



蘇州大學
Soochow University

BIO 101 Introduction to Biology I

Winter 2024

Course Credits: 4

Contact Hours: 56 hours

Instructor: TBA

Email: TBA

COURSE OBJECTIVES

This course is an introduction to the principles of biology for science majors, with an emphasis on the cellular nature of life. Specific topics covered include the pattern of evolution, Mendelian genetics in populations, life origin, genetic evolution, species and speciation, population, community and ecosystem level ecology of plants and animals. There are no prerequisites for this course. Laboratory exercises develop a proficiency in the use of laboratory equipment and guide students in investigations of evolutionary process and ecology.

Upon Completion of this Course, students will be able to:

1. describe the nature of science as it specifically applies to the discipline of biology;
2. explain the process of evolution and the impact that Charles Darwin and other evolutionists had on the explanation of the process;
3. be familiar with the nature of organic biocompounds and their importance as building blocks of living systems;
4. identify the chemical and physical structure and diversity of living organisms and how they interact with the environment;
5. demonstrate knowledge of scientific and mathematical principles and proficiency in laboratory practices.

PREREQUISITES

None



GRADING

Grades will be determined by accumulating points, with 100 points being the maximum, as follows:

ITEM	POINTS
2 Assignments	10 Points
2 Quizzes	20 Points
10 Lab Reports	30 Points
Midterm	15 Points
Final Exam	25 Points
Total	100 Points

Late submissions will be graded at the end of the course. Grades will be assigned according to the following rule:

$$A \geq 90 > B \geq 80 > C \geq 70 > D \geq 60 > F.$$

We reserve the right to make adjustments to the overall grading policy.

COURSE MATERIALS

Required Texts:

Principles of Life, 3rd Edition, by David M. Hillis; Mary V. Price; Richard W. Hill; David W. Hall; Marta J. Laskowski. Sinauer Associates and Macmillan.

Recommended (Optional) Texts or Other Materials:

None.

COURSE TOPICS

MODULE	TASKS
Module 1	Topics: Topic 1: The Science of Biology Topic 2: Principles of Life Topic 3: The Pattern of Evolution Topic 4: Phylogeny Assessments: Assignment #1



Module 2	<p>Topics: Topic 5: Mendelian Genetics in Populations I: Selection and Mutation Topic 6: Mendelian Genetics in Populations II: Migration, Drift, and Nonrandom Mating Topic 7: Aging and life history Topic 8: Genome Evolution</p> <p>Assessments: Quiz #1</p>
Module 3	<p>Topics: Topic 9: Species and Speciation Topic 10: Origin and Evolution of Early Life Topic 11: Animal Behavior Topic 12: Ecological Systems in Time and Space</p> <p>Assessments: Midterm Exam</p>
Module 4	<p>Topics: Topic 13: Population Distribution and Abundance Topic 14: Population Dynamics Topic 15: Interactions Between Populations Topic 16: Population Growth</p> <p>Assessments: Assignment #2</p>
Module 5	<p>Topics: Topic 17: Ecological Communities Topic 18: The Global Ecosystem Topic 19: Bacteria, Archaea, and Viruses Topic 20: The Origin and Diversification of Eukaryotes</p> <p>Assessments: Quiz #2</p>
Module 6	<p>Topics: Topic 21: The Evolution of Plants Topic 22: The Evolution and Diversity of Fungi Topic 23: Animal Origins and Diversity Topic 24: Final Exam Review</p> <p>Assessments: Final Exam</p>

ATTENDANCE

1) Class attendance is required. Missing classes without permission will lead to



decrease in overall grade.

Missing less than two classes: no penalty.

Missing more than two classes: 7% will be taken off from the overall grade.

If the instructor reports a student's frequent missing of class to the Soochow University Academic Administration Office, the student might get a written warning and might be prohibited from attending final exam.

2) Participants in this course are expected to arrive in class promptly and adequately prepared. The primary objective of this course is to critically engage with the readings and the subject matter. Therefore, course participants are expected to have completed the reading prior to class and prepare thoughtful reflections/commentaries to share with fellow colleagues.

LEARNING REQUIREMENTS

- 1) Late assignments are not acceptable and are subjected to grade deductions.
- 2) Assignments submitted in the wrong format will be counted as not submitted.
- 3) Failure to submit or fulfill any required course component results in failure of the class.
- 4) Make-up for midterm and final exams only with valid excuses, as defined by the University.
- 5) In order to earn a Certificate of Completion, participants must thoughtfully complete all assignments by stated deadlines and earn an average quiz score of 50% or greater.

TECHNOLOGY POLICY

The use of electronic devices in class is distracting, both for the user and for the rest of the class. Only non-programmable calculators can be used in the tests and exam. Any attempts to use cell phones and other electronic communication devices will be seemed as cheating. Laptops are discouraged, unless you use them for activities DIRECTLY related to the course (eg., note taking, reading course documents).

ACADEMIC INTEGRITY POLICY

Soochow University highly values the academic integrity and aims to promote the



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academic fairness, honesty and responsibility. Any academic dishonesty behaviors and any attempts to cheats and plagiarism will be reported to the university administration office. A written warning and the relevant penalties will be imposed. The record might be shown on the official university transcript.

DISABILITY ACCOMMODATION

Soochow University is committed to maintaining a barrier-free environment so that students with disabilities can fully access programs, courses, services, and activities at Soochow University. Students with disabilities who require accommodations for access to and/or participation in this course are welcome.

Note:

Please contact the University Administrative Office immediately if you have a learning disability, a medical issue, or any other type of problem that prevents professors from seeing you have learned the course material.