Hibbing Community College
Course Outline

COURSE NUMBER & COURSE TITLE: MLT 1412: Hematology 1
CREDITS: 3 (2 Lec /1 Lab)
PREREQUISITES: Accuplacer College level reading is required.

COURSE DESCRIPTION
This course introduces students to fundamental concepts in hematology including red blood cell development, normal physiology of red blood cells, and red blood cell disorders. The laboratory component complements the lecture and includes microscopic examination of blood and bone marrow slides and common laboratory testing by both manual and automated methods. Phlebotomy skills are introduced and are integrated throughout the course.

OUTLINE OF MAJOR CONTENT AREAS
1. Principles of Blood Collection
2. Basic Hematology Principles
   A. Hematopoiesis and CBC
   B. Red cell production and function
   C. Hemoglobin function
3. Red Blood Cell Disorders; Classification and Assessment of Anemias
   A. Microcytic anemias
   B. Macrocytic anemias
   C. Normochromic anemias; Red cell membrane disorders
   D. Normochromic anemias; Hemoglobinopathies
4. Principles of Blood Collection

COURSE OUTCOMES/OBJECTIVES/GOALS:
1. Students will be able to understand the concept of hematology in the laboratory and its importance in monitoring hematopoiesis though CBC results.
2. Students will be able to recognize normal and abnormal red cell morphology as well as recognize the importance of hemoglobin structure and function.
3. Students will be able to recognize both microcytic and macrocytic anemias through interpretation of CBC results and peripheral smear observation.
4. Students will be able to recognize and categorize normochromic anemias due to membrane disorders and hemoglobinopathies by data interpretation and visual observation of peripheral smears.
5. Students will produce a college level research paper on a red blood cell disorder.
HCC COMPETENCIES MET:
Working Productively & Cooperatively
Thinking Creatively and Critically

STUDENT CONTRIBUTIONS:
Students are expected to participate in class lectures, complete all labs and assignments on time, and spend the necessary study time to pass all quizzes and exams.

STUDENT ASSESSMENT SHALL TAKE PLACE USING INSTRUMENTS SELECTED/DEVELOPED BY THE COURSE INSTRUCTOR.

Curriculum Committee Approval Date: April 3, 2018

AASC APPROVAL DATE: April 18, 2018
REVIEW DATE: April 2023