

Course Information

Course Prefix : MLT 110
Course Title: Hematology
Lecture Hrs/week: 3.0
Lab Hrs/week : 3.0
Credit Hrs/week: 4.0

DL Attendance/VA Statement **Textbook Information**

Entry Level Skills: Students should have a basic knowledge of the metric system, scientific notation, centrifuges, the microscope, pipetting, and the guidelines for laboratory safety.

Prerequisite: None *

Co-requisite: None *

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

Course Description:

This course provides a study of the basic principles of hematology, including hemoglobins, hematocrits, white and red counts, and identification of blood cells.

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 the MLA Electra 750 or equivalent instrument.
- (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 Tech College Library and various other sites, 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/lab consistently. The maximum number of allowable absences is **10%**.
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

1. Perform all laboratory exercises at a satisfactory level per instructor observation according to guidelines in lab manual.
2. Report on a blood disease.
3. Take and pass 3 written tests and a Final Exam.
4. Take and pass unannounced pop quizzes.
5. Perform a minimum of 2 venipunctures and 2 fingersticks

The course grade is an average of the lab grade, report grade, written tests, final exam, and pop quizzes. The average **must** be 70 or greater to continue in the MLT program of study. Professionalism as outlined in MLT 101, and attendance **must** be satisfactory for the final grade to be given.

Grading Scale:

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