

# Common Course Outline

## BIOL 260

### Disease and Diagnosis

4 Credits

## Community College of Baltimore County

### Description

**BIOL 260 – Disease and Diagnosis** serves as an introduction to basic concepts of pathology, pathophysiology, and pharmacology, and to tools used in the diagnosis and treatment of diseases, disorders and injuries. The integumentary, skeletal, muscular, nervous, endocrine, lymphatic, circulatory, respiratory, digestive, urinary, and reproductive systems are covered. Students apply medical terminology and anatomical and physiological concepts learned in previous courses.

**4 Credits:** *3 lecture hours, 3 lab hours per week*

**Prerequisites:** MATH 083 or any college-level math course; and BIOL 160, or BIOL 109, or appropriate anatomy and physiology coursework as approved by the program coordinator.

### Overall Course Objectives

Upon completion of this course students will be able to:

1. evaluate and use academically-appropriate sources of information;
2. apply anatomical and medical terminology appropriately in normal and diseased or injured states;
3. compare normal anatomy and physiology with pathology and pathophysiology within body systems;
4. explain how pathology and pathophysiology within one system can affect other systems;
5. collect (using appropriate instrumentation) and/or calculate physiologic data;
6. interpret and evaluate physiologic values to infer possible disease processes either individually or collaboratively;
7. explain the use of appropriate diagnostic tools and procedures to identify injuries and diseases based on associated pathology and/or pathophysiology;
8. explain the use of appropriate pharmacological therapies and physical modalities to treat injuries and disease processes based on associated pathology and/or pathophysiology;
9. relate methods of natural and artificial fertilization and contraception to pregnancy and prevention thereof; and
10. describe normal human development from conception to birth and identify injuries and diseases that can occur during that process.

## **Major Topics**

- I. Introduction to pathology and pathophysiology
  - A. Introduction to diagnostic techniques
  - B. Introduction to pharmacological therapies and physical modalities
  - C. Cellular and genomic bases of injury, disease and aging
- II. Pregnancy & fetal development
  - A. Female and male reproductive systems
  - B. Contraception technology and fertilization
- III. Pathology, pathophysiology, diagnosis and treatment related to specific body systems
  - A. Integumentary system
  - B. Skeletal and muscular systems
  - C. Control systems: Endocrine and nervous systems
  - D. Circulatory and lymphatic systems and immunity
  - E. Respiratory system
  - F. Digestive system
  - G. Urinary system

## **Course Requirements**

Grading procedures will be determined by the individual faculty member but will include the following:

### **Grading/exams**

#### Lecture Portion

- A minimum of three unit exams and/or six mini-tests
- A comprehensive final exam
- One written paper
- One collaborative project and/or 3 class discussions

#### Lab Portion

- Two laboratory exams and/or four laboratory quizzes; exams and quizzes will include a practical component
- Two written reports on laboratory-based activities, such as lung volume or blood pressure measurement or urinalysis, in which the student has participated

Written Assignments: Students are required to use appropriate academic resources.

### **Other Course Information**

Students must earn a passing grade (60%) in both the lecture and laboratory portions of the course to pass the course. Earning less than 60% in either will result in failure of the entire course. If the student repeats the course, he/she must repeat both the lecture and laboratory portions. Students may not take the course more than twice. For the Health Informatics and Information Technology degree and Medical Coding Certificate Program, students must earn at least a C in this course.

This course is a core course for students seeking a Health Informatics and Information Technology degree or Medical Coding Certificate. The laboratory portion of this course is delivered using a combination of traditional anatomy laboratory and electronic media. Individual faculty members may include additional course objectives, major topics, and other course requirements in addition to the minimum expectations stated in the Common Course Outline.

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