Syllabus

BIO 115 Human Biology

General Information

Date
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Department
Science and Technology

Course Prefix
BIO

Course Number
115

Course Title
Human Biology

Course Information

Credit Hours
4

Lecture Contact Hours
3

Lab Contact Hours
2

Other Contact Hours
0

Catalog Description
This course approaches basic biological principles from a human perspective. It is a principles course with a laboratory
designed for non-science majors. Basic cell biology, systems anatomy and physiology, evolution and human ecology are
broadly discussed.

Prerequisites
None

Co-requisites
None

Grading Scheme
Letter

First Year Experience/Capstone Designation

This course DOES NOT satisfy the outcomes applicable for status as a FYE or Capstone.

SUNY General Education

This course is designated as satisfying a requirement in the following SUNY Gen Ed category
Natural Sciences

FLCC Values

Institutional Learning Outcomes Addressed by the Course
Course Learning Outcomes

1. Describe basic cell biology, the anatomy and functioning of several key physiological systems, and evolutionary theory.
2. Evaluate the disruption of homeostasis in key body systems, and cite evidence to support your explanation.
3. Utilize basic laboratory techniques to conduct experiments.
4. Discuss the human species' place in, and effects on, the environment.
5. Determine ethical implications and personal values regarding humans in science research and medical treatments.

Program Affiliation

This course is not required as a core course in a program.

Outline of Topics Covered

1. Scientific method
   a. Experimental design
   b. Evaluation of experiments

2. Cell Structure
   a. organelles and their functioning

3. Cell division
   a. mitosis
   b. Meiosis
   c. Development and progression of cancer

   a. Punnett Squares
   b. Mendelian and non-Mendelian patterns of inheritance

5. Nervous system
   a. Structure
   b. Function
   c. Diseases/Disorders

6. Endocrine system
a. Structure
b. Function
c. Diseases/Disorders

7. Cardiovascular system
   a. Structure
   b. Function
c. Diseases/Disorders

8. Respiratory
   a. Structure
   b. Function
c. Diseases/Disorders

9. Immune system
   a. Structure
   b. Function
c. Diseases/Disorders

10. Digestive System
    a. Structure
    b. Function
c. Diseases/Disorders

11. Urinary system
    a. Structure
    b. Function
c. Diseases/Disorders

12. Reproductive system, including an overview of birth defects
    a. Structure
    b. Function
c. Diseases/Disorders

13. Evolution
    a. Natural Selection
    b. Human Ancestors

14. Ecology and man’s interaction with the environment
a. Ecological responsibility