



COURSE SYLLABUS

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COURSE: **BIO 166** **ANATOMY AND PHYSIOLOGY II**

HOURS: Lecture: 3 Lab/Shop: 3 Work Exp/Clinical: 0 Credits: 4

COURSE DESCRIPTION:

This course is the second in a two-course sequence which provides a comprehensive study of the anatomy and physiology of the human body. Topics include the structure, function, and interrelationship of organ systems with emphasis on the processes which maintain homeostasis. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and the interrelationships of all body systems.

Note: In accordance with the Comprehensive Articulation Agreement, this course has been approved to satisfy the pre-major/elective requirement in A.A. and A.S. degree programs. This course has been approved to meet the natural sciences requirement in A.A.S. degree programs.

PREREQUISITE(S): BIO 165

COREQUISITE(S): None

TEXTBOOK(S) & OTHER SPECIAL REQUIREMENTS:

Open Educational Resources (OER) are listed in the course Moodle.

STUDENT LEARNING OUTCOMES:

Upon successful completion of this course, the student will be able to:

1. List the major endocrine glands within the body, and describe the functions of the hormones secreted.
2. Discuss the role of blood as a tissue, identify blood elements, and discuss their function.
3. Identify major structural components of the human heart, and relate these components to its function.
4. Provide specific examples of neural and hormonal mechanisms responsible for regulating cardiac function, blood volume, and pressure.
5. Describe the function, and structural organization of organs within the lymphatic, respiratory, digestive, urinary and reproductive systems.
6. Give specific examples of homeostatic mechanisms and imbalances within the circulatory, lymphatic, respiratory, digestive, urinary and reproductive systems.
7. Describe the major physiological processes that regulate electrolytes, pH, and fluid balance within the major body compartments.
8. Describe specific current methods used in vaccine production aimed at improving worldwide vaccine distribution.
9. Explain the molecular structure of DNA, and relate this structure to its ability to carry genetic traits from one generation to the next.

*****Please refer to the online version of the Richmond Community College Program & Course Catalog and the Student Handbook for current academic and general information.**