SCBE415 Biodiversity Sciences

[3(3-0-6)]

Second semester, 2025
Mondays 9:30-12:30
(online)

Instructor: Alyssa Stewart
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Course Description: This course will examine the definition, scope, and constraints of biodiversity; genetic, species, and ecosystem diversity; values and uses of biodiversity; latitudinal gradients of diversity and biodiversity hotspots; and the loss and conservation of biodiversity. Additional topics covered will be determined based on students' interests.

Learning Goals: By the end of this course, students should:

- Be familiar with the basic concepts of biodiversity sciences.
- Feel comfortable reading scientific literature.

Course format:

- The first hour of class will be spent discussing scientific articles (each week, 2-3 students will be in charge of leading the class discussion about that week's topic).
- The last two hours of class will be spent working on a group activity.
    - Students at MU will work on assignments in class.
    - Students at SUNY-ESF can work on the assignment anytime, and submit it via Google Classroom by the following Monday.
- The last two weeks of class will be dedicated to student presentations. Each student will pick a topic of interest related to biodiversity and give a 15-minute presentation (+5 min Q&A).

Class Discussion format:

- Discussion leaders should (a) briefly summarize the paper, (b) ask questions to the class to guide the discussion, and (c) help answer questions that other students have.
- Don't stress if you don't understand everything in the paper! It's completely normal. (And I will help guide the class discussion also.)
- Even if it's not your week to lead, everyone needs to read the papers each week so that we can all contribute to the discussion.

SCBE415 Schedule:

Week	Date	Topic
1	5 Jan	Introduction to the course
2	12 Jan	Defining and Quantifying Biodiversity; Scope & Constraints of Biodiversity Science
3	19 Jan	Value and Uses of Biodiversity
4	26 Jan	Genetic Diversity
5	2 Feb	Species Diversity
6	9 Feb	Ecosystem Diversity
7	16 Feb	Latitudinal Gradients of Biodiversity
8	23 Feb	Biodiversity Hotspots
9	2 – 6 Mar	Midterm Exam Week
10	9 Mar	Threats to Biodiversity
11	16 Mar	Impacts of Biodiversity Loss
12	23 Mar	Conservation of Biodiversity
13	30 Mar	Biodiversity and Protected Areas
14	6 Apr	Biodiversity and Agriculture / Biodiversity in Thailand
15	13 Apr	holiday (no class)
16	20 Apr	Students' Topics
17	27 Apr – 8 May	Final Exam Week