COURSE INFORMATION

Course Prefix/Number: BIO 211
Course Title: Anatomy and Physiology II
Lecture Hours/Week: 3.0
Lab Hours/Week: 3.0
Credit Hours/Semester: 4.0

VA Statement/Distance Learning Attendance
Textbook Information
Student Code and Grievance Policy
Attendance Statement (3-30-4000.1)

COURSE DESCRIPTION

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

COURSE 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: Endocrine System and Cardiovascular Anatomy

- Cite major differences between prostaglandins and hormones, the mechanism and importance of hormone action, and the functions, target organs, and control of hormones produced by the major endocrine organs; laboratory activities include:
  - Using torsos to locate the major endocrine glands of the human body.
  - Dissecting a preserved cat to locate major endocrine glands which correspond to major human endocrine glands.
- Determine the functions and components of whole blood, diseases associated with blood cells, the major human blood types, and the mechanism of blood coagulation; laboratory activities include:
  - Typing samples of blood.
  - Using the microscope to observe and draw a prepared blood smear.
- Recognize the anatomy of the heart and major blood vessels of the human body, and trace the path of blood through systemic, pulmonary, portal, and fetal circulations; laboratory activities include:
  - Using heart models and torsos to locate the major structures of the human heart and the major blood vessels of the human body.
  - Dissecting a sheep heart and preserved cats to locate the major heart structures and blood vessels which correspond to major human heart structures and blood vessels.
Module 2: Cardiovascular Physiology, Lymphatic and Respiratory Systems
- Demonstrate a practical knowledge of heart physiology, control of circulation, blood pressure, and pulse.
- Correlate the lymphatic system in terms of structure and function.
- Identify the component parts of the upper and lower respiratory tract, relating structure to function; laboratory activities include:
  o Using torsos and respiratory models to locate the major structures of the human respiratory system.
  o Dissecting preserved cats to locate major respiratory structures which correspond to major human respiratory structures.
- Demonstrate a practical knowledge of the fundamental processes involved in respiratory physiology, including pulmonary ventilation, gas exchange, gas transport, and regulation of respiration; laboratory activities include conducting various experiments which relate to respiratory physiology.

Module 3: Digestive System and Metabolism
- Examine the basic anatomy of the main and accessory organs of digestion, including modifications which occur in digestive organ walls; laboratory activities include:
  o Using torsos to locate the major structures of the human digestive system.
  o Dissecting preserved cats to locate major digestive structures which correspond to major human digestive structures.
- Cite the major processes involved in mechanical and chemical digestion, including control of digestive gland secretion and absorption; laboratory activities include conducting various experiments which relate to mechanical and chemical digestion as well as absorption.
- Correlate the basic principles of metabolism to the metabolism of carbohydrates, fats, and proteins; laboratory activities include conducting experiments relating to the metabolism of various foods.
- Determine rates of metabolism and mechanisms for regulating food intake; laboratory activities include obtaining an estimate of basal rate of metabolism.

Module 4: Urinary and Reproductive Systems
- Correlate the structure and function of the component parts of the urinary system, including processes involved in urine formation; laboratory activities include:
  o Using torsos and kidney models to locate the major structures of the human urinary system.
  o Dissecting pig kidneys to locate major urinary structures which correspond to major human urinary structures.
- Identify the essential and accessory organs of the male and female reproductive system, relating structure to function; laboratory activities include:
  o Using torsos and reproductive models to locate the major structures of the male and female reproductive system.
  o Dissecting preserved cats to locate major structures of the male and female reproductive system which correspond to major human male and female reproductive structures.
- Recognize the cyclical changes which occur each month in the female reproductive system, including how these cycles are controlled.
METHODS OF INSTRUCTION

Principles will be introduced by the instructors through lecture and laboratory activities, utilizing lecture presentations, technology, computer-based training, and hands-on experimentation. Additional methods designed for remediation or enrichment will be individually tailored as needed.

COURSE REQUIREMENTS

Withdrawal from a Course
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.

Academic Integrity
The policies stated in the York Technical College Handbook will be enforced. Any student violating these policies will be subject to academic discipline.

EVALUATION STRATEGIES/GRADING

Grades will be determined as described below:

Module Tests and Homework .................. 60%
Cumulative Final Exam ........................ 15%
Lab ................................................. 25%

Grading Scale

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<thead>
<tr>
<th>Grade</th>
<th>Range</th>
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<tbody>
<tr>
<td>A</td>
<td>90 - 100</td>
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<tr>
<td>B</td>
<td>80 - 89</td>
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<tr>
<td>C</td>
<td>70 - 79</td>
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<td>D</td>
<td>60 - 69</td>
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<tr>
<td>F</td>
<td>Below 60</td>
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The above requirements and topics are standard and required for the course. Individual instructors will provide statements of additional requirements and/or policy.

ENTRY LEVEL SKILLS

None

PREREQUISITES

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 Office (SRO) at 803-327-8007 in the 300 area of Student Services. The SRO coordinates reasonable accommodations for students with documented disabilities.