

# Virginia Western Community College

## BIO 145

### Human Anatomy and Physiology for the Health Sciences

#### Prerequisites

All of the following prerequisites are strongly recommended: an ENG 111 placement recommendation, co-enrollment in ENF 3/ENG 111, or successful completion of all developmental English requirements; high school and/or college biology and/or chemistry within the last 5 years.

#### Course Description

Introduces human anatomy and physiology primarily to those planning to pursue an AAS degree in nursing or other allied health professions. Covers basic chemical concepts, cellular physiology, as well as the anatomy and physiology of human organ systems.

**Semester Credits: 4**

**Lecture Hours: 3**

**Laboratory Hours: 3**

#### Required Materials

**Textbook:**

#### Course Outcomes

**At the completion of this course, the student should be able to:**

- Develop a vocabulary of appropriate terminology to effectively communicate information related to anatomy and physiology.
- Recognize the anatomical structures and explain the physiological functions of body systems.
- Recognize and explain the principle of homeostasis and the use of feedback loops to control physiological systems in the human body.
- Use anatomical knowledge to predict physiological consequences, and use knowledge of function to predict the features of anatomical structures.
- Recognize and explain the interrelationships within and between anatomical and physiological systems of the human body.
- Synthesize ideas to make a connection between knowledge of anatomy and physiology and real-world situations, including healthy lifestyle decisions and homeostatic imbalances.
- Demonstrate laboratory procedures used to examine anatomical structures and evaluate physiological functions of each organ system.
- Interpret graphs of anatomical and physiological data.
- Demonstrate information literacy skills to access, evaluate, and use resources to stay current in the fields of anatomy and physiology.
- Approach and examine issues related to anatomy and physiology from an evidence-based perspective, including pathological conditions.

- Communicate clearly and in a way that reflects knowledge and understanding of the human body and demonstrates the ability to adapt information to different audiences and applications.

## **Teaching Methods**

This course is delivered in an online format. A variety of instructional methods may be incorporated into the online presentation and are instructor dependent. The amount of instructional time allocated to each topic may vary from instructor to instructor, according to their expertise and interest, but all parts on the outline are to be covered. This course is offered online and mostly asynchronous; however, parts will be synchronous in small groups.

## **Evaluation Criteria and Procedures**

Evaluations may vary from instructor to instructor. Generally, there are four or more written lecture examinations, computer-based lab quizzes and written examinations and/or performance based assessments to evaluate the laboratory exercises. In addition, there will be one comprehensive, written final exam during the exam week. At least two assessments will be proctored, per VCCS guidelines. Specific details are available in the course syllabus.

## **Topical Description**

- Week 1: Introduction Module  
\*Complete orientation assignment (due no later than SATURDAY at 11:59 p.m.)
- Week 2: Module 1: Levels of Organization  
Chapters 1, 2, and 3  
\*RECITATION #1 (Discussion posts due no later than SATURDAY at 11:59 p.m.)
- Week 3: Module 1: Levels of Organization  
Chapters 4 and 5  
\*TEST 1 (MODULE 1)
- Week 4: Module 2: Support and Movement  
Chapters 6 and 7  
\*RECITATION #2 (Discussion posts due no later than SATURDAY at 11:59 p.m.)
- Week 5: Module 2: Support and Movement  
Chapter 7  
\*RECITATION #3 (No discussion posts due this week)  
\*LAB PRACTICAL #1
- Week 6: Module 2: Support and Movement  
Chapter 8  
\*RECITATION #4 (No discussion posts due this week)  
\*TEST 2 (MODULE 2)
- Week 7: Module 3: Integration and Coordination  
Chapters 9 and 10  
\*RECITATION #5 (Discussion posts due no later than SATURDAY at 11:59 p.m.)
- Week 8: Module 3: Integration and Coordination  
Chapter 11  
\*TEST 3 (MODULE 3; this is a PROCTORED test)  
\*LAB PRACTICAL #2 (Module 2, part 2 and Module 3)
- Week 9: Module 4: Transport

- Chapter 12  
\*RECITATION #6 (Discussion posts due no later than SATURDAY at 11:59 p.m.)
- Week 10: Module 4: Transport  
Chapter 13  
\*RECITATION #7 (Discussion posts due no later than SATURDAY at 11:59 p.m.)
- Week 11: Module 4: Transport  
Chapter 14  
\*RECITATION #8 (No discussion posts this week)  
\*TEST 4 (MODULE 4)
- Week 12: Module 5: Absorption and Excretion  
Chapter 15  
\*RECITATION #9 (Discussion posts due no later than SATURDAY at 11:59 p.m.)
- Week 13: Module 5: Absorption and Excretion  
Chapter 16  
\*RECITATION #10 (Discussion posts due no later than SATURDAY at 11:59 p.m.)
- Week 14: Module 5: Absorption and Excretion  
Chapters 17 and 18  
\*TEST 5 (MODULE 5)
- Week 15: Module 6: Human Life Cycle  
\*RECITATION #11 (No discussion posts this week)  
\*LAB PRACTICAL #3 (Module 5 and 6)  
\*E-PORTFOLIO DUE  
\*FINAL EXAM (This includes module 6; this is a PROCTORED test.)

### **Notes to Instructors**

1. Departmental policy dictates that instructors do not allow students to keep tests.
2. A comprehensive final exam counting 15%-20% of the total grade will be given at the end of the semester.
3. The syllabus should state what the course grade will be based on, such as tests, quizzes, a comprehensive final exam, and any other assignments made by the instructor.
4. The VWCC Biology Department uses a 10-point grading scale.