A. COURSE DESCRIPTION

Credits: 5
Lecture Hours/Week: 4
Lab Hours/Week: 2
OJT Hours/Week: *.*

Prerequisites:
This course requires both of these prerequisite categories
1. One of these two groups
   1. Both of these
      MELT 1631 - Hematology (Number of Years Valid: 3)
      MELT 1632 - Immunohematology (Blood Bank) (Number of Years Valid: 3)
      Or
   2. MELT 1640 - Hematology (Number of Years Valid: 5)
      And
   2. MELT 1645 - Immunohematology (Blood Bank) (Number of Years Valid: 5)

Corequisites: None
MnTC Goals: None

This course provides advanced practice of laboratory skills and procedures to reinforce theory gained in core MLT courses in preparation for clinical internship. This course encompasses the major content areas within medical laboratory science including blood banking, chemistry, hematology, immunology, microbiology, laboratory operations, urinalysis and other body fluids. Major emphasis will be on physiologic mechanisms of preanalytical, analytical, post-analytical testing, and general clinical correlations.

B. COURSE EFFECTIVE DATES: 04/05/2024 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Demonstrate advanced knowledge and practice of basic laboratory techniques.
2. Correlate lab results with conditions.
3. Demonstrate selected laboratory testing competencies.
4. Differentiate microscopic organisms and cells.
5. Demonstrate competent transfusion service testing.
6. Demonstrate knowledge in hematologic and hemostasis procedures and conditions.
7. Demonstrate knowledge in diagnostic chemistry procedures and conditions.
8. Demonstrate knowledge in microbiologic procedures and conditions.
9. Demonstrate knowledge in biological fluids procedures and conditions.
10. Demonstrate knowledge in immunology procedures and conditions.
11. Demonstrate knowledge in immunohematology procedures and conditions.
12. Demonstrate application of theory, correlation, and evaluation of all areas of laboratory testing.
13. Review pre-analytical, analytical, and post-analytical processes and errors that can occur for each.

D. LEARNING OUTCOMES (General)
1. Perform laboratory tests with minimal direction.
2. Demonstrate knowledge and skills of basic laboratory techniques.
3. Demonstrate knowledge and skills in hematology and
4. Demonstrate knowledge and skills in transfusion service.
5. Demonstrate knowledge and skills in diagnostic chemistry.
6. Demonstrate knowledge and skills in diagnostic microbiology.
7. Demonstrate knowledge and skills in biological fluids.
8. Demonstrate knowledge and skills in immunology.

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

F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted