



South Central College

MDLT 2828 Clinical: Immunohematology

Course Outcome Summary

Course Information

Description	During the clinical immunohematology experience, the student is assigned to an affiliated hospital/clinic laboratory for the purpose of acquiring practical experience in a laboratory setting while under direct supervision. The experience allows the student to apply knowledge learned in the didactic phase of their training with practical hands-on experience for preparation of employment in a clinical laboratory. Students practice basic laboratory procedures/techniques, and phlebotomy. (Prerequisite: MDLT 1825, MDLT 1835, and MDLT 2807.)
Total Credits	2
Total Hours	96

Types of Instruction

Instruction Type	Credits/Hours
Internship	2/96

Pre/Corequisites

MDLT 1825, MDLT 1835, and MDLT 2807

Institutional Core Competencies

Communication - Students will be able to demonstrate appropriate and effective interactions with others to achieve their personal, academic, and professional objectives.

Critical and Creative Thinking - Students will be able to demonstrate purposeful thinking with the goal of using a creative process for developing and building upon ideas and/or the goal of using a critical process for the analyzing and evaluating of ideas.

Course Competencies

- 1. Outline the information that should accompany a clinical specimen so that it can be processed in the immunohematology department.**

Learning Objectives

Discuss the importance of proper patient identification.

Explain the importance of requiring the following information when processing specimens for the Immunohematology department: patient's full name, a unique identification number, date specimen was drawn, time specimen was drawn, and initials of individual drawing patient specimen.

- 2. State the principle of selected laboratory methods/procedures and perform the daily functional checks and maintenance on clinical facility's equipment and analyzers.**

Learning Objectives

Explain the principles of the ABO, Rh, and other major blood groups.

Explain the principle of the indirect antiglobulin test (IAT).

Explain the principle of the direct antiglobulin test (DAT).

Explain the principle of the compatibility testing procedure.

Discuss importance of routinely performing maintenance, calibration, and troubleshooting of laboratory analyzers and equipment.

Demonstrate proper procedures in maintenance, calibration, operation, and troubleshooting of laboratory analyzers and equipment.

- 3. Demonstrate the proper techniques for performing immunohematology procedures correctly, efficiently, and accurately according to the clinical facility's established protocol.**

Learning Objectives

Given the necessary materials, perform within 100% accuracy pretransfusion testing procedures.

Given the appropriate data, interpret and report within 100% accuracy, patient test results.

- 4. Identify the possible causes of basic immunohematology testing problems.**

Learning Objectives

List and explain discrepancies in pre-transfusion testing per clinical internship's instructor's discretion.

Resolve, using established immunohematology testing practices, basic immunohematology testing problems.

- 5. Discuss the clinical correlation between laboratory results and transfusion practices.**

Learning Objectives

Understand the terms immunohematology, blood banking, and transfusion medicine.

Name the major developments in the history of immunohematology.

Discuss the clinical significance of established internal quality control measures, and their results when performing routine transfusion practices.

- 6. Compare the different types of blood and blood products available for transfusion practices.**

Learning Objectives

Note the blood components used in each of the special transfusion practices.

Cite the indications for leukopoor red blood cells (RBCs), fresh frozen plasma (FFP), cryoprecipitate, white blood cells (WBCs), platelet concentrates, irradiated red blood cells (RBCs), coagulation factors, and plasma expanders.

Name the goal of each of the special transfusion practices.

- 7. Discuss appropriate blood and blood product transfusion practices.**

Learning Objectives

Discuss the indication for transfusing leukopoor red blood cells (RBCs).

Discuss the indication for transfusing irradiated red blood cells (RBCs).

Discuss the indication for transfusing platelet concentrates.

Discuss the indication for transfusing white blood cells (WBCs).

Discuss the indication for transfusing plasma expanders.

Discuss the indication for transfusing cryoprecipitate.

Discuss the indication for transfusing coagulation factors.

- 8. Perform an initial transfusion reaction investigation and discuss the rationale for each evaluation in the investigation.**

Learning Objectives

Cite testing protocol for an initial transfusion reaction workup.

Explain reason for procedures included in an initial transfusion reaction workup.

Given appropriate data, perform within 100% an initial transfusion reaction workup.

- 9. Discuss the importance of record keeping, quality assurance/control, and compliance with Food and Drug Administration (FDA) regulations and American Association of Blood Banks (AABB)**

standards.

Learning Objectives

Discuss the technician's role in error management and corrective action.
Recognize the regulatory and accrediting agencies influencing blood bank quality.
Cite quality control criteria for reagents, equipment, and blood components.
Evaluate quality control results for acceptability and suggest corrective action.

10. List the sequence of events of a donor unit from collection to disposition.

Learning Objectives

List the physical and medical requirements donors must meet in order to donate blood and blood products.
Recognize acceptable/unacceptable donor criteria.
Name the donor information that must be kept on file.
Name the anticoagulants used in blood collection.
List the tests that are performed on collected blood.
Explain informed consent.
Explain confidential unit exclusion.
Name the special donor categories and the characteristics of each.

11. Discuss and practice the general laboratory safety rules according to the clinical facility's established protocol.

Learning Objectives

Explain the importance of laboratory safety.
Choose appropriate personal protective equipment when working in the laboratory.
List and describe the basic aspects of infection control policies and practices.
Identify hazards, and recognize importance related to handling of chemicals, and biologic specimens.
Select the correct means for disposal of waste generated in the clinical laboratory.
Outline the steps required in documentation of an accident in the workplace.

12. Demonstrate acceptable attitudes toward laboratory work, laboratory personnel, clients/patients, and other medical professionals.

Learning Objectives

List personal qualities that characterize a clinical laboratory professional.
Explain importance of good communication between clinical laboratory professionals and other medical professionals.
Discuss importance of working as a team member to ensure quality patient care.

SCC Accessibility Statement

South Central College strives to make all learning experiences as accessible as possible. If you have a disability and need accommodations for access to this class, contact the Academic Support Center to request and discuss accommodations. North Mankato: Room B-132, (507) 389-7222; Faribault: Room A-116, (507) 332-7222.

Additional information and forms can be found at: www.southcentral.edu/disability

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