

JAMESTOWN COMMUNITY COLLEGE
State University of New York

INSTITUTIONAL COURSE SYLLABUS

Course Title: Human Biology

Course Abbreviation and Number: BIO 1500

Credit Hours: 4

Course Type: Lecture/Lab

Course Description: This course covers basic structures and functions of the human body. Students will learn about the chemical basis of life, cellular structure and metabolism, tissues, and an overall survey of the organ systems of the body. An introduction to human evolution is presented. Recent developments in science, medicine, and health coupled with environmental issues and their impact on health are incorporated into the course. Laboratory exercises include use of the microscope, experimentation, and hands-on investigation of organ systems.

Prerequisite/Corequisite: ENG 1510.

General Education Requirements Met

SUNY

Natural Sciences

JCC

Scientific Reasoning

Student Learning Outcomes:

Students who demonstrate understanding can:

1. Identify and illustrate basic chemical processes important to biological systems.
 2. Apply principles related to the structures, functions, and major chemical traits of the biomolecules (carbohydrates, lipids, proteins, and nucleic acids) found in the human body.
 3. Differentiate basic cell structures and their relative functions.
 4. Classify tissue levels of organization and demonstrate how they relate to organs and organ systems.
 5. Distinguish among the major organ systems of the body with an emphasis on basic anatomical and physiological principles.
 6. Identify (and recognize the evidence for) several major environmental problems; identify or describe their impacts on life on earth
 7. Apply a basic knowledge of evolution as it pertains to who we are and from where we've come.
 8. Specify the causes of sexually transmitted diseases and their effects on the human body.
 9. Interpret and integrate current developments in science and medicine to our existing knowledge of the human body and how it works.
 10. Demonstrate an understanding of the methods scientists use to explore natural phenomena, including observation, hypotheses development, measurement and data collection, experimentation, evaluation of evidence, and employment of data analysis or mathematical modeling. [SUNY Gen Ed – Natural Sciences]
 11. Application of scientific data, concepts, and models in one of the natural sciences. [SUNY Gen Ed – Natural Sciences]
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Topics Covered:

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| • Chemistry of Life | • Muscular System | • Human Genetics: Chromosomal Inheritance, Genes and |
| • Cell Structure and Function | • Nervous System/Senses | • Medical Genetics |
| • Digestive System and Nutrition | • Endocrine System | • Cancer |
| • Cardiovascular System | • Reproductive System | • Evolution |
| • Lymphatic System and Immunity | • Development and Aging | • Population Concerns |
| • Respiratory System | • Sexually Transmitted Diseases | |
| • Skeletal System | | |
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Information for Students

- Expectations of Students
 - [Civility Statement](#)
 - [Student Responsibility Statement](#)
 - [Academic Integrity Statement](#)
- [Accessibility Services](#)
Students who require accommodations to complete the requirements and expectations of this course because of a disability must make their accommodation requests to the Accessibility Services Coordinator.
- [Get Help: JCC & Community Resources](#)
- [Emergency Closing Procedures](#)

- Course grade is determined by the instructor based on a combination of factors, including but not limited to, homework, quizzes, exams, projects, and participation. Final course grade can be translated into a grade point value according to the following:

A=4.0	B+=3.5	B=3	C+=2.5	C=2	D+=1.5	D=1	F=0
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- Veterans and active duty military personnel with special circumstances (e.g., upcoming deployments, drill requirements, VA appointments) are welcome and encouraged to communicate these to the instructor.

Effective Date: Fall 2023