Degree Applicable

Glendale Community College
October 2013

COURSE OUTLINE

Biology 115
Human Biology

I. Catalog Statement

Biology 115 is an introductory course covering biological principles as they apply to the human body. The central theme is the structure and function of the human organism. Topics covered include: human evolution, the human species in the environment, cells, tissues, the major body systems, heredity, and the major human conditions and diseases. A weekly laboratory allows students the opportunity to gain practical experience in the techniques necessary to study the health sciences.

Total Lecture Units: 3.0
Total Laboratory Units: 1.0
Total Course Units: 4.0

Total Lecture Hours: 48.0
Total Laboratory Hours: 48.0
Total Faculty Contact Hours: 96.0

Recommended preparation: High school biology

II. Course Entry Expectations

Skill Level Ranges: Reading 5; Writing 5; Listening/Speaking 5; Math 2.

III. Course Exit Standards

Upon successful completion of the required course work, the student will be able to:

1. identify the body systems, their organs and functions;
2. demonstrate knowledge of the functions of the cell and its organelles;
3. recognize the primary tissues that make up the human body;
4. explain the homeostatic mechanisms of the organ systems of the human body;
5. understand the cause and effect of major diseases of the human body;
6. interpret the place of the human animal in scheme of life on earth.

IV. Course Content

Total Faculty Contact Hours = 96

A. The Human Organism — Lecture 5 hours, Laboratory 5 hours
   1. The organization of the human body
   2. Human evolution and homeostasis

B. The Systems of the Human Body — Lecture 39 hours, Laboratory 40 hours
   1. Cells and tissues
   2. The integumentary system and its disorders

3. The human skeleton (support) and muscles (movement)
4. The nervous system, senses and human behavior
5. Digestion and diet
6. Respiration and its disorders
7. Circulation and lymphatics
8. Cardiovascular disease
9. Immunity
10. Reproduction and development
11. Endocrine system and homeostasis
12. Urinary system and excretion

C. Heredity — Lecture 4 hours
1. Traits, Chromosomes, and Sex Determination — Laboratory 3 hours
2. Genes, Mutations, and Disease

V. Methods of Instruction

The following methods of instruction may be used in the course:
1. lecture;
2. multimedia;
3. laboratory demonstrations;
4. online.

VI. Out of Class Assignments

The following out of class assignments may be used in the course:
1. Laboratory reports (e.g., identify tissue types in various organ systems).

VII. Methods of Evaluation

The following methods of evaluation may be used in the course:
1. laboratory practicum and reports;
2. midterm examinations;
3. final examination.

VIII. Textbook

VanPutte, C., J. Regan, and A. Russo, *Seeley's Essentials of Anatomy & Physiology*, 8th edition. New York: WCB/McGraw-Hill, 2013. Print.
13th Grade Textbook Reading Level. ISBN: 0077361385.

IX. Student Learning Outcomes

Upon successful completion of the required coursework, the student will be able to:
1. identify and/or describe the various organelles of a human body cell, explain their functions, and apply this knowledge to the concept of homeostasis;

2. identify and/or describe the primary tissues of the human body, explain their relevant features, and explain the relationship of these tissues to the overall function of the organs they are a part of;
3. demonstrate knowledge of the basic terminology needed to study the human body including terminology pertaining to body position, directional terminology, body cavities, and the planes and sections of the human body;
4. identify and/or explain the various organs of the human body systems as to their basic anatomical and physiological features, focusing on the maintenance of homeostasis and relationships to some relevant major diseases and/or pathological conditions.