

**SEWARD COUNTY COMMUNITY COLLEGE  
COURSE SYLLABUS**

**I. TITLE OF COURSE:** MT1903- Basic Immunology

**II. COURSE DESCRIPTION: 3 credit hours**

**3 credit hours of lecture and 0 credit hours of lab per week.**

A survey of basic immunological principles is presented for the student to provide a general orientation to immunology. Certain concepts and the major effectors of immune responses are introduced and more detailed discussions are held later in the course. Central aspects of humoral and cellular immune responses, both specific and non-specific are covered.

Exploration of special topics in immunology such as autoimmunity and immunodeficiency is held. Immunologic principles of laboratory diagnosis of human disease are emphasized.

For each unit of credit, a minimum of three hours per week with one of the hours for class and two hours for studying/preparation outside of class is expected.

Pre-requisite: [Prereq]

**III. PROGRAM AND/OR DEPARTMENT MISSION STATEMENT:**

The Seward County Community College Medical Laboratory Technology program provides a curriculum that produces competent, career entry level medical laboratory technicians.

**IV. TEXTBOOK AND MATERIALS:**

Clinical Immunology & Serology: A Laboratory Perspective, 4th Ed. C. Stevens, 2017 ISBN -9780803644663

**V. SCCC OUTCOMES**

Students who successfully complete this course will demonstrate the ability to do the following SCCC Outcomes.

I: Read with comprehension, be critical of what they read, and apply knowledge gained to real life

II: Communicate ideas clearly and proficiently in writing, appropriately adjusting content and arrangement for varying audiences, purposes, and situations.

V: Demonstrate the ability to think critically by gathering facts, generating insights, analyzing data, and evaluating information

**VI. COURSE OUTCOMES:**

Upon completion of this course, the student will be able to:

1. Provide a historical context of immunology by tracing some of the major developments that have occurred in the field of immunology.
2. Discuss the function and anatomy of the cells, tissues, and organs of the immune system.
3. Relate the basic components of external and internal defense systems that provide natural resistance.
4. Describe the basic concepts of passive and acquired immunity and the role of antigens, immunoglobulins, and complement in these processes.
5. Discuss the physiologic and pathologic consequences of immune activity, the ways in which these can be manipulated, and the highlights of transplantation immunology.
6. Summarize immunodeficiency conditions, neoplasms of the immune system and diseases of

immune etiology.

7. Relate and interpret tests that exploit different immunologic principles.

8. State the relative advantages and disadvantages the tests provide for laboratory analysis.

## **VII. COURSE OUTLINE:**

1. Introduction to the Immune System
2. Innate Immunity
3. Antigen Capture and Presentation
4. Adaptive Immune System & Antigen Recognition
5. T-Cell Mediated Immunity
6. Humoral Immune Response
7. Autoimmunity
8. Tumor and Transplant Immune Response
9. Hypersensitivity
10. Congenital and Acquired Immunodeficiencies
11. Introduction to Virology & Serology
12. Assay Methods and Molecular Diagnostic Overview

## **VIII. INSTRUCTIONAL METHODS:**

Lecture, discussion, computer tutorials, article reviews, written assignments.

## **IX. INSTRUCTIONAL AND RESOURCE MATERIALS:**

Handouts, selected reference readings, Internet sites.

## **X. METHODS OF ASSESSMENT:**

SCCC/ATS Outcome #1 and #2 will be assessed and measured by class participation in threaded discussion assignments indicating comprehension of the material read.

SCCC/ATS Outcome #5 will be assessed and measured by class participation in the discussion assignments and examination scores.

## **XI. ADA STATEMENT:**

Under the Americans with Disabilities Act, Seward County Community College will make reasonable accommodations for students with documented disabilities. If you need support or assistance because of a disability, you may be eligible for academic accommodations. Students should identify themselves to the Dean of Students at 620-417-1106 or go to the Student Success Center in the Hobbie Academic building, room A149.

Syllabus Reviewed: 11/1/2022