

---

<b>Course Prefix No</b>	<b>MLT 125</b>
<b>Course Title:</b>	<b>Introduction to Clinical Chemistry</b>
<b>Lecture Hrs/Wk:</b>	<b>3.0</b>
<b>Lab Hrs/Wk:</b>	<b>3.0</b>
<b>Credit Hrs/Semester:</b>	<b>4.0</b>

[Distance Learning Attendance/VA Statement](#)  
[Textbook Information](#)

### **COURSE DESCRIPTION**

This course provides an introduction to basic concepts in Clinical Chemistry.

### **COURSE COMPETENCIES**

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

- (1) Recognize the biohazards in Clinical Chemistry and the safety rules that apply to each.
- (2) Perform laboratory calculations.
- (3) Identify and evaluate quality control used in the Clinical Chemistry Lab.
- (4) Follow directions and perform procedures creating a Clinical Chemistry Lab Manual.
- (5) Describe the basic principle of various instrumentation methods.
- (6) Describe the routine tests performed in Clinical Chemistry including basic principles and methodologies used.
- (7) Recognize normal and abnormal results of basic Clinical Chemistry lab tests.
- (8) Correlate routine lab test results with various disease states.
- (9) Describe Special Chemistry testing methods and correlate lab results with disease states.
- (10) Promote professionalism in dress, conduct and attitude.

### **PERFORMANCE OBJECTIVES**

1. Given lecture notes and laboratory situations, the student will identify common biohazards and relate their corresponding safety rules. Proficiency will be displayed by a score of equal to or greater than 70% on written test and completion of each laboratory exercise.
2. Utilizing lecture notes and homework assignments, the student will perform basic laboratory calculations involving %, normality, molarity, dilutions, conversions and Beers law. 70% or greater on written test proves competency.
3. Given routine Clinical Chemistry tests, the student will select the proper quality control method for each test and evaluate the validity of the method using the Westgard Rules. Proficiency evaluated through written test (70% or greater) and laboratory exercises.
4. Given demonstrations and instructions, the student will perform each lab test issued by the instructor. These will be compiled in an orderly manner to create a lab manual (to be turned in). The student must turn in a completed lab manual before a grade for the course is issued.
5. Utilizing lecture notes and text, the student will describe the basic principle of operation of various instrumentation methods. Evaluation occurs through written test (70% or greater).

6. Given specific tests performed in Clinical Chemistry through lecture, text, and lab exercises, the student will describe the basic principle and methodology for each test. 70% or greater on each written test proves competency.
7. Given results of various lab tests studied in Clinical Chemistry, the student will recognize normal, abnormal and panic values for each test. Evaluation will occur through written test.
8. Utilizing various disease states given, along with lecture notes and text and case simulations, the student will be able to choose pertinent lab tests and predict results for the disease state.
9. Provided with lecture notes and text, the student will describe the Special Chemistry tests discussed in class and correlate these tests to specific disease states given. Evaluation will occur through written tests.
10. The student will demonstrate a professional attitude by adhering to dress codes and written policies.

**Note:** For further objectives refer to the learning objectives at the beginning of each chapter in the text.

## **COURSE REQUIREMENTS**

In order to successfully complete MLT 125 the following requirements must be met:

1. Attend lecture/lab sessions consistently (10% maximum absence) (3 tardies = 1 absence) **10 hours maximum** absence for MLT 125.
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**

Laboratory exercises will be graded as Complete, or Incomplete. All exercises must be completed and a lab manual turned in before final grade is given.

Missed laboratory exercises will be made up at the end of the semester and are the responsibility of the student.

A score of 70 or better should be attained on each of 5 written tests and the final exam.

### **Grading scale:**

90 - 100 = A  
80 - 89 = B  
70 - 79 = C  
60-69 = D  
<60 = F

- **A grade of C or better** must be obtained in this class for progression in the MLT program.

**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 10% maximum absences as stated by the MLT Dept., this may result in his/her being dropped from the course and from the MLT program. Three tardies constitute one (1) absence.

Missed test (s) will be made up the last week of the semester and arrangements are the responsibility of the student.

**ENTRY-LEVEL SKILLS**

The student should be familiar with the concepts of basic chemistry, organic chemistry, and biochemistry as acquired from CHEM 105.

**PREREQUISITES:** None

**CO-REQUISITES:** None

\*Note: MLT classes must be taken in accordance with the curriculum display as outlined in the college catalog and MLT program handbook.

**Disabilities Statement:** Any student who feels s/he may need an accommodation based on the impact of a disability should contact the Special Resources Offices (SR) at 803-327-8007 in the 300 area of Student Services. The SRO coordinates reasonable accommodations for students with documented disabilities.