Hibbing Community College

MLT 1432: Hematology 2

A. COURSE DESCRIPTION

Credits: 3
Lecture Hours/Week: 2
Lab Hours/Week: 2
Prerequisites: MLT1412 – Hematology 1
This course covers peripheral blood and bone marrow abnormalities of white blood cells relating to malignancies such as leukemia, lymphoma, and multiple myeloma. The role of the laboratory in diagnosis, classification and assessment of treatment outcomes will be stressed. This course also introduces students to the principles and disorders of hemostasis and thrombosis and reviews hematology instrumentation and analysis of instrumental data. Laboratory time is devoted to microscopic examination of blood and bone marrow slides and performing common laboratory tests by both manual and automated methods.

COURSE EFFECTIVE DATES: 08/25/2008 - Present

B. OUTLINE OF MAJOR CONTENT AREAS

1. Describe the nuclear and cytoplasmic characteristics of neutrophils, lymphocytes, monocytes, eosinophils, and basophils under normal conditions.
2. White Blood Cell Disorders/Abnormalities
3. Laboratory Assessment of Platelet Disorders
4. Blood Coagulation Factors
5. Laboratory Assessment of Coagulation Factor Deficiencies
6. Instrumentation in Hematology

C. LEARNING OUTCOMES (General)

1. Students will be able to describe the process of leukopoiesis and interpret qualitative and quantitative abnormalities of white blood cells.
2. Students will be able to recognize an acute myeloproliferative disorder based on patient presentation, CBC findings, and peripheral smear results.
3. Students will be able to recognize a chronic myeloproliferative disorder based on patient presentation, CBC findings and peripheral smear results.
4. Students will be able to recognize and characterize lymphoproliferative disorders given laboratory data and peripheral smear findings.
5. Students will be able to recognize and characterize myelodysplastic conditions given laboratory data and peripheral smear findings.
6. Students will be able to give an overview of hemostasis and relate both qualitative and quantitative platelet disorders to its process.
7. Students will be able to recognize and interpret plasma clotting deficiencies, their treatments and describe the fibrinolytic process.
8. Students will describe the methodologies used in hematology instrumentation and quality assessment.
9. Students will produce a college-level research paper on a white blood cell disorder.
10. Student will follow all laboratory safety procedures consistent with OSHA and laboratory policy.

D. Minnesota Transfer Curriculum Goal Area(s) and Competencies - None

E. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

F. SPECIAL INFORMATION
   **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