

# Bemidji State University

## GEOG 4130: Biogeography

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: \*.\*

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course examines the distribution and diversity of flora and fauna across multiple scales. It will focus on the factors that shape and influence these patterns and investigate the role of disturbance in this process. It will also incorporate both field and lab experiences to further examine the key concepts of biogeography. Prerequisites: GEOG 2100 and GEOG 3231.

**B. COURSE EFFECTIVE DATES:** 08/25/2014 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. 1. Introduction to Biogeography
  - a. The Science & History of Biogeography
2. 2. The geographic and ecological foundations of biogeography
  - a. Visualization and Analysis of Biogeography Patterns
  - b. Distributions of Species & Communities
3. 3. Fundamental biogeographic processes and earth history
  - a. Dispersal and Immigration
  - b. Speciation and Extinction
  - c. The Changing Earth, Tectonics, and Glaciation
  - d. Diversification
  - e. Reconstructing the History of Lineages & Biotas
4. 4. Ecological biogeography
  - a. Patterns in Species Richness
  - b. Assembly and Evolution of Insular Communities
  - c. Ecological Geography of Continental and Oceanic Biotas
5. 5. Field Study in Biogeography
  - a. Vegetation sampling and analysis
  - b. Environmental sampling and analysis

### D. LEARNING OUTCOMES (General)

1. . Understand the historical trajectory of the key conceptual ideas and discoveries in the field of biogeography.
2. . To develop an understanding of the historical and ecological factors that influences the patterns of life on earth.
3. . To survey examine how processes such as evolution, and plate tectonics influence biogeography.
4. . Apply, through hands-on assignments concepts of biogeography such as analysis of species diversity and richness.
5. . Conduct field-based data collection and analysis of vegetation and hydrologic data.

**E. Minnesota Transfer Curriculum Goal Area(s) and Competencies**

None

**F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

**G. SPECIAL INFORMATION**

None noted