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<b>Course Prefix/Number:</b>	<b>BIO 210</b>
<b>Course Title:</b>	<b>Anatomy and Physiology I</b>
<b>Lecture Hours per Week:</b>	<b>3.0</b>
<b>Lab Hours per Week:</b>	<b>3.0</b>
<b>Credit Hours per Semester:</b>	<b>4.0</b>

[Distance Learning Attendance/VA Statement](#)  
[Textbook Information](#)

## **COURSE DESCRIPTION**

This is the first in a sequence of courses, including an intensive coverage of the body as an integrated whole. All body systems are studied.

## **COURSE/MODULE COMPETENCIES**

The student will be given instruction and appropriate laboratory materials. Upon successful completion of this course, the student should be competent to perform the following tasks:

### **Module 1: The Body as a Whole**

- Identify the levels of organization in the human body, characteristics of life, anatomical position, body and abdominal regions, abdominopelvic quadrants, bilateral symmetry, terms used in describing body structure, and basic generalizations about homeostasis; laboratory activities include investigations related to the topics of body organization.
- Relate fundamental principles of basic chemistry and biochemistry to anatomy and physiology; laboratory activities include building models of carbohydrates, proteins, and lipids.
- Correlate basic cell structures to their functions; laboratory activities include learning the parts and the proper use of the compound microscope.
- Compare and contrast passive and active transport processes and demonstrate knowledge of the cell life cycle; laboratory activities include conducting experiments related to diffusion, dialysis, and osmosis.
- Correlate the structure of the major tissue types to their functions in the human body; laboratory activities include using the microscope to observe and draw representatives of the four major tissues types.

### **Module 2: Integumentary and Skeletal Systems**

- Inspect and identify basic generalizations concerning structure and functions of the integumentary system and the mechanism for maintaining body temperature homeostasis; laboratory activities include using the microscope to observe and draw skin.
- Correlate the structure of skeletal tissues to their functions; laboratory activities include using the microscope to observe and draw compact bone tissue.
- Identify the divisions of the skeleton, the major bones and bone markings of the human body, and skeletal differences in men and women; laboratory activities include using articulated

skulls as well as articulated and disarticulated skeletons to learn the bones and the major bone markings of the axial and appendicular skeletons.

- Recognize the major types of articulations based on structure and function.

### **Module 3: Muscular System and Nervous System Cells**

- Describe the structure of skeletal muscles and identify the major skeletal muscles of the human body; laboratory activities include:
  1. Using muscle man models and torsos to locate the major skeletal muscles of the human body.
  2. Dissecting a preserved cat to locate major muscles, which correspond to major human muscles.
- Discuss the function of skeletal muscle tissue and skeletal muscle organs as well as the function of cardiac and smooth muscle tissue.
- Identify the fundamental types of nervous system cells, neuron physiology, and the mechanism and importance of the reflex arc; laboratory activities include using the microscope to observe and draw the major cells in the nervous system.

### **Module 4: The Central and Peripheral Nervous System**

- Compare and contrast the structure and functions of the component parts of the central nervous system; laboratory activities include:
  1. Using the microscope to observe and draw the spinal cord.
  2. Locating the major structures of the human brain using models.
  3. Dissecting sheep brains to locate major structures which correspond to major structures of the human brain.
- Compare and contrast structure and functions of the component parts of the peripheral nervous system; laboratory activities include:
  1. Using models of the human brain as well as sheep brains to locate the cranial nerves.
  2. Comparing cranial nerves observed on human brain models with cranial nerves observed on sheep brains.
- Distinguish between general and special organs and examine in detail the structure and functions of the eye and ear.

### **MINIMAL STANDARDS**

Minimal standards of performance on all course competencies for receiving credit for the course are indicated by 70 percent accuracy for all nursing, dental hygiene, and college transfer students on all evaluation instruments (see evaluation strategies) which address the performance objectives listed above.

### **LECTURE ATTENDANCE POLICY**

Students are responsible for attending meetings in the course until they have completed all course requirements. Students are responsible for all material covered and for all assignments made in all classes. Students who are absent from a course more than 10 percent of the total contact hours assigned may be withdrawn. Since BIO 210 has a total of 48 contact hours for lecture, any student who is absent from lecture 5 contact hours will be dropped in accordance with the York Technical College attendance policy. See Instructor's Individual Policy for more information.

## LABORATORY ATTENDANCE POLICY

BIO 210 is a four-credit hour course with three lecture hours and one three-hour lab each week. The lab grade will count as one-fourth of the final course grade. Student attendance is required for all lab sessions. It is the student's responsibility to arrange with the instructor to make up any lab that is missed. With the instructor's permission, any lab session missed can be made up at another BIO 210 lab during that same week. If this is not possible, ONE lab can be made up by writing a term paper in the format specified by the instructor. **ONLY ONE LAB CAN BE MADE UP IN THIS MANNER.** There will be a 10-point reduction in the lab grade for each missed lab that is not made up. If a student fails to make up as many as three missed labs, his/her lab grade will be recorded as zero. See Instructor's Individual Policy for more information concerning labs.

## WITHDRAWAL POLICY

A student may withdraw from a course after the add/drop period until midterm with a grade of "W." Withdrawals after midterm will result in either a grade of "W" or "WF" depending upon the student's academic performance and attendance in the course at the time of withdrawal.

## STUDENT CONDUCT – ACADEMIC INTEGRITY

Students are expected to conform to all standards of conduct as specified in the York Technical College Handbook and Catalog. In addition, any student caught cheating or involved in any other academic dishonesty will be given a grade of zero and may be subject to further disciplinary action.

## EVALUATION STRATEGIES/GRADING

Grades will be determined as described below:

### Lecture: 75%

The lecture grade is evaluated through lecture tests and a final comprehensive exam.

Module 1	15%
Module 2	15%
Module 3	15%
Module 4	15%
Final Comprehensive Exam	15%

### Lab: 25%

The lab grade is based on the lab activities described in Modules 1-4 and is evaluated through lab quizzes and lab reports.

The grading scale will be as follows:

- A 90-100
- B 80-89
- C 70-79
- D 60-69
- F Below 60

See Instructor's Individual Policy for more information concerning determination of the final course grade.

**ENTRY LEVEL SKILLS**

The student entering this course must possess reading comprehension and writing skills on a 10<sup>th</sup> grade level.

**PREREQUISITES:** RDG 100 or equivalent; it is recommended that students with no chemistry background take CHM 101 before taking BIO 210.

**CO-REQUISITES:** None

**Disabilities Statement:** Any student who feels s/he may need an accommodation based on the impact of a disability should contact the Special Resources Offices (SR) at 803-327-8007 in the 300 area of Student Services. The SRO coordinates reasonable accommodations for students with documented disabilities.