SOUTHEAST COMMUNITY COLLEGE
COURSE SYLLABUS
HEALTH SCIENCES DIVISION
MEDICAL LABORATORY TECHNOLOGY PROGRAM
Revision Date: 9/2019
Syllabus Statements

I. CATALOG DESCRIPTION

Course Number:	**MEDT 1150**
Course Title:	**LABORATORY METHODS**
Prerequisite(s):	**Admission into the Medical Laboratory Technology Program**
Catalog Description:	**Introduction to medical laboratory procedures and laboratory mathematics. Basic laboratory techniques and skills required in the field of medical laboratory technology. Laboratory safety, HIPPA, departments of the laboratory, equipment, quality assurance, and mathematical applications used in the medical laboratory. Laboratory is concurrent with lecture.**
Credit Hours:	**3.0**
Class Hours:	**30**
Lab Hours:	**45**
Total Contact Hours:	**75**

II. COURSE OBJECTIVES: *Course will:*

1. Introduce the departments of the medical laboratory.
2. Review the knowledge and skills for the medical laboratory.
3. Introduce laboratory safety and laboratory testing.
4. Provide practice using mathematical calculations in the medical laboratory.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

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

1. Identify and discuss each department in the medical laboratory.
2. Identify the various levels of medical laboratory personnel and their educational requirements.
3. Identify the type of knowledge and skills necessary for a career in the field of Medical Laboratory Technology.
4. Recognize the importance of quality assurance in determining the accuracy and precision of laboratory test results.
5. Complete all safety training required in the medical laboratory.
6. Use safety precautions in the laboratory.
7. Complete HIPPA training.
8. Understand HIPPA guidelines and follow them appropriately.
9. Identify, analyze, and perform basic laboratory testing procedures in the areas of Hematology, Microbiology, Medical Chemistry, Serology, Immunohematology, and Urinalysis.
10. Explain the principle of each laboratory procedure performed.
11. Research and write a paper on an assigned medical laboratory topic.

12. Perform calculation for dilutions.
13. Solve problems using ratio and proportion.
14. Calculate molar, normal and percent solutions.
15. Calculate solutions using specific gravity and percent assay.
16. Use Beer's Law to calculate concentration of unknowns.
17. Define the basic terms related to fundamental descriptive statistics.
18. Calculate the mean, standard deviation and coefficient of variation for a group of numbers.

B. GENERAL EDUCATION LEARNING OUTCOMES

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 in the Medical Laboratory**
- **B. HIPPA in the Medical Laboratory**
- **C. Overview of the Clinical (Medical) Laboratory**
- **D. Departments of the Laboratory**
- **E. Quality Assurance**
- **F. Laboratory Measurements**
- **G. Laboratory Procedures**

V. INSTRUCTIONAL MATERIALS

A. Required Text(s):

Estridge, Barbara, and Anna Reynolds. *Basic Clinical Laboratory Techniques* (most current edition)
Johnson, Catherine W., Daniel L. Timmons and Pamela E. Hall. *Essential Laboratory Mathematics* (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. Technology enhanced lecture
2. Classroom discussion
3. In-class group exercises
4. Demonstrations
5. Lab exercises
6. Practice problems
7. Audiovisual materials

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.