

# Spokane Community College

## COURSE LEARNING OUTCOMES (CLO) AND OUTLINE

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**Course Title: Human Anatomy and Physiology I**

**Prefix and Course Number: BIOL& 241**

**Version Date: Winter 2025**

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### Course Learning Outcomes

By the end of this course, a student should be able to:

1. Apply anatomical and physiological concepts of histology, the integumentary system, the skeletal system, the muscular system, and the nervous system to homeostasis and the related treatment of human disorders.
2. Explain effectively a wide range of processes that govern the functions of the human body to both experts and non-experts.
3. Evaluate diverse sources to describe the structure and function of body, including integumentary, skeletal, muscular, and nervous systems.
4. Recognize how anatomical variation contributes to the diversity seen in humanity.
5. Interpret physiological data, such as muscle mechanics, nervous system function, and bone structures to their role in the human body's function.
6. Demonstrate proficiency in laboratory skills that utilize anatomical and physiological concepts.

### **Course Outline**

- I. Tissues
  - A. Anatomy
    - i. Identification and histology of the four major classes of tissues
  - B. Physiology
    - i. Classification and function of the four major classes of tissues
    - ii. Tissue growth and repair
- II. Integumentary System
  - A. Anatomy
    - i. Histology of the different layers of the integument
    - ii. Identification of accessory structures of the integument
  - B. Physiology
    - i. Functions of the integument
    - ii. Skin markings
    - iii. Functions of the accessory structures of the integument
- III. Skeletal System
  - A. Anatomy
    - i. Identification of the bones and the bony markings of the human body
    - ii. Identification of select articulations of bones
  - B. Physiology
    - i. Bone formation
    - ii. Bone homeostasis
- IV. Muscular System
  - A. Anatomy
    - i. Identification of skeletal muscles in the human body
    - ii. Identification of actions, origins, and insertions of skeletal muscles

- B. Physiology
  - i. Process of muscle contraction
  - ii. Muscle metabolism
  - iii. Effects of muscle fatigue
- V. Nervous System
  - A. Anatomy
    - i. Identification of the organs of the nervous system
    - ii. Identification of the components of the eye and ear
    - iii. Identification of nervous tissue histology
    - iv. Histology of the nervous system
  - B. Physiology
    - i. Electrophysiology of neurons
    - ii. Processing of sensory information
    - iii. Functions of the different divisions of the nervous system
    - iv. Role of the autonomic nervous system
    - v. Mechanisms of the general senses