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<b>Course Prefix</b>	<b>MLT 110</b>
<b>Course Title</b>	<b>Hematology</b>
<b>Lecture Hrs/ week</b>	<b>3.0</b>
<b>Lab Hrs/ week</b>	<b>3.0</b>
<b>Credit Hrs/ week</b>	<b>4.0</b>

[Distance Learning Attendance/VA Statement](#)

[Textbook Information](#)

[Student Code and Grievance Procedure](#)

### **COURSE DESCRIPTION**

This is an introductory course in the study of many routine hematological laboratory blood tests used by physicians in diagnosis. Attention is given to cell maturation and the blood pictures seen in anemias, leukemias, and other blood diseases. Coagulation testing is also included in this study.

### **COURSE COMPETENCIES**

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

1. Perform routine hematology tests by manual and some automated methods.
2. Recite and diagram the maturation sequence for the erythrocytic, leukocytic, and thrombocytic series.
3. Perform normal differentials.
4. Identify a limited number of abnormal cells.
5. Demonstrate a basic understanding of hematological diseases including anemias, leukemias, and thrombocyte disorders.
6. Perform prothrombin times and partial thromboplastin times using coagulation instrumentation.
7. Promote professionalism in dress, conduct, and attitude.

### **PERFORMANCE OBJECTIVES**

1. Using the equipment and reagents provided, the student will perform the basic routine hematology tests described in the Hematology Laboratory Manual.
2. Given charts and prepared blood smears, the student will identify by distinguishing characteristics, all cells in the maturation sequence of the three cellular elements.
3. Given prepared blood smears on normal patients, the student will perform 10 differentials within +/- 10% of the values obtained by the instructor.
4. Using prepared blood smears on patients with various blood dyscrasias, the student will perform 5 differentials within +/- 10% of the value obtained by the instructor.
5. Obtaining materials from the York Technical College Library, each student will prepare and present a report to the class on a blood disease. Students are responsible for the information presented by all classmates.

6. Given appropriate blood samples and the coagulation instrument, each student will perform Prothrombin Times and Partial Thromboplastin Times within allowable range of the values obtained by the instructor.
7. Utilizing information obtained in MLT 101 on professionalism, the student will display appropriate dress, conduct, and attitude at all times.

Note: For further objectives refer to learning objectives at the beginning of the chapters in the text.

## **COURSE REQUIREMENTS**

1. Attend lecture consistently. The maximum allowable absence is 10% of required class time.
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

## **METHODS OF INSTRUCTION**

Class time will consist of lecture by the instructor and note taking by students. Use of various audio-visual aids and computer-assisted instruction will be employed.

Laboratory sessions will provide hands on application of the theory and procedures presented in lecture. The instructor will demonstrate each procedure and students will perform the tasks until satisfactory performance is achieved.

## **EVALUATION STRATEGIES/GRADING**

In order to successfully complete MLT 110, the following requirements must be met:

1. Perform all laboratory exercises at a satisfactory level.
2. Report on a blood disease.
3. Take and pass all quizzes, written tests and a cumulative Final Exam.
4. Perform a minimum of 2 venipunctures and 2 fingersticks.
5. Perform a practical exam with a score of 70 or better

### **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 maximum absences of 10%, this may result in his/her being dropped from the course and from the MLT program.

## COMPETENCY CHECKLIST

LAB EXERCISE CRITERIA: A grade of S (satisfactory) per instructor observation via the Hematology Laboratory Manual Guidelines.

1. GENERAL LAB TESTS:

WBC Counts  
RBC Counts  
Hemoglobins  
Hematocrits  
RBC Indices  
Platelet Counts  
Retic Counts  
Sedrates  
Fingersticks  
Venipunctures

2. BLOOD SMEARS:

Preparation Technique  
Staining  
ID Maturation Sequence

3. CELL IDENTIFICATION:

Normal Differentials

4. CELL IDENTIFICATION:

Abnormal Differentials

5. COAGULATION STUDIES:

PT  
PTT

6. PROFESSIONALISM

7. REPORT

Blood Diseases

## ENTRY LEVEL SKILLS

Students should be able to utilize the metric system, scientific notation, centrifuges, the microscope, and pipets.

**PREREQUISITE:** MLT 101

**CO-REQUISITES:** None

**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.