SOUTHEAST COMMUNITY COLLEGE
HEALTH SCIENCES DIVISION
MEDICAL LABORATORY TECHNOLOGY
Revision Date: 10/2020
Syllabus Statements

I. CATALOG DESCRIPTION

Course Number: **MEDT 1180**
Course Title: Immunology
Prerequisite(s): MEDT 1150

Catalog Description: Introduction to immunology: immune system, antigens, antibodies, complement, and reactions of antigens and antibodies. Relationships to diseases that are immunologically involved.

Credit Hours: 1
Class Hours: 15
Lab Hours: 0
Total Contact Hours: 15

II. COURSE OBJECTIVES: *Course will:*

1. Introduce the field of Immunology.
2. Familiarize the student with the theory and clinical application of immunology, immunochemistry, and serology lab tests.
3. Introduce immunologic mechanisms and manifestations of infectious disease.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

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

1. Identify the factors involved in the first line of defense in resisting infection.
2. Discuss the process of inflammation and phagocytosis.
3. Differentiate between cellular and humoral immunity.
4. Define an antigen and list examples.
5. Discuss antibodies with regard to composition, structure, and classes and their characteristics.
6. Discuss the role of B cells, T cells and other lymphocytes in the immune process.
7. Discuss the current theory of antibody production.
8. Discuss complement with regard to composition, complement pathways, inactivation, and activities invivo and invitro.
9. Discuss immunodeficiency.

10. Discuss the four types of hypersensitivity reactions with regard to class of immunoglobulin involved, type of cells involved, involvement of complement, mechanism of reaction, and examples of each type.
11. Discuss autoimmune diseases with regard to definition, possible causes, specific diseases, and diagnostic tests available.
12. Discuss hepatitis and AIDS with regard to causative agent, methods of transmission, disease process, and diagnostic tests available.
13. Discuss graft rejection and graft versus host reactions.

B. 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. DEFINITIONS**
- **B. FACTORS INVOLVED IN RESISTANCE OF INFECTION**
- **C. IMMUNE RESPONSE**
- **D. IMMUNE DEFICIENCY**
- **E. ALLERGIC REACTIONS (HYPERSENSITIVITY)**
- **F. AUTOIMMUNE DISEASE**
- **G. HEPATITIS**
- **H. TRANSPLANTATION AND TUMOR IMMUNOLOGY**

V. INSTRUCTIONAL MATERIALS

A. Required Text(s):

Turgeon, Mary Louise. **Immunology and Serology in Laboratory** Medicine, 6th 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. Discussion
3. Textbook
4. PowerPoints

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.

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.

C. OTHER

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