

Anatomy and Physiology

SCIH 045 055

Credits: 0.5 units / 5 hours / NCAA

Course Description

Anatomy and Physiology is a detailed study of the human body, its parts and structures, and how these function together to create and sustain human life. In this course we will start with an introduction to terminology, human development, and body processes, then move on to the functioning of cells, tissues, and systems. With these basics to build on students will compile an extensive vocabulary of anatomical terminology as they navigate the various systems of the body, building toward a more complete understanding of the human body.

Graded Assessments:

6 Unit Evaluations; 3 Projects; 3 Proctored Progress Tests, 6 Teacher Connect Activities

Course Objectives

When you have completed the materials in this course, you should be able to:

1. Identify and define key terms and medical terminology.
2. Understand anatomical directions, planes, quadrants, and units of measure used in healthcare.
3. Demonstrate your familiarity with body cavities and regions and the organs found in them.
4. Be comfortable explaining the structure and functions of cells, tissues, membranes, and organs, and their roles and functions in the human body.
5. Identify tissues, organs, and organ systems and their functions.
6. Understand the components of the human musculoskeletal system, along with their functions and characteristics.
7. Identify the functions and structures of the central, sympathetic, and parasympathetic nervous systems.
8. Develop a good understanding of the glands that make up the endocrine system and their functions.
9. Evaluate the important components of your blood, including blood clotting and the significance of blood types.

10. Identify the principal arteries and veins in the body and understand the significance of the specialized circulatory systems.
11. Become familiar with the structures of the heart and its role in circulation
12. Develop a good understanding of how the respiratory system functions, its organs and structures, and various respiratory disorders.
13. Become familiar with the general function of your digestive system, including its structure and how the organs function.
14. Identify the actions of enzymes and juices that break down food and enable you to gain nourishment from it.
15. Understand the functions of the organs in the urinary system, explain how kidneys work to regulate water balance, and be able to identify some common urinary system disorders.
16. Explain the process of fertilization and identify all the organs, processes, and stages associated with it.
17. Explain the common disorders and diseases identified in the course.

Course Outline

Unit 1 Introduction to Anatomy and Physiology

Teacher Connect Activity 1

Lesson 1: Introduction to Body Structures and Processes

Lesson 2: Cells, Tissues, and Membranes

Unit 1 Evaluation

Project 1

Unit 2 Muscular and Skeletal Systems

Lesson 3: Skeletal System

Lesson 4: Muscular System

Unit 2 Evaluation

Teacher Connect Activity 2

Progress Test 1

Unit 3 The Nervous and Endocrine Systems

Lesson 5: Central, Peripheral, and Autonomic Nervous Systems

Lesson 6: Special Senses and the Endocrine System

Unit 3 Evaluation

Teacher Connect Activity 3

Project 2

Unit 4 Blood Circulation and the Heart

Lesson 7: Blood and Circulation

Lesson 8: The Heart

Unit 4 Evaluation

Teacher Connect Activity 4

Progress Test 2

Unit 5 Respiratory and Digestive Systems

Lesson 9: Respiratory System

Lesson 10: Digestive System

Unit 5 Evaluation

Teacher Connect Activity 5

Project 3

Unit 6 Reproductive and Urinary Systems

Lesson 11: Urinary System

Lesson 12: Reproductive System

Unit 6 Evaluation

Teacher Connect Activity 6

Progress Test 3

Required Textbook and Materials

(available through Follett virtual bookstore at <http://highschool.nebraska.bkstr.com>)

Textbook: *Body Structures and Functions*. Delmar, Cengage Learning. 2014. ISBN: 9781133691655