BIOL 2200 HUMAN ANATOMY AND PHYSIOLOGY I (4 credit hours)

Elmira College

SPRING 2025

Required Text:

1. Elaine Marieb(2019). ***Human Anatomy & Physiology***(11th Ed.). Pearson.
2. Kenneth S. Saladin(2021). ***Anatomy & Physiology: The Unity of Form and Function***(9th Ed.). McGraw-Hill Higher Education.

Supplemental readings might be included to illustrate or expand on textbook readings.

Pre-requisites: None.

Course Description

This course is the first part of a two-semester sequence that provides a comprehensive introduction to the structure and function of the human body. It covers fundamental concepts of anatomy and physiology, including basic cellular processes, tissue organization, and major organ systems. Emphasis will be placed on the integration of body systems and their role in maintaining homeostasis. Students will explore anatomical structures and physiological mechanisms through lectures and laboratory exercises, developing a strong foundation for advanced study in health and life sciences.

Course Objectives and Goals

- Describe the structure and function of major organ systems and their components.
- Explain fundamental physiological processes, including homeostasis, membrane transport, and cellular metabolism.
- Identify major anatomical structures using appropriate terminology and models.
- Understand the interrelationship between different organ systems in maintaining overall health.
- Apply knowledge of anatomy and physiology to real-world clinical and biomedical contexts.
- Analyze physiological responses to different internal and external stimuli.
- Utilize laboratory techniques and tools to investigate anatomical and physiological principles.

Evaluation of Performance

Your grade will be based upon your performance on exams, assignments, and participation.

2 Assignments	10%
2 Quizzes	20%
6 Lab and Lab Reports	30%
Midterm Exam	20%

Final Exam	20%
Total	100%

Grades will be assigned as follows:

A	93% and above	B-	80 - 82%	D+	67 - 69%
A-	90 - 92%	C+	77 - 79%	D	63 - 66%
B+	87 - 89%	C	73 - 76%	D-	60 - 62%
B	83 - 86%	C-	70 - 72%	F	59% or below

Withdrawal Policy: Please see Elmira College Bulletin for information on this policy.

Academic Honesty: Please read the section on Academic Honesty in the **Code of Conduct**. Briefly, academic dishonesty includes: cheating, fabrication, facilitating academic dishonesty, and plagiarism. Ask if you have any questions on whether something constitutes as academic dishonesty. All work must be original and new. Past assignments from current or other courses will not be accepted. Academic dishonesty will not be tolerated. It will result in zero on the assignment, and a report will be filed with the school. Continued practice will result in failure of the class. Institutional penalties may also apply with repeated acts of academic honesty.

Student Responsibility:

- It is your responsibility to keep track of assignments and due dates.
- You should ask questions concerning assignments and lectures, if you need any clarifications.
- If you are struggling in class, have concerns, and/or unsure about expectations, please stop by during office hours or make an appointment for another time.

Tentative Schedule of Topics

Topic	Materials	Tasks & Evaluations
The Human Body: An Orientation	Chapter 1	
Chemistry Comes Alive	Chapter 2	Assignment 1
Cells: The Living Units	Chapter 3	
Tissue: The Living Fabric *Lab 1: Microscopic Examination of Epithelial Tissues*	Chapter 4	Lab Report 1
Covering, Support, and Movement of The Body	Chapter 5	
The Integumentary System	Chapter 6	Quiz 1
Bones and Skeletal Tissue *Lab 2: Bone Histology and Microscopic Analysis*	Chapter 7	Lab Report 2
The Skeleton	Chapter 8	
Joints *Lab 3: Ligament Tensile Strength Experiment*	Chapter 9	Lab Report 3
Muscles and Muscle Tissue	Chapter 10	Midterm Exam
The Muscular System	Chapter 11	
Regulation and Integration of The Body	Chapter 12	
Fundamentals of the Nervous System and Nervous Tissue	Chapter 13	Lab Report 4

Lab 4: Neuron Structure and Microscopic Examination		
The Central Nervous System	Chapter 14	Assignment 2
The Peripheral Nervous System and Reflex Activity	Chapter 15	
The Autonomic Nervous System *Lab 5: Autonomic Control of Respiratory Rate*	Chapter 16	Lab Report 5
The Brain and Cranial Nerves	Chapter 17	Quiz 2
Sense Organs *Lab 6: Localization of Sound and Binaural Hearing*	Chapter 18	Lab Report 6
The Special Senses	Chapter 19	Final Exam