



**BAKER COLLEGE**  
**STUDENT LEARNING OUTCOMES**

**BIO2150 Pathophysiology**  
**3 Semester Hours**

---

**Student Learning Outcomes & Enabling Objectives**

1. Classify disease as a failure of homeostasis.
  - a. Discuss homeostasis as it relates to feedback loops (negative or positive).
2. Utilize terminology related to the study of disease.
  - a. Discuss etiology, manifestations (signs and symptoms), diagnosis, sequelae/complications and prognosis.
3. Recognize cellular responses to injury and diseases.
  - a. Explain cellular adaptations as it relates to change in homeostasis.
  - b. Identify atrophy, hypertrophy, hyperplasia, metaplasia, dysplasia, anaplasia, and neoplasia.
4. Describe the inflammatory response and healing.
  - a. Identify cardinal signs and symptoms of inflammation.
  - b. Compare acute and chronic inflammation.
  - c. Discuss resolution, regeneration and repair by scar tissue formation.
5. Describe the pathophysiology, etiology, manifestations (signs and symptoms), diagnostic procedures, treatment modalities, sequelae/complications and prognosis of diseases and disorders of the endocrine system:
  - a. Diabetes Mellitus
  - b. Hyperthyroidism
  - c. Hypothyroidism
  - d. Cushing's syndrome
  - e. Addison's disease
6. Compare and contrast benign and malignant tumors.
  - a. Understand terminology related to tumors/cancer.
  - b. Describe a benign tumor.
  - c. Describe a malignant tumor.
  - d. Identify tumors in stages.
  - e. Describe the process of carcinogenesis.
  - f. Describe the processes of invasion and metastasis.
7. Describe the inherited patterns of genetic or chromosomal disorders.
  - a. Congenital
  - b. Autosomal dominant
  - c. Autosomal recessive
  - d. X-linked

- e. Y-linked
8. Describe the pathophysiology, etiology, manifestations (signs and symptoms), diagnostic procedures, treatment modalities, sequelae/complications and prognosis of diseases and disorders of the integumentary system:
    - a. Malignant melanoma
    - b. Kaposi's Sarcoma
  9. Describe the pathophysiology, etiology, manifestations (signs and symptoms), diagnostic procedures, treatment modalities, sequelae/complications and prognosis of musculoskeletal diseases and disorders:
    - a. Osteoporosis
    - b. Duchenne's Muscular Dystrophy
    - c. Osteoarthritis
    - d. Rheumatoid Arthritis (RA)
  10. Describe the pathophysiology, etiology, manifestations (signs and symptoms), diagnostic procedures, treatment modalities, sequelae/complications and prognosis of diseases and disorders of the nervous system.
    - a. Describe Acute Neurological Disorders.
      - i. Cerebrovascular accidents
      - ii. Transient ischemic attacks (TIA)
      - iii. Increased intracranial pressure
    - b. Describe Chronic Neurological Disorders.
      - i. Parkinson's disease (PD)
      - ii. Alzheimer's disease (AD)
      - iii. Multiple sclerosis (MS)
      - iv. Seizures
      - v. Amyotrophic Lateral Sclerosis (ALS)
  11. Describe the pathophysiology, etiology, manifestations (signs and symptoms), diagnostic procedures, treatment modalities, sequelae/complications and prognosis of diseases and disorders of the blood.
    - a. Describe Leukemia.
    - b. Describe Iron deficiency anemia.
    - c. Describe Pernicious anemia.
    - d. Describe Sickle cell anemia.
    - e. Describe Hemophilia A.
  12. Describe the pathophysiology, etiology, manifestations (signs and symptoms), diagnostic procedures, treatment modalities, sequelae/complications and prognosis of diseases and disorders of the cardiovascular system.
    - a. Describe coronary artery disease including: arteriosclerosis, atherosclerosis, ischemia, angina pectoris and myocardial infarction.
    - b. Describe congestive heart failure.
    - c. Describe rheumatic heart disease.
    - d. Describe hypertension.
    - e. Describe aortic aneurysms.

- f. Describe cardiac dysrhythmias.
13. Discuss the process of infectious disease.
- a. Discuss modes of transmission.
  - b. Discuss control of transmission.
  - c. Discuss patterns of infection.
  - d. Discuss signs and symptoms of infection.
14. Describe the pathophysiology, etiology, manifestations (signs and symptoms), diagnostic procedures, treatment modalities, sequelae/complications and prognosis of diseases and disorders of the immune system.
- a. Describe AIDS.
  - b. Describe hypersensitivity reactions.
  - c. Describe anaphylaxis.
  - d. Describe systemic lupus erythematosus (SLE).
15. Describe the pathophysiology, etiology, manifestations (signs and symptoms), diagnostic procedures, treatment modalities, sequelae/complications and prognosis of diseases and disorders of the digestive system.
- a. Describe peptic ulcers.
  - b. Describe viral hepatitis.
  - c. Describe Crohn's disease.
  - d. Describe cholelithiasis.
  - e. Describe gastroesophageal reflux disease (GERD).
  - f. Describe diverticulitis.
  - g. Describe colorectal cancer.
16. Describe the pathophysiology, etiology, manifestations (signs and symptoms), diagnostic procedures, treatment modalities, sequelae/complications and prognosis of diseases and disorders of the respiratory system.
- a. Describe tuberculosis (TB).
  - b. Describe cystic fibrosis (CF).
  - c. Describe influenza.
  - d. Describe pneumonia.
  - e. Describe asthma.
  - f. Describe emphysema.
  - g. Describe chronic bronchitis.
  - h. Describe lung cancer.
17. Describe the pathophysiology, etiology, manifestations (signs and symptoms), diagnostic procedures, treatment modalities, sequelae/complications and prognosis of diseases and disorders of urinary system.
- a. Describe cystitis and urethritis.
  - b. Describe pyelonephritis.
  - c. Describe urolithiasis.
  - d. Describe acute and chronic renal failure.
  - e. Describe acute poststreptococcal glomerulonephritis.

18. Describe the pathophysiology, etiology, manifestations (signs and symptoms), diagnostic procedures, treatment modalities, sequelae/complications and prognosis of diseases and disorders of the reproductive system.
- a. Describe benign prostatic hypertrophy.
  - b. Describe pelvic inflammatory disease (PID).
  - c. Describe gonorrhea.
  - d. Describe syphilis.
  - e. Describe genital herpes.
  - f. Describe breast cancer.
  - g. Describe prostate cancer.

---

These SLOs are not approved for experiential credit.

**Effective: Fall 2019**