniques.
13. Recognize the elements of critical thinking.
14. Promote professionalism in dress, conduct and attitude.

Performance Objectives:

1. Given lecture notes and handouts (including laboratory flow chart), the student will describe the clinical lab by listing the following:
 - a. departments of lab and functions of each
 - b. titles of personnel working in the main departments
 - c. educational requirements for each title listed in b above.
2. Provided with lecture notes and a hospital organizational flow chart, the student will locate the laboratory on the flow chart and list at least five other departments within the hospital to include how these departments affect the laboratory operation.
3. Given lecture notes and examples, the student will describe the effects of finances on the laboratory.
4. Utilizing lecture notes and handouts, the student will identify professionalism by describing ten desirable qualities that laboratory personnel should display and relating these qualities with their effects on laboratory testing.
5. Given a list of professional organizations through lecture, the student will identify the organization by name and describe the function of each organization as it relates to the clinical lab.
6. Provided with text, lecture notes and homework assignments, the student will perform laboratory calculations involving metric system conversions, temperature conversions, scientific notation, and dilutions.
7. Given lecture notes, text and demonstrations, the student will describe and/or identify the following laboratory equipment/instrumentation:
 - a. glassware – beakers, pipets, cylinders, flasks, tubes
 - b. centrifuges – parts, types
 - c. balances – trip, analytical
 - d. microscope – parts, types
 - e. spectrophotometer – parts, Beers Law
 - f. H₂O – distilled, deionized
 - g. pH

*Note: The student will also pass a practical exam related to laboratory equipment instrumentation.

8. Given lecture notes, text, and handouts, the student will demonstrate knowledge of medical terminology by passing a vocabulary quiz.
9. Utilizing lecture notes on safety, the student will recognize potential biohazards in the laboratory and the safety rules that apply to each.
10. Utilizing lecture notes, text, and video cassettes, the student will list equipment and procedures used in routine blood collection and perform a venipuncture and skin stick to the satisfaction of the instructor.
11. With the aid of lecture notes and text, the student will be able to calculate standard deviation and relate this calculation to quality control used in the lab.
12. Utilizing lecture notes on communication and technical writing, the student will compose a paper on a selected topic and report information learned through the research process to the class to count as part of the final average.
13. Given lecture notes, the student will list steps used in critical thinking and apply this information in problem solving and decision making.
14. The student will demonstrate a professional attitude by adhering to dress codes and written policies.

NOTE: Proficiency in the above objectives will be established by scoring 70 or above on each written test and exercise. Additional objectives are located at the beginning of each chapter in the text.

Course Requirements:

1. Attend lecture/lab consistently. The maximum number of allowable absences is **10%.(3.2 hrs)**
3 tardies = 1 absence.
2. Students will adhere to the student code of conduct as described in the York Technical College Catalog and Handbook. Students will conduct themselves with dignity and maintain high standards of responsible citizenship. Any student caught cheating or involved in any other academic dishonesty will be given a grade of zero and will be subject to further disciplinary action

Evaluation Strategies/Grading:

In order to successfully complete MLT 101 the following requirements must be met:

1. Take and pass 2 written quizzes pertaining to medical terminology.
2. Pass a practical exam of laboratory equipment.
3. Write and present a paper on a selected topic.
4. Pass 2 tests with a minimum score of 70.

Grading scale	90 - 100 = A
	80 - 89 = B
	70 - 79 = C
	<70 = F

Note: If a student must be absent on the day of a test, he/she must notify the instructor prior to test time in order to be allowed to take a make-up test. A grade of zero (0) will be assigned if the instructor is not notified. If the student exceeds the maximum absences of 10%, this will result in his/her being dropped from the course and from the MLT program.

Effective: SU2005