Hibbing Community College
Course Outline

MLT 1422: Laboratory Techniques

A. COURSE DESCRIPTION
   Credits: 3
   Lecture Hours/Week: 1
   Lab Hours/Week: 4
   Prerequisites: None
   Laboratory Techniques is an introductory course in basic medical laboratory techniques. The equipment and techniques to be studied include laboratory glassware, pipetting, balances, centrifuges, solution chemistry, titration, spectrophotometry, and basic laboratory mathematics. This is the first in a series of clinical chemistry courses designed to teach fundamental concepts in clinical laboratory procedures. PREREQUISITES: A score of 69 or higher is required in arithmetic portion of placement exam.

B. COURSE EFFECTIVE DATES: 12/05/2008 - Present

C. OUTLINE OF MAJOR CONTENT AREAS
   1. Laboratory glassware
   2. Dilution protocols and Laboratory mathematics
   3. Reagent preparation
   4. Calibration and Quality Control concepts
   5. Basic concepts of laboratory departments and routine tests

D. LEARNING OUTCOMES (General)
   1. Students will recognize and use basic laboratory structure and equipment, and use laboratory mathematics to make solutions of various concentrations, convert volumes, degrees, concentrations, interpreting quality of the results.
   2. Students will be able to explain the role of hematology in the lab, relating and interpreting findings of a complete blood count and differential cell findings to disease states.
   3. Students will be able to explain the role of coagulation in the lab, relating and interpreting various coagulation tests to disease states.
   4. Students will be able to utilize the basic concepts of immunology and apply them to the practice of immunohematology and possess a knowledge foundation of urine assessments.
   5. Students will accrue basic knowledge in chemistry tests including liver, cardiac, renal, thyroid, electrolytes, and enzymes.
   6. Students will apply basic knowledge of microbiology and parasitology testing procedures and findings such as gram stains, plating, colony counts, and basic parasite identification to aid in diagnosis of infection and/or disease.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None
F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. ADDITIONAL INFORMATION

   HCC COMPETENCIES MET:
   Working Productively and 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 ELECTED/DEVELOPED BY THE COURSE INSTRUCTOR.

Curriculum Committee Approval Date: April 3, 2018
AASC APPROVAL DATE: April 18, 2018
REVIEW DATE: April 2023