



BIO 104 Ecology and Environmental Science

Summer 2024

Course Credits: 4

Contact Hours: 56 hours

Instructor: TBA

Email:TBA

COURSE OBJECTIVES

This course explores the critical global challenges that humanity faces in the realm of biology and the environment. With a primary focus on the intricate relationship between biodiversity, the environment, and human livelihoods, students will delve into the complexities of these interconnections. The course will utilize real-world case studies to illustrate the profound impact of biodiversity on the environment and, consequently, its influence on various aspects of human life.

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

1. Gain a comprehensive understanding of biodiversity and its significance in maintaining ecological balance.
2. Evaluate the impact of habitat destruction, climate change, and pollution on biodiversity, recognizing their interconnectedness.
3. Recognize and understand the relationships between human activities and biodiversity loss, and their consequences.
4. Apply theoretical knowledge to real-world scenarios through the analysis of biodiversity conservation case studies.
5. Appreciate the economic and biomedical potential of global biodiversity, exploring case studies highlighting its role in innovation.

PREREQUISITES

N/A

GRADING



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

| ITEM | POINTS |
|--------------|------------|
| Quizzes | 20 Points |
| Assignments | 20 Points |
| Midterm Exam | 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:

1. Fred Van Dyke; Rachel L. Lamb, *Conservation Biology: Foundations, Concepts, Applications*, 3rd Edition, Springer, 2020.
2. Eric Chivian; Aaron Bernstein, *Sustaining Life: How Human Health Depends on Biodiversity*, Oxford University Press.

Recommended (Optional) Texts or Other Materials:

None

COURSE TOPICS

| MODULE | TASKS |
|----------|--|
| Module 1 | <p>Topics: Topic 1: The History and Distinctions of Conservation Biology Topic 2: Biodiversity: Concept, Measurement, and Management Topic 3: The Anthropocene: Conservation in a Human-Dominated Nature Topic 4: Biodiversity Conservation and Climate Change</p> <p>Assessments: Quiz#1</p> |



| | |
|----------|---|
| Module 2 | Topics: Topic 5: Conservation Genetics Topic 6: The Conservation of Populations: Theory, Analysis, Application Topic 7: The Conservation of Terrestrial Habitat and Landscape Topic 8: The Conservation of Aquatic Systems Assessments: Quiz#2 |
| Module 3 | Topics: Topic 9: Conservation Through Ecosystem Management Topic 10: Values and Ethics in Conservation Topic 11: Conservation Economics and Sustainable Development Topic 12: The Legal Foundations of Conservation Biology Assessments: Midterm Exam |
| Module 4 | Topics: Topic 13: Conservation as Vocation Topic 14: How Is Biodiversity Threatened By Human Activity? Topic 15: Ecosystem Services Topic 16: Biodiversity And Biomedical Research Assessments: Assignment#1 |
| Module 5 | Topics: Topic 17: Threatened Groups Of Organisms Valuable To Medicine Topic 18: Ecosystem Disturbance, Biodiversity Loss, And Human Infectious Disease Topic 19: Biodiversity And Food Production Topic 20: What Individuals Can Do To Help Conserve Biodiversity Assessments: Assignment#2 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



蘇州大學
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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.