

SOUTHEAST COMMUNITY COLLEGE
HEALTH SCIENCES DIVISION
MEDICAL LABORATORY TECHNOLOGY
Revision Date: 10/2020
[Syllabus Statements](#)

I. CATALOG DESCRIPTION

Course Number: MEDT 1190
Course Title: Medical Microbiology 1
Prerequisites: MEDT 1160

Catalog Description: The study of routine procedures in Medical Microbiology, emphasizing the isolation and identification of common pathogenic bacteria. Course includes the advanced study of Medical Microbiology theory and procedures. Skills and laboratory techniques corresponding to theoretical information presented in the lecture. Laboratory is concurrent with lecture.

Credit Hours: 4
Class Hours: 30
Lab Hours: 90
Total Contact Hours: 120

II. COURSE OBJECTIVES: *Course will:*

1. Summarize the safety policies of the MLT program.
2. Outline cell structure and function.
3. Outline prokaryotic metabolism.
4. Introduce microbial genetics.
5. Correlate the role of microbes on humans and the environment.
6. Familiarize students with microbes of clinical importance.
7. Diagram morphological and biochemical procedures for identification of pathogenic bacteria.
8. Outline procedures for susceptibility testing.
9. Summarize procedures for processing body specimens for bacterial growth.
10. Differentiate common pathogens from normal flora in body specimens.
11. Apply the concept of quality control to microbiology procedures.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

A. STUDENT LEARNING OUTCOMES: *Student will be able to:*

1. Identify organisms that are normal flora and pathogens using current laboratory techniques.
2. Discuss prokaryotic cell structure and function, genetics and metabolism.
3. Identify normal flora and pathogens in different body systems.

4. Identify if an organism is susceptible or resistant to antibiotics.

A. GENERAL EDUCATION LEARNING OUTCOMES

1. GELO #3: Critical Thinking & Problem Solving

Collect, identify, interpret and analyze data.

Evaluate the validity of arguments, alternatives, data, outcomes, and/or impacts of actions.

IV. CONTENT/TOPICAL OUTLINE (*course outline may provide more detailed information*)

- A. SAFETY
- B. STERILIZATION
- C. CULTIVATION OF BACTERIA
- D. PROKARYOTIC CELL STRUCTURE AND FUNCTION
- E. MICROBIAL GENETICS
- F. MICROBES AND HUMANS AND THE ENVIRONMENT
- G. ORIGIN AND EVOLUTION OF MICROBES
- H. MICROCOCCACEAE
- I. *STAPHYLOCOCCUS AUREUS* AND RESISTANT FORMS
- J. STREPTOCOCCACEAE
- K. MISCELLANEOUS AEROBIC GRAM POSITIVE COCCI
- L. NEISSERIACEAE
- M. ENTEROBACTERIACEAE
- N. NONFERMENTERS
- O. SUSCEPTIBILITY TESTING
- P. URINE CULTURES
- Q. GASTROINTESTINAL CULTURES
- R. SEROLOGICAL METHODS
- S. BLOOD CULTURES
- T. HACEKS (MISCELLANEOUS GRAM NEGATIVE RODS)
- U. AEROBIC GRAM POSITIVE RODS

V. INSTRUCTIONAL MATERIALS

A. Required text(s):

Leboffe, Michael J. and Pierce, Burton E. **Microbiology Laboratory Theory and Application**
(most current edition)

Mahon, Connie **Diagnostic Microbiology** (most current edition)

B. Other Required Resources:

Packet of Handouts

VI. METHODS OF PRESENTATION/INSTRUCTION

A. Methods of presentation typically include a combination of the following:

1. Lecture
2. Projected images
3. Demonstrations
4. Lab Exercises
5. Case Studies

6. Practice lab unknowns
7. Practical Exam
8. Video microscope

VII. METHODS OF EVALUATION

- A. Methods of evaluation typically include a combination assignments, quizzes, exams, projects, laboratory competencies, etc. For grading expectations please see the course information document

SCC STANDARD GRADING SCALE POLICY:

A+ 95-100	C+ 75-79
A 90-94	C 70-74
B+ 85-89	D+ 65-69
B 80-84	D 60-64
	F Below 60

VIII. SPECIFIC COURSE REQUIREMENTS

A. GRADING

Lecture and laboratory must be passed with a 75% or higher. If either the Lecture Grade or Lab Grade is below 75% (C+), the student will receive the lower grade as the Grade for the course.

B. ATTENDANCE

Attendance is crucial to the success of this course. The attendance policy can be found in the MLT Student Handbook.

Attendance for lecture is expected. Missing lecture will result in valuable information being missed and may have a negative effect on a student's grade in the course.

Attendance for laboratory sessions is required. The MLT attendance policy will be followed and applied in this course. Failure to attend laboratory sessions will have a negative effect on a student's grade in the course.

C. OTHER

Please see the Course Information Document for course policies related to grading, expectations, assignments, assessment, and participation.