



COURSE SYLLABUS

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COURSE: **BIO 165** **ANATOMY AND PHYSIOLOGY I**

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

COURSE DESCRIPTION:

This course is the first of 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 their interrelationships.

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): None

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. Name the various regions and components of the human body using proper anatomical terminology.
2. Identify and explain the levels of organization of the human body.
3. Describe the location and role of biological molecules such as carbohydrates, proteins, lipids, and nucleic acids within the human body.
4. Identify and describe the function of common types of epithelial, connective, muscle, and nervous tissue.
5. Describe the basic structure and function of the integumentary system.
6. Identify specific muscles within the body, and describe their actions.
7. Describe the ultrastructure of muscle tissue, and relate it to the physiology of skeletal, smooth, and cardiac muscle contraction.
8. Identify whole bones, and components of bone tissue, and describe the skeleton's role in support, protection, movement, and calcium homeostasis.
9. Describe how electrochemical potentials are produced within muscle and nervous tissue, and explain how these potentials are converted to neural signals or muscle contractions.
10. Name and describe specific major diseases that are prevalent in both industrialized and developing countries.

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