



蘇州大學  
Soochow University

# BIO 105 Organismal Biology

Summer 2023

**Course Credits:** 4

**Contact Hours:** 55 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. Comprehend the fundamental knowledge of ecological evolution and biological diversity
2. Explain the scientific method and interpret scientific data from figures and tables
3. Be able to use scientific methods to research evolutionary process and major trends in biotic diversity with specific examples
4. Apply the knowledge learned from this course to real life and think scientifically about biological issues in our society

## **PREREQUISITES**

BIO 100 Introduction to Biology

## **GRADING**

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



ITEM	POINTS
Assignments	10 Points
2 Quizzes	30 Points
Midterm Test	25 Points
Final Exam	35 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:**

Jane B. Reece; Neil A. Campbell, *Campbell Biology*, Pearson Learning Solutions, 2011.

### **Recommended (Optional) Texts or Other Materials:**

None

## COURSE TOPICS

MODULE	TASKS
Module 1	<b>Topics:</b> Topic 1: Course Overview Topic 2: The Chemical Context of Life Topic 3: Molecular Diversity of Life Topic 4: The Cell Topic 5: Membrane Structure and Function <b>Assessments:</b> Assignment



Module 2	<b>Topics:</b> Topic 6: Metabolism Topic 7: Cellular Respiration and Fermentation Topic 8: Mendel and the Gene Idea Topic 9: Inheritance: The Chromosomal Basis Topic 10: Inheritance: The Molecular Basis <b>Assessments:</b> Quiz#1
Module 3	<b>Topics:</b> Topic 11: Mechanism of Evolution Topic 12: Descent with Modification Topic 13: The Evolution of Populations Topic 14: The Origin of Species Topic 15: Midterm Test Reviews <b>Assessments:</b> Midterm Test
Module 4	<b>Topics:</b> Topic 16: Evolutionary History of Biological Diversity Topic 17: Phylogeny Topic 18: Plant Diversity Topic 19: The Evolution of Plants Topic 20: Animal Diversity <b>Assessments:</b> Quiz#2
Module 5	<b>Topics:</b> Topic 21: Animal Form and Function Topic 22: Ecology and the Biosphere Topic 23: Population Ecology Topic 24: Community Ecology Topic 25: Human Life and Ecosystem <b>Assessments:</b> 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.



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## **DISABILITY ACCOMMODATION**

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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.