



Syllabus

BIO 115 Human Biology

General Information

Date

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Author

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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

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
4. Genetics and genetic problem solving.
 - 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