

Central Arizona College

8470 N. Overfield Road

Coolidge, AZ 85228

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BIO201 Human Anatomy-Physiology I

Catalog Description:	Study of structure and function of the human body. Topics include a general introduction and basic orientation of the human body, basic chemistry for biology, cells, tissues, integumentary system, skeletal system, muscular system, nervous system, and the special senses.
Credit Hours:	4
Effective Term:	Fall 2009
Terms Offered:	All terms
Teaching Methods:	Lecture Lab
Modalities:	Face to Face Hybrid ITV Online
Prerequisite(s):	BIO156 or BIO181 or one year of high school biology with a grade of "C" or better; RDG094
Corequisite(s):	None
Times for Credit:	1
Grading Option:	A/F
Credit Breakdown:	3 Lectures, 3 Labs
Cross Listed:	None
Learning Outcomes:	<ol style="list-style-type: none">1. Describe the interrelationship between anatomy and physiology and examine the role of homeostatic balance in body functions.2. Categorize the structural organization of the human body.3. Use anatomical terminology in an appropriate way.4. Distinguish the various biochemical pathways of cell physiology and relate the underlying chemical components of life processes to body function.5. Compare the structure and function of various cellular organelles.6. Explain how the various tissues in the body repair themselves and the mechanisms used for repair.7. Describe the major functions of the integumentary system and relate the functions to the structures found in the various layers of the skin.8. Examine the two types of bone structure and outline the anatomy of a long bone.

9. Classify the articulations of the human skeletal system by structure and function.
10. Discuss the microscopic arrangement of skeletal muscle tissue and apply that to the contraction of individual skeletal muscles.
11. Compare the basic structures and functions of the central nervous system and the peripheral nervous system.
12. Describe the function of the special senses including taste, smell, vision, hearing and balance.
13. Apply the foundations of human anatomy and physiology to a specific set of demonstrable lab skills, activities and reports.

Standards:

1. Accurately apply the concept of positive and negative feedback systems to the maintenance of homeostasis in the body.
2. Using standard anatomical terminology, describe relative positions, body sections and body regions.
3. Using basic chemical concepts, pH, chemical bonding, etc., explain metabolism and cellular function.
4. Describe the cellular components involved in the cell cycle, including cell division, and how loss of control over cell division can lead to cancer.
5. Accurately describe the basic structure of tissues in the body and how they relate to specific organ structure and function.
6. Accurately describe the three layers of the skin and the function of each layer.
7. Successfully identify the two types of bone tissue found in the body.
8. List the major bones of the appendicular and axial skeleton and describe how the various bone features connect muscle to bone.
9. Using the structure of various joints, explain extension, flexion, adduction and abduction.
10. Accurately describe the physiology of a skeletal muscle cell and how it leads to a muscle contraction.
11. List the major muscles of the body and the movement associated with them.
12. Accurately describe the physiology of an action potential in the nervous system.
13. List the major structures of the central and peripheral nervous systems.
14. Describe the sensations associated with each of the special senses.

15. Actively and successfully complete a series of laboratory experiments or field trips in which observation and critical reasoning skills are employed in the development of detail report writing. Laboratory assignments may be completed independently or in groups.

**AGEC/Special
Requirements:**

Biological & Physical Science

Campus:

Statewide/District - DSP

Revised:

October 2008