

<b>Contact Time</b>	Two 1.5 hour lectures per week One 1.5 hour lab per week
<b>Format</b>	In person delivery – lectures, labs
<b>Class Assessment</b>	20% Final exam 20% Quizzes 40% Lab activities 10% Reading reports 10% Participation

### COURSE OVERVIEW

Biogeography integrates knowledge from multiple disciplines to understand the factors that control patterns of distribution, diversity, and abundance of species and communities on Earth. It addresses such questions as “Why is biological diversity high in tropical ecosystems?”, “Why do similar species occupy different areas?”, or “How will species and communities respond to global change?” We can address such questions by integrating knowledge from geology, biology, ecology and other disciplines. This course will focus on interactions among organisms, between organisms and their environment that serve to define critical habitats required by all species. We will also examine current environmental issues through a biogeographical lens, including climate change, invasive species, and loss of biological diversity. By the end of the course, students will understand the key factors influencing patterns of distribution, diversity and abundance, how these factors operate over a range of spatial and temporal scales, and how humans have and will impact these patterns.

### LEARNING OUTCOMES

- Provide a critical understanding of key concepts related to ecological and historical biogeography.
- Understand the distribution of life as a function of the physical environment and biological interactions.
- Explain the linkages between patterns and processes across a range of spatial and temporal scales.
- Discuss global patterns as a function of climate, latitude, glaciations, etc.
- Examine the impacts of contemporary issues on biophysical processes and environmental change.

### COURSE TOPICS

History of biogeography, distribution of species, communities and biomes, biological diversity, speciation and extinction, dispersal, plate tectonics and continental drift, patterns of diversity, human evolution and impacts, island biogeography, consequences of global change, effects of disturbance, biogeography and conservation.

### COURSE READINGS

Required: Lomolino, M.V., B.R. Riddle, and R.J. Whittaker. *Biogeography: Biological Diversity Across Space and Time*, 5th ed. 2016. Sinauer Associates, Oxford University Press.

Required: weekly readings posted on OnQ to support the lecture and lab material.