

# BIO 271 Pathophysiology

## COURSE DESCRIPTION:

Prerequisites: BIO 169

Corequisites: None

This course provides an in-depth study of human pathological processes and their effects on homeostasis. Emphasis is on interrelationships among organ systems in deviations from homeostasis. Upon completion, students should be able to demonstrate a detailed knowledge of pathophysiology. Course topics include the etiology, physical signs and symptoms, prognosis, and complications of commonly occurring diseases and their management. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

Course Hours per Week: Class, 3. Semester Hours Credit, 3.

## LEARNING OUTCOMES:

Upon completing requirements for this course, the student will be able to:

1. Describe the general physiological processes used by the body to maintain homeostasis
2. Describe the pathophysiological responses to infection, necrosis, stress, carcinogenesis
3. Discuss the etiology and effects of disease on the various organ systems
4. Identify compensation mechanisms that occur in response to trauma and disease

## OUTLINE OF INSTRUCTION:

- I. Common disease categories and terminology
  - A. Characteristics of diseases
  - B. Classification of diseases
- II. Common diagnostic methodology
  - A. Diagnosis versus prognosis
  - B. Diagnosing the patient
    - i. Clinical history
    - ii. Physical examination
    - iii. Differential diagnoses
  - C. Treatment
  - D. Diagnostic tests and procedure
    - i. Invasive procedures
    - ii. Noninvasive procedures
- III. Clinical characteristics of inflammation
  - A. Inflammatory reaction and cycle
  - B. Chemical mediators
  - C. Infection
- IV. Basic immunology, hypersensitivity, and autoimmune disorders





- B. Intracellular and extracellular electrolytes
- C. Fluid and electrolyte imbalances
- D. Acid/base imbalances
- E. Respiratory control mechanisms
- F. Renal control mechanisms

**REQUIRED TEXTBOOK AND MATERIAL:**

The textbook and other instructional material will be determined by the instructor.