

# RARITAN VALLEY COMMUNITY COLLEGE ACADEMIC COURSE OUTLINE

## BIOL 125 - Human Anatomy and Physiology II

### I. Basic Course Information

- A. Course Number and Title: BIOL 125 – Human Anatomy and Physiology II
- B. New or Modified Course: Modified
- C. Date of Proposal: Semester: Fall Year: 2020
- D. Effective Term: Fall 2021
- E. Sponsoring Department: Science and Engineering
- F. Semester Credit Hours: 4
- G. Weekly Contact Hours: Lecture: 3  
Laboratory: 3  
Out of class student work per week: 7.5
- H. Prerequisites: BIOL 124 - Human Anatomy and Physiology I
- I. Laboratory Fees: NO
- J. Name and Telephone Number or E-Mail Address of Department Chair and Divisional Dean at time of approval:  
Department Chair: Ed Carr, [Edward.Carr@raritanval.edu](mailto:Edward.Carr@raritanval.edu)  
Divisional Dean: Sarah Imbriglio, [sarah.imbriglio@raritanval.edu](mailto:sarah.imbriglio@raritanval.edu)

### II. Catalog Description

Prerequisite: BIOL 124 - Human Anatomy and Physiology I

This course is an in-depth study of the structures and functions of the general and special senses and the endocrine, cardiovascular, lymphatic, immune, respiratory, digestive, urinary and reproductive systems. In the laboratory students will examine models and preserved specimens, and conduct physiological as well as computer simulated experiments. Students that successfully complete this course will be able to identify relevant anatomical structures and integrate this knowledge with a physiological

understanding of the systems covered in this course. The Honors Option is available for this course.

### **III. Statement of Course Need**

- A. This course serves as a prerequisite for nursing RN/PN/AD programs and the Occupational Therapy Assistant program. It is a required course in the Exercise Science and is a general education lab science elective. Students who complete this course and the prerequisite course in the sequence, Human Anatomy and Physiology I, will have a firm foundation of understanding of the structure and function of the human body.
- B. This course requires a lab component so that students have the time and proper equipment for studying anatomical models, histology slides and specimens, and for performing physiological experiments and procedures. The programs for which it is a prerequisite/requirement require a laboratory component and having the lab increases the transferability of the course.
- C. This course generally transfers as a program requirement or a free elective.

### **IV. Place of Course in College Curriculum**

- A. Free elective.
- B. This course serves as a General Education course in Science with Lab.
- C. This course meets a pre-requisite requirement for the Nursing RN/PN/AD programs
- D. This course meets a program requirement for Exercise Science, Health Science, AS; Exercise Science - Option in Sports Management, AS; and Exercise Science - Option in Sports Medicine and Rehabilitation.
- E. To see course transferability: a) for New Jersey schools, go to the NJ Transfer website, [www.njtransfer.org](http://www.njtransfer.org); b) for all other colleges and universities, go to the individual websites.

### **V. Outline of Course Content**

- A. The Special Senses
- B. The Endocrine System
- C. The Cardiovascular System
- D. Blood
- E. The Lymphatic System
- F. The Immune System
- G. The respiratory System
- H. The Digestive System
- I. The Urinary System
- J. Fluid, Electrolyte and Acid Base System

## **VI. General Education and Course Learning Outcomes**

### **A. General Education Learning Outcomes:**

**At the completion of the course, students will be able to:**

1. Use working vocabulary of appropriate terminology in the systems covered (Core SLO)
2. Identify structure of the systems covered (Core SLO)
3. Differentiate among various histological body tissue samples (Core SLO)
4. Explain the function of the organs within a particular system and their importance to that system's function and to maintaining homeostasis (Core SLO)
5. Correlate structure and function relationships within a particular system (Core SLO)
6. Integrate knowledge of anatomical and physiological functions of the entire body\* (Core SLO)
7. Utilize concepts of the scientific method investigating laboratory/clinical data\* (Core SLO)

(\*embedded critical thinking)

### **B. Course Learning Outcomes:**

**At the completion of the course, students will be able to:**

1. Identify important anatomical structures of general sensory receptors and special sensory organs and of the endocrine, cardiovascular, lymphatic, immune, respiratory, digestive, urinary, and reproductive systems.
2. Demonstrate understanding of physiological mechanisms involved in cell, tissue and organ function.
3. Use traditional laboratory and technological tools to examine anatomical features, study physiological processes and acquire, and interpret physiological data.

### **C. Assessment Instruments**

- A. Theoretical Exams
- B. Practical Exams
- C. Group lab work/projects
- D. Laboratory Simulations
- E. Online programs

## **VII. Grade Determinants**

- A. Lecture exams and quizzes

- B. Laboratory exams and quizzes
- C. Individual lecture and laboratory assignments
- D. Research projects and/or collaborative projects in or out of class
- E. Class participation and/or preparation
- F. Discussion questions

Primary formats, modes, and methods for teaching and learning that may be used in the course:

- A. lecture/discussion
- B. small-group work
- C. computer-assisted instruction
- D. laboratory
- E. student oral presentations
- F. student collaboration
- G. independent study

### **VIII. Texts and Materials**

- A. suggested textbook
  - *Human Anatomy and Physiology*, E.N. Marieb, K. Hoehn (most recent edition, Pearson).
  - *Human Anatomy and Physiology Laboratory Manual: Fetal Pig Version*, E.N. Marieb and S.J. Mitchell (most recent edition)
- B. primary resources
- C. web sources: Mastering Anatomy and Physiology (Pearson)
- D. computer-based sources: Physio-Ex, simulation software, Interactive Physiology, PAL (Pearson)
- E. other (at discretion of instructor)

Please Note: The course outline is intended only as a guide to course content and resources. Do not purchase textbooks based on this outline. The RVCC Bookstore is the sole resource for the most up-to-date information about textbooks.

### **IX. Resources**

- A. Anatomy laboratory with computers and equipment
- B. School computer labs for access to web resources
- C. Text books and software on reserve at library.