

SOUTHEAST MISSOURI STATE UNIVERSITY

Department of Biology

BI 438/638

Biogeography

New: Fall 2009

I. Catalog Description and Credit Hours

Geographical distribution of biological diversity. Application of theories and methods to explore spatial and temporal patterns of variation and biodiversity. Three lectures. (3)

II. Prerequisites: BI 154, and either BI 300 or BI 332.

III. Purposes or Objectives of Course:

Students will be able to:

- A) Demonstrate understanding of basic terms and concepts of biogeography.
- B) Relate biogeographic distributions to historical and modern environmental change.
- C) Critically evaluate historical and contemporary biogeographic publications.
- D) Apply quantitative analytical techniques to explore biogeographic patterns.
- E) Apply biogeographic principles to the conservation of biological diversity.

IV. Expectations of Students

- A) Attend all lectures and complete all assignments.
- B) Contribute meaningfully to class discussions.
- C) Prepare and present a report on the historical and contemporary biogeographic processes (e.g., speciation, extinction, dispersal) of a taxon of the student's choice.
- D) Take all quizzes, two one-hour examinations, and the final exam.
- E) Graduate students must complete and present an additional individual or group project.

V. Course Content or Outline

TOPIC	PERIODS
Introduction to Biogeography Science of Biogeography History of Biogeography	2
Environment and Basic Biogeographic Patterns Climate Soils and Water Species Distributions Geography of Ecological Communities	6
Historical Patterns and Processes Dispersal Speciation and Extinction Global Change Glacial Dynamics	7
Evolutionary History of Biotas Geography of Lineages Reconstructing the History of Lineages Reconstructing the History of Biotas	7
Ecological Biogeography Island Biogeography Assembly of Island Communities Ecogeography and Gradients	6
Conservation Biogeography Biodiversity and Geography of Extinctions Conservation Biogeography Biogeography of Humanity Anthropogenic Climate Change	5
In-depth comparative analysis of historical and contemporary publications from the primary literature	4
Presentations: Historical and contemporary biogeographic processes	6
Two one-hour exams	2
TOTAL	45

VI. Textbook and/or Other Required Materials

A) Required Text: Lomolino, M.V., B.R. Riddle, and J.H. Brown. *Biogeography*, 3rd ed. Sinauer, 2006.

B) Assigned readings and handouts.

VII. Basis for Student Evaluation

Undergraduate

Exams and Quizzes	60%
Critical Analyses	20%
Presentation & Report	20%

Graduate

Exams and Quizzes	55%
Critical Analyses	15%
Presentation & report	15%
Individual or Group Project	15%

The weight of evaluation criteria and the nature of the presentations and reports may vary at the discretion of the instructor and will be indicated at the beginning of each semester.

VIII. Grading Scale

Undergraduate

90.00% - 100%	= A
80.00% - 89.99%	= B
70.00% - 79.99%	= C
60.00% - 69.99%	= D
≤ 59.99%	= F

Graduate

90.00% - 100%	= A
80.00% - 89.99%	= B
70.00% - 79.99%	= C
≤ 69.99%	= F

The instructor may adjust downward the lower boundary of each grade level. The lower boundary will never be adjusted upward.

IX. Academic Policy Statement:

Students will be expected to abide by the University Policy for Academic Honesty regarding plagiarism and academic honesty. Refer to:
<http://www6.semo.edu/judaffairs/code.html>

X. Student with Disabilities Statement:

If a student has a special need addressed by the Americans with Disabilities Act (ADA) and requires materials in an alternative format, please notify the instructor at the beginning of the course. Reasonable efforts will be made to accommodate special needs.