

**CAPITAL COMMUNITY COLLEGE
COURSE OUTLINE
HUMAN BIOLOGY**

SECTION I

SUBJECT AREA AND COURSE NUMBER: BIOLOGY 115

COURSE TITLE: HUMAN BIOLOGY

COURSE CATALOGUE DESCRIPTION: Basic course in human biology which stresses anatomy and physiology, progressing from cellular levels through all organ systems. Pathophysiology is included with each system.

LECTURE HOURS PER WEEK: 3

CREDIT HOURS: 4

LABORATORY HOURS PER WEEK: 2

PREREQUISITES: High school biology or departmental permission.

SECTION II

A. SCOPE:

The objective of this course is to provide the student with a basic knowledge of the structure and function of the human body. This is accomplished through the study of the organization of the body from the cellular to the system level. The eleven organ systems are studied.

B. REQUIRED WORK: determined by the faculty as described in the course syllabus

C. ATTENDANCE AND PARTICIPATION: Students are expected to attend all lectures and the one laboratory section per week, arrive on time, take exams on the scheduled dates, participate in class and in laboratory activities and complete all assignments. Attendance is to be taken in each class.

D. METHODS OF INSTRUCTION: The methods of instruction are determined by each faculty member and may include lectures, demonstrations, audio-visual aids, laboratory activities, and written reports.

E. OBJECTIVES, OUTCOMES, ASSESSMENT

The following objectives and outcomes represent the course's core requirement for student achievement.

| LEARNING OBJECTIVES | LEARNING OUTCOMES | ASSESSMENT METHOD |
|---|--|--|
| The student will demonstrate understanding of: | Demonstrating ability to or knowledge of | As measured by: |
| Study of human biology, use of anatomical and directional terminology and descriptions, the concept of homeostasis, understanding of basic chemistry, and knowledge of of the cell. | a)terms of anatomy and physiology b)levels of organization of the human body c)homeostasis d)anatomical positions, directional terms, and body cavities e)the atom, elements, molecules, compounds, ions, bonding , pH, energy, ATP f)composition of the cell, plasma membrane, nucleus, organelles g)passive and active transport | Written in-class tests, laboratory quizzes and tests, homework assignments, class and laboratory participation, written reports. |

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The classification of biomolecules and understanding the concept of metabolism

- a)metabolism, anabolism, catabolism
- b)structure and function of carbohydrates, lipids, proteins, nucleic acids
- c)protein synthesis

The classification of human tissues into four main categories and a number of subcategories, and description, location, and function of basic tissues and membranes of the body

- a)types and functions of epithelial tissue
- b)types and functions of connective tissues
- c)types and functions of muscle tissues
- d)types of nervous tissue
- e)types of membranes

The structure and function of the organ systems:

- integumentary
- skeletal
- muscular
- nervous and sensory
- endocrine
- cardiovascular
- immune/lymphatic
- respiratory
- digestive
- urinary
- reproductive

- a)overview of each system
 - the functions of each system
 - the organs and their location
- b)the functions of each organ in each system
- c)major disorders of each system

F. REQUIRED TEXTS:

Herlihy, Barbara and Maebius, Nancy. The Human Body in Health and Illness. W.B. Saunders, 2003.

Herlihy, Barbara. Study Guide for The Human Body in Health and Illness, 2nd edition. Saunders, 2003.

Mader, Sylvia. Human Biology Laboratory Manual, 9th edition. McGraw Hill, 2005.