



蘇州大學
Soochow University

BIO 105 Organismal Biology

Fall 2023

Course Credits: 4

Contact Hours: 56 hours

Instructor: TBA

Email:TBA

COURSE OBJECTIVES

The course focuses on the fundamentals of the ecological evolution and ecology of biological diversity as well as the evidence of which. Students will use scientific methods to examine various topics associated with biology, which include mechanisms of evolution, biological diversity, the influence of human life on ecological systems, etc. This course is designed to introduce students to the process of scientific thinking as well as the fundamentals of organismal biology.

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

1. Explain how evolution drives the diversity of life on Earth;
2. Comprehend the fundamental knowledge of ecological evolution and biological diversity;
3. Analyze biological systems on a variety of scales, from organismal to global;
4. Explain evolution to describe species and population changes in ecology and behavior.

PREREQUISITES

None

GRADING

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

ITEM

POINTS



2 Assignments	20 Points
2 Quizzes	20 Points
Term Paper	20 Points
Midterm Exam	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:

Hillis DM, *Principles of Life*. Sinauer Associates/MacMillan, Sunderland, MA, 2014.

Recommended (Optional) Texts or Other Materials:

None.

COURSE TOPICS

MODULE	TASKS
Module 1	Topics: Topic 1: Evidence for Evolution Topic 2: Darwin: Natural Selection Topic 3: Genetic Variation Topic 4: Microevolution and Macroevolution Assessments: Assignment #1
Module 2	Topics: Topic 5: Phylogenetics Topic 6: Origins of Life, Bacteria, Archaea Topic 7: Microbial Eukaryotes Topic 8: Plants, Insects and Vertebrates Assessments: Quiz #1



Module 3	Topics: Topic 9: Ecology: Populations Topic 10: Ecology: Communities Topic 11: Ecology: Ecosystems and Biomes Topic 12: Ecology: Ecological Interactions Assessments: Assignment #2 Midterm Exam
Module 4	Topics: Topic 13: Mitosis and the Cell Topic 14: Meiosis Topic 15: Mendelian Inheritance Topic 16: The Chromosomal and Molecular Basis Assessments: Quiz #2
Module 5	Topics: Topic 17: Pedigrees and Development Topic 18: Animal Form and Function Topic 19: Metabolism, Digestion, Nutrition Topic 20: Human Life and Ecosystem Assessments: Term Paper Final Exam

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 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



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learning disability, a medical issue, or any other type of problem that prevents professors from seeing you have learned the course material.