SOUTHEAST COMMUNITY COLLEGE
ARTS AND SCIENCES DIVISION
Sciences
Revision Date: 07-01-25

I. CATALOG DESCRIPTION

Course Number:	BIOS2250
Course Title:	Human Anatomy & Physiology I
Prerequisite(s):	College General Biology (BIOS1010) or Department Approval
Catalog Description:	Introduction to the form and function of the human body. Including homeostatic mechanisms, organization, biochemistry, cells, tissues, integumentary system, skeletal system, muscular system, nervous system, and introduction to the special senses.
Credit Hours:	4.0
Class Hours:	45.0
Lab Hours:	30.0
Contact Hours:	75.0

II. COURSE OBJECTIVES: *Course will*:

A. Facilitate student exploration of the organization and biochemistry of the human body, from the cellular to the organismal level.
B. Compare and evaluate human tissues from human body.
C. Examine the integumentary system and accessory structures.
D. Explore the anatomy and physiology of the skeletal system, including articulations.
E. Investigate the anatomy and physiology of the muscular system.
F. Detail the anatomy and physiology of the nervous system, including an introduction to the special senses.
G. Explain homeostasis and how it applied to the integumentary, skeletal, muscular, and nervous systems.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES

A. Student Learning Outcomes: *Student will be able to*:

1. Apply homeostatic concepts to the maintenance of, and interrelationships between anatomy and physiology.
2. Use terms of relative position, landmarks, and body cavities to correctly locate a anatomical structures.
3. Explain the basic biochemical activities and functions of human body cells, tissues, and organs.
4. Identify function and locations of each tissue type.
5. Locate and identify bones and bone landmarks using precise anatomical and osteological nomenclature.
6. Distinguish between joint types and describe joint movements using standard terminology.
7. Explain the physiology of skeletal system tissues, including bone growth and repair.

8. Locate skeletal muscles, identify them using anatomical terminology, and describe their major actions.

9. Explain the physiology of muscle tissue, including the mechanism of muscle contraction.

10. Identify nervous system structures using anatomical nomenclature.

11. Explain the physiology of nervous tissue, synaptic transmission and introduce the special senses.

B. General Education Learning Outcomes

1. GELO #3: Critical Thinking & Problem Solving

Critical thinkers have the ability to evaluate a problem or assumption and determine an appropriate course of action. They use reason and evidence to make judgments and decisions. Critical thinking and problem-solving skills rank highly among employer expectations.

Outcome: Collect, identify, interpret and analyze data.

Outcome: Synthesize information to arrive at reasoned solutions to problems.

Outcome: Evaluate the validity of arguments, alternatives, data, outcomes, and/or impacts of actions.

2. GELO #5: Analytical, Quantitative, and Scientific Reasoning

A primary way of knowing and making sense of our world comes from the analysis of quantitative and scientific information. SCC students will have developed the ability to examine problems or issues by evaluating evidence, analyzing relationships between variables, and developing and communicating conclusions.

Outcome: Apply mathematical and scientific methods to solve problems from an array of contexts and everyday situations.

Outcome: Effectively develop strategies, algorithms, or experiments (or performing experiments) to better describe the systems or to solve the problems.

Outcome: Manipulate formulas, data sets, graphs, tables, etc. in a way to produce a meaningful outcome.

IV. CONTENT/ TOPICAL OUTLINE *(course outline may provide more detailed information)*

A. Introduction to Anatomy and Physiology
B. Biochemistry
C. Cellular level of Organization
D. Histology
E. Integumentary System
F. Skeletal System
G. Muscular System
H. Nervous System

V. INSTRUCTIONAL MATERIALS

A. Required Text(s):

1. Betts, et al., *Human Anatomy and Physiology*, 2nd ed., OpenStax Publishing, 2022, Hardcover ISBN: 978-1-711494-06-7; Paperback ISBN: 978-1-711494-05-0; Digital ISBN: 978-1-951693-42-8.

2. Amerman, *Exploring Anatomy & Physiology in the Laboratory*., 2nd ed., Morton Publishing, 2018, ISBN: 978-1-61731-780-4

VI. METHODS OF PRESENTATION/INSTRUCTION

A. Methods of presentation typically include a combination of the following:

1. Lecture
2. Laboratory activities
3. Discussion
4. Supplemental learning objects, such as: animations/videos, demonstrations, companion Internet site access, and in-class activities.

VII. METHODS OF EVALUATION

A. Methods of evaluation typically include a combination of the following:

1. Tests and exams
2. Quizzes
3. Projects
4. Writing assignments
5. Presentations
6. Outside research
7. Portfolios
8. Online activities

B. SCC GRADING SCALE

A+	95-100	C+	75-79	F	59 or less
A	90-94	C	70-74		
B+	85-89	D+	65-69		
B	80-84	D	60-64		