Hibbing Community College
Course Outline

MLT 2466: Blood Bank

A. COURSE DESCRIPTION

Credits: 4
Lecture Hours/Week: 2
Lab Hours/Week: 4
Prerequisites: MLT 1445 - Immunology
MnTC Goals: None

Blood Bank introduces students to the theory and lab analyses of blood group antigens and antibodies of the ABO, Rh, and other major blood group systems. Introduction to blood banking practice includes antihuman globulin theory, and procedures including antibody detection and identification, compatibility testing, donor selection and testing, component processing and storage as well as hemolytic disease of the newborn, Rh immune globulin workup, and quality control.

B. COURSE EFFECTIVE DATES: 09/30/2014 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. ABO and Rh blood group systems
2. Warm and cold antibody detection and identification
3. Compatibility testing
4. Adverse events related to transfusion therapy
5. Alternatives to allogeneic blood transfusion
6. Donor testing
7. Component preparation and therapy
8. Hemolytic disease of the newborn, Rh immune globulin
9. Quality assurance and regulation of blood Bank industry

D. LEARNING OUTCOMES (General)

1. Students will be able to correctly select and utilize blood bank reagents in performing basic procedures, while understanding the purpose of each. The necessity and importance of quality control, quality assurance, and specimen integrity will be stressed.
2. Students will perform and interpret patient unknown blood typing correctly, recognizing the possibility for and resolution of discrepancies due to other antigens, antibodies, or conditions.
3. Students will understand the importance of and be able to perform all testing necessary to safely transfuse various blood components, recognizing the possibility and types of transfusion reactions, their causes and preventions.
4. Students will recall proper donor selection, collection, processing storage conditions and use of individual blood components for transfusion.
5. Students will recall and/or perform basic testing with regard to hemolytic disease of the fetus prevention and the requirements in transfusion of the neonatal population.
E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None

F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   **HCC COMPETENCIES MET:**
   Working Productively and Cooperatively
   Communicating Clearly and Effectively
   Thinking Creatively and Critically

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

   **STUDENT ASSESSMENT SHALL TAKEPLACE USING INSTRUMENTS SELECTED/DEVELOPED BY THE COURSE INSTRUCTOR.**

   **ADDITIONAL INFORMATION:**
   Students will be working with human blood products and should therefore have been vaccinated against Hepatitis B. Students are expected to comply with all rules of the laboratory to include personal protective equipment.

   *Curriculum Committee Approval Date: April 3, 2018*

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