

GEO 220 Biogeography

Summer 2023

Course Credits: 4 Contact Hours: 55 hours Instructor: TBA Email:TBA

COURSE OBJECTIVES

Biogeography is the study of the geography of life. It is a branch of geography that studies the past and present distribution of the world's many species. In this course, we will study on the history of biogeography, the pattern of distribution, and the patterns of life. Main topics will include communities, biodiversity, natural selection, evolutiuon, human intrusion, conservation biogeography, etc. Students will also learn to explain geographic variation in the characteristics of individuals and populations of closely related species.

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

1. Develop historical understanding of biogeography;

2. Identify the typical patterns of species distributions;

3. .Explain critical determinants that affect the distribution of plants and animals;

4. Gain insight into the approaches for studying the main subfields of biogeography;

5. Predict how biodiversity will respond to our rapidly changing world.

PREREQUISITES

GEO 110 Introduction to Geology

GRADING

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



ITEM	POINTS
Labs	40 Points
Midterm	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:

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

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

COURSE MATERIALS

Required Texts:

Christopher Barry Cox, Peter D. Moore, Richard J. Ladle, *Biogeography: an ecological and evolutionary approach*, 9th Edition, John Wiley & Sons;Wiley-Blackwell, 2016.

Recommended (Optional) Texts or Other Materials:

None

COURSE TOPICS

MODULE	TASKS
Module 1	Topics:
	Topic 1: The History of Biogeography
	Topic 2: Patterns of Distribution: Finding a Home
	Topic 3: Limits of Distribution
	Topic 4: The Community
	Assessments:
	Lab 1: Patterns of Distribution
Module 2	Topics:
	Topic 5: The Ecosystem
	Topic 6: Diversity in Space and Time
	Topic 7: Dynamic Biodiversity and Neutral Theory
	Topic 8: Plate Tectonics
	Assessments:
	Lab 2: Biodiversity





Module 3	Topics:
	Topic 9: How Plate Tectonics affects the Living World
	Topic 10: Islands and Plate Tectonics
	Topic 11: The Mechanism of Evolution: The Genetic System
	Topic 12: The Theory of Island Biogeography
	Assessments:
	Midterm
	Lab 3: Ecosystem
Module 4	Topics:
	Topic 13: Building an Ecosystem
	Topic 14: Dispersal, Vicariance and Endemism
	Topic 15: Reticulate Patterns
	Topic 16: Zones in the Ocean and on the Seafloort
	Assessments:
	Lab 4: Evolution
Module 5	Topics:
	Topic 17: Early Land Life on the Moving Continents
	Topic 18: The Biogeographical Regions Today
	Topic 19: Ice and Change; Regional Distribution
	Topic 20: The Human Intrusion; Conservation Biogeography
	Assessments:
	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).

ACEDEMIC 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



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