

SCBE415 Biodiversity Sciences

[3(3-0-6)]

First semester, 2026

Tuesdays 9:30-12:30

Hybrid format: SC2-220 (or SC1-155) & online

Google Classroom code: cewur7jv

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.
 - o Students at MU will work on assignments in class.
 - o 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). (Please send me your topic by Oct 20th so I can confirm that it is appropriate.)

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, I'd like everyone to read the papers each week so that we can all contribute to the discussion.

Grading:

- Participation & effort: 100% (see grading rubric)
- [You don't have to know all the answers, but your participation in class and your work should demonstrate that you have attempted them to the best of your ability.]

SCBE415 Schedule:

Week	Date	Topic
1	4 Aug	Introduction to the course
2	11 Aug	Defining and Quantifying Biodiversity; Scope & Constraints of Biodiversity Science
3	18 Aug	Value and Uses of Biodiversity
4	25 Aug	Genetic Diversity
5	1 Sept	Biodiversity in Thailand
6	8 Sept	Species Diversity
7	15 Sept	Ecosystem Diversity
8	22 Sept	Latitudinal Gradients of Biodiversity
9	28 Sept - 2 Oct	Midterm Exam Week
10	6 Oct	No Class (MU Graduation Ceremony)
11	13 Oct	No Class (public holiday)
12	20 Oct	Biodiversity Hotspots
13	27 Oct	Threats to Biodiversity
14	3 Nov	Impacts of Biodiversity Loss
15	10 Nov	Conservation of Biodiversity
16	17 Nov	Biodiversity and Protected Areas
17	24 Nov	Students' Topics
18	30 Nov - 11 Dec	Final Exam Week