

Anatomy and Physiology, Semester B

Credits: 0.5

Course Overview and Goals

Anatomy and Physiology, Semester B, is the second part of a two-semester course that builds on the foundational knowledge from Semester A. This course delves deeper into some of the human body systems, focusing on the nervous, integumentary, musculoskeletal, endocrine, and reproductive systems. You will explore the anatomy and physiology of these systems, including their structures, functions, and common diseases or disorders. The course also emphasizes the integration of this knowledge with health science careers, offering a comprehensive understanding of how these systems are studied and applied in professional contexts. Additionally, you will engage in activities that involve research, discussion, and projects to solidify your understanding and application of the material.

This course consists of 13 lessons organized into three units, three Unit Activities, and three Discussions. Additionally, there is one Course Activity and one Course Project. Each lesson contains one or more Lesson Activities. You will grade your work in the Lesson Activities by comparing it to sample responses. You will submit the Unit Activities, Course Activity, and Course Project to your teacher for grading.

By the end of this course, you will be able to do the following:

- ❖ Examine the structure and functions of human body systems.
- ❖ Examine the processes of a human life cycle like fetal development, birth, maturation, and aging.
- ❖ Assess health careers and recent advances in science and medicine.

UNIT 1: THE NERVOUS AND INTEGUMENTARY SYSTEMS (DAYS 1 – 37)

In this unit, you will explore the intricate structure and function of the human nervous system. You will examine the central and peripheral nervous systems, learning how they work together to control sensory functions and coordinate body activities. Additionally, you will delve into the integumentary system, understanding its role in protecting the body and maintaining homeostasis. By the end of this unit, you will have a comprehensive understanding of how these systems contribute to overall health and how they can be affected by various disorders.

Lesson	Lesson Objective
Syllabus and Student Orientation	Review the Student Orientation and Course Syllabus at the beginning of this course.
The Nervous System	Examine the structure, function, and common pathologies of the nervous system.
The Central Nervous System	Analyze the structure and function of the central nervous system.
The Peripheral Nervous System	Examine the structure and function of the peripheral nervous system.
Sensory Functions	Examine the structure, function, and common pathologies of the organs of the sensory system.
The Integumentary System	Analyze the structure, function, and common pathologies of the integumentary system.

UNIT 2: THE MUSCULOSKELETAL SYSTEM (DAYS 38 – 64)

In this unit, you will learn about the essential components of the musculoskeletal system, including bones, joints, and muscles. You will study the anatomy of the skeletal system and how movement is facilitated by the intricate interplay between bones and muscles. The unit also covers the importance of maintaining musculoskeletal health and how exercise and rehabilitation play a role in recovery from injuries. By the end of this unit, you will be able to identify the key structures of the musculoskeletal system and understand their functions in supporting and moving the body.

Lesson	Lesson Objective
The Skeletal System	Examine the structure and function of the skeletal system.
Bones and Joints	Examine the structures, types, and functions of bones and joints.
Muscles	Analyze the structure, function, and common pathologies of the muscular system.
Movement	Evaluate the role of the muscular system in movement.
Course Activity	Developments in Medical Equipment

UNIT 3: HORMONAL CONTROL AND REPRODUCTION (DAYS 65 – 90)

In this unit, you will focus on the endocrine and reproductive systems, examining how hormones regulate bodily functions and how reproduction is controlled. You will learn about the major glands of the endocrine system, the hormones they produce, and their effects on various body systems. The unit also covers the stages of the human life cycle and introduces health careers related to the body systems. By the end of this unit, you will have a clear understanding of how hormonal control is essential for maintaining homeostasis and supporting life processes.

Lesson	Lesson Objective
The Endocrine System	Analyze the structure, function, and common pathologies of the endocrine system.
The Reproductive System	Examine the structure, function, and common pathologies of the male and female reproductive systems.
The Human Life Cycle	Examine the processes of fetal development, birth, maturation, and aging.
Health Careers	Assess health careers and recent advances in science and medicine.
Course Project	Living Well with Diabetes