

JAMESTOWN COMMUNITY COLLEGE
State University of New York

INSTITUTIONAL COURSE SYLLABUS

Course Title: Principles of Ecology and Evolution Bio Lab

Course Abbreviation and Number: BIO 1582

Credit Hours: 1

Course Type: Lab

Course Description: This laboratory course introduces students to the core concepts of ecology and evolutionary biology—the scientific frameworks that explain the diversity of life and the interactions among organisms and their environments. Through laboratory exploration, students will identify and evaluate the general tenets of evolutionary theory, identify and apply principles of ecology and biodiversity, identify the major episodes in the geological history of life, and evaluate and describe the evolutionary history of the Earth’s major plant and animal groups. This course is designed for science majors as a gateway to more advanced coursework in biology and related disciplines but also serves non-science majors as a general education course.

Eligibility: ENG 1510 without supports or Corequisite: ENG 1510 with supports; Pre/Corequisite: High School Chemistry or CHE 1500 (or higher); Corequisite: MAT0550 or Eligibility: MAT 1590 ; Corequisite: BIO 1581

General Education Requirements Met

SUNY

Natural Sciences

JCC

Scientific Reasoning

Student Learning Outcomes:

Students who demonstrate understanding can:

1. Apply principles from topics covered in the lecture portion of the course via scientific experimentation.
 2. 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 SLO 1]
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Topics Covered:

- Scientific Method
 - Scientific Measurement
 - Evolution-Hardy Weinberg
 - Population Ecology
 - Ecosystems
 - Microscopes
 - Phylogenetics
 - Plant Nutrition
 - Plant Hormones
 - Bacteria
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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.
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Effective Date: Fall 2026