



South Central College

MDLT 2829 Clinical: Microbiology

Course Outcome Summary

Course Information

Description	During the clinical microbiology 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	3
Total Hours	144

Types of Instruction

Instruction Type	Credits/Hours
Internship	3/144

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 properly processed in the microbiology laboratory.**

Learning Objectives

Discuss the importance of proper patient identification.

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

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

Learning Objectives

Stain, examine and correctly interpret slides using the gram stain method so that the correct gram stain reaction and morphology are obtained.

Select and inoculate appropriate media for the performance of routine cultures.

Correctly inoculate and incubate appropriate media for bacterial cultures.

Prepare, using established techniques, a pure culture from a mixed culture.

Examine, using established techniques, bacteria on primary media and interpret growth characteristics.

- 3. Demonstrate knowledge of and consistently practice the rules of aseptic technique.**

Learning Objectives

Define aseptic technique.

List the rules of aseptic technique.

Demonstrate and practice the rules of aseptic technique.

- 4. Select appropriate procedures to complete identification and (if appropriate) susceptibility testing of those microorganisms isolated most often from common microbiology specimens.**

Learning Objectives

List common procedures used in the identification of microbiology specimens.

List common procedures used in the susceptibility testing of microbiology specimens.

Demonstrate and practice common procedures used in identification and susceptibility testing of microbiology specimens.

- 5. Follow precautions for the safe handling of biohazardous materials, including the disposal of specimens.**

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 related to handling 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.

- 6. Discuss the types of specimens for anaerobic cultures, their collection, transport, and processing.**

Learning Objectives

Define anaerobic culture.

Select and inoculate appropriate media for the performance of anaerobic cultures.

Correctly incubate appropriate media for anaerobic cultures.

Examine, using established techniques, bacteria on primary anaerobic media and interpret growth characteristics.

Discuss appropriate methods of collection of anaerobic cultures depending on source of specimen.

Discuss appropriate methods of transportation of anaerobic cultures, depending on source of specimen, to the microbiology department.

- 7. Discuss the types of specimens for parasitic, fungal, and viral cultures, and their collection, transport, and processing.**

Learning Objectives

Select and inoculate appropriate media for the performance of parasitic, fungal, and viral cultures.

Correctly incubate appropriate media for parasitic fungal, and viral cultures.

Examine, using established techniques, parasite, fungi, and viral on primary media and interpret growth characteristics.

Discuss appropriate methods of collection of parasitic, fungal, and viral cultures depending on source of specimen.

Discuss appropriate methods of transportation of parasitic, fungal, and viral cultures, depending on source of specimen, to the microbiology department.

- 8. Summarize the importance of quality assurance practices in the microbiology department.**

Learning Objectives

Discuss importance of quality assurance practices in the microbiology department.
Describe the pre-analytical, analytical, and post-analytical phases of quality assurance.
List common quality control measurements used in the microbiology department.
Evaluate and apply quality control results for acceptability and suggest corrective action.
Discuss proficiency-testing programs in the microbiology department.

9. Perform the daily functional checks and maintenance on clinical facility's equipment and analyzers.

Learning Objectives

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.

10. 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

This material can be made available in alternative formats by contacting the Academic Support Center at 507-389-7222.