BIOL C226: PATHOPHYSIOLOGY

Item	Value
Curriculum Committee Approval Date	04/22/2022
Top Code	041000 - Anatomy and Physiology
Units	3 Total Units
Hours	54 Total Hours (Lecture Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Standard Letter (S), • Pass/No Pass (B)
California General Education Transfer Curriculum (Cal-GETC)	• Cal-GETC 5B Biological Sciences (5B)
Intersegmental General Education Transfer Curriculum (IGETC)	• IGETC 5B Biological Sciences (5B)
California State University General Education Breadth (CSU GE-Breadth)	• CSU B2 Life Science (B2)

Course Description

Pathophysiology is the study of disease processes in the human. This course introduces the fundamentals of pathophysiology, focusing on essential concepts of physiologic changes and altered functions in the human body resulting from disease processes. Principles from anatomy, physiology, and chemistry provide the foundation for the study of pathophysiology, body systems, etiology and pathogenesis. Diagnostic procedures, preventative measures and current therapeutic regimens are explored. PREREQUISITE: BIOL C220 and BIOL C225. Transfer Credit: CSU; UC. C-ID: HIT 105X.**C-ID:** HIT 105X.

Course Level Student Learning Outcome(s)

1. Given a series of scenarios, compare and contrast normal physiological processes and abnormal pathological conditions.
2. Describe how disease processes interfere with normal homeostasis in organ systems.

Course Objectives

- 1. Define what disease is and identify common causes of morbidity and mortality in patients.
- 2. Define terminology associated with the study of pathophysiology.
- 3. Identify common disorders of selected body systems in terms of pathogenesis, etiology, clinical manifestations, significant diagnostic tests, common treatment modalities, and potential complications.
- 4. Analyze and interpret typical signs and symptoms of selected disorders.
- 5. Identify physiologic changes related to adolescence, pregnancy, and aging.
- 6. Explain the differences in disease processes in the elderly and pediatric populations.
- 7. Discuss the influence of age, heredity, environment, stress, and immune response in disease processes.
- 8. Apply knowledge of responses of the human body to illness and injury toward more effective patient care.

Lecture Content

Introduction to pathophysiology inflammation and healing Abnormal immune responses and infection Neoplasms and fluid, electrolyte, and acid-base imbalances Congenital and genetic disorders and pregnancy Adolescent health problems and aging and disease processes Effects of immobility and influence of stress Pain and substance abuse and environmental hazards Cardiovascular and lymphatic disorders Respiratory disorders Digestive system disorders Urinary system disorders Neurologic disorders Endocrine disorders Musculoskeletal disorders Skin disorders Reproductive system disorders

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)
- DE Online Lecture (02X)

Instructional Techniques

Lecture, reading assignments, PowerPoints, Videos.

Reading Assignments

Textbook, Open Educational Resource, and journal readings.

Writing Assignments

Essays, short answer questions.

Out-of-class Assignments

Videos, library assignments.

Demonstration of Critical Thinking

This course requires that students understand the concept of homeostasis and how disease interferes with this process of maintaining normalcy.

Required Writing, Problem Solving, Skills Demonstration

Assigned reading, journal interpretation, short answers, essays

Eligible Disciplines

Biological sciences: Masters degree in any biological science OR bachelors degree in any biological science AND masters degree in biochemistry, biophysics, or marine science OR the equivalent. Masters degree required.

Textbooks Resources

1. Required Sandy Falk, MD. The Merck Manual Professional Edition, 20th ed. Merck, 2018 2. Required Sandy J. Falk, MD. https://www.merckmanuals.com/professional, ed. Merck, 2022 3. Required Gould, W.B. Saunders. Pathophysiology for the Health Professional, 6th ed. Elsevier, 2018

Other Resources

1. https://www.cdc.gov 2. Coastline Library