

COCONINO COMMUNITY COLLEGE
COURSE OUTLINE

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General Education Criteria Reviewed By: Bruce Belman
General Education Outcomes reviewed by: Bruce Belman
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Effective Term: Fall

December 4, 1991
October 2, 1998
October 2, 1998
March 23, 2001
Spring 2003
Fall 2003
November 21, 2016

A. Identification:

1. Subject Area: Biology (BIO)
2. Course Number: 201 SUN #2201
3. Course Title: Human Anatomy and Physiology I
4. Credit Hours: 4
5. Course Description: Design and function of the human body. Topics include cells, tissues, integumentary, muscular, skeletal, nervous, and sensory systems. Prerequisite: BIO 181 or Consent of Instructor. General Education: Physical and Biological Sciences. Three lecture. Three lab. Fall, Spring, Summer.

B. Course Goals: This course is the first semester of a two-semester sequence designed primarily to provide students preparing for careers in health-related professions with a basic knowledge of the structure of the human body and a fundamental understanding of processes that constitute life.

C. Course Outcomes: Students will:

1. identify in anatomical models, diagrams, photos or other media, the major anatomical features of the skeletal, muscular, nervous, and integumentary systems;
2. describe the physiological processes involved in the contraction of muscle, the generation of a nerve impulse and the propagation of nerve impulses in the nervous system;
3. list and construct in models the basic organic molecules present in the human body;
4. state in written form the relationships between physiological dysfunction and homeostatic response citing examples from the nervous systems;
5. recognize in histological section selected samples of human body;
6. demonstrate the function of the articulations in human body;
7. identify in anatomical models the major features of the human nervous system;
8. describe reflexive behavior;
9. and explain how the human nervous systems integrates sensory information and provides appropriate output.

D. Course Outcomes Assessment will include:

1. laboratory practical exams
2. and comprehensive final exam.

E. Course Content will include:

1. review of organic chemistry;
2. basic cell biology
 - a. anatomy and physiology of the plasma membrane;
 - b. protein synthesis;
 - c. and basic cell structure;

3. homeostasis and basic body organization;
4. histology of human tissue;
5. the skeletal system and the articulations;
6. the muscular system:
 - a. physiology of muscle contraction;
7. organization of the nervous system:
 - a. characteristics of excitable cells;
 - b. physiology of nerve impulse generation and propagation;
8. the central nervous system:
 - a. anatomy of the brain and spinal cord;
 - b. physiology of sensory and motor information processing;
 - c. reflexive information processing;
9. the special senses
 - a. olfaction and gustation;
 - b. the visual system;
 - c. and the auditory system;

Last Reviewed Date: November 2016