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

I. CATALOG DESCRIPTION

Course Number: **MEDT 2120**
Course Title **Medical Laboratory Chemistry 2**
Prerequisite(s): **MEDT 2110**

Catalog Description: Study of theory and application of clinical chemistry normal and disease states and normal and abnormal constituents of urine. Skills and laboratory techniques corresponding to theoretical information presented in lecture. Laboratory is concurrent with lecture.

Credit Hours: 2.0
Class Hours: 15
Lab Hours: 45
Total Contact Hours: 60

II. COURSE OBJECTIVES *Course will:*

1. Provide advanced study in the theory and application of clinical chemistry procedures.
2. Familiarize the student with the theory and clinical application of electrolytes, acid-base balance, body fluid analysis, therapeutic drug monitoring, and toxicology.
3. Provide practice performing chemistry analyses and body fluid analyses.
4. Require application of critical thinkning.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES

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

1. Attain skill in performin routine clinical chemistry procedures
2. Describe the principles of instrumentation used in the clinical chemistry laboratory.
3. Describe the principles of chemical reactions for the analysis of specific body constituents.
4. Define and discuss the metabolism, clinical significance, and measurement of major and minor electrolytes, hormones, therapeutic drugs, and drugs of abuse.
5. Discuss acid-base balance within the body, define the terms and realtionships associated with acid-base balance, and explain the normal physiological mechanisms for maintain acid-base balance.
6. Identify, describe, and discuss the barious types of body fluids and analysis of the various body fluids.
7. Perform clinical chemistry procedures/
8. Demonstrate cooperation when working with others.

B. GENERAL EDUCATION LEARNING OUTCOMES

1. **GELO #3: Critical Thinking & Problem Solving**

   Outcomes:

   1. Collect, identify, interpret and analyze data.
   4. Evaluate the validity of arguments, alternatives, data, outcomes, and/or impacts of actions.

IV. CONTENT/TOPICAL OUTLINE

- **A. Sodium, Potassium, and Chloride**
- **B. Calcium, Phospohorus, Magnesium, Iron and Trace Elements**
- **C. Acid-Base Balance**
- **D. Endocrine Function**
- **E. Analysis of Other Body Fluids**
- **F. Therapeutic Drug Monitoring and Drugs of Abuse**
- **G. Toxicology**
- **H. Miscelaneous Topics in Clinical Chemistry**

V. INSTRUCTIONAL MATERIALS

A. Required Text(s):

Brunzel, Nancy A. *Fundamentals of Urine and Body Fluid Analysis* (Most current edition)

Sunheimer, Robert L., and Graves, Linda. *Clinical Laboratory Chemistry* (Most current edition)

B. Other Required Resources:

Packet of Handouts

VI. METHODS OF PRESENTATION/INSTRUCTION

Methods of presentation/instruction include a combination of the following:

1. Lecture
2. Images
3. Demonstrations
4. Audio-visual materials
5. Lecture and laboratory exercises

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.