

# SCBE415 Biodiversity Sciences

[3(3-0-6)]

2023 Academic Year, Term 3

N209 (Phayathai), 9:30-12:30

**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 within 3 days.
- The last 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 2 weeks in advance 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:**

<b>Lecture</b>	<b>Date</b>	<b>Topic</b>
1	4 Jun	Introduction to the course
2	7 Jun	Defining and Quantifying Biodiversity
3	10 Jun	Sampling Biodiversity
4	12 Jun	Value and Uses of Biodiversity
5	14 Jun	Genetic Diversity
6	17 Jun	Species Diversity
7	19 Jun	Ecosystem Diversity
8	21 Jun	Latitudinal Gradients of Biodiversity
9	24 Jun	Biodiversity Hotspots
10	26 Jun	Threats to Biodiversity
11	28 Jun	Impacts of Biodiversity Loss
12	1 Jul	Conservation of Biodiversity
13	3 Jul	Biodiversity in Thailand
14	5 Jul	Review of Material & Work on Presentations
15	9 Jul	Students' Topics
16	12 Jul	Students' Topics
17	16 Jul	Students' Topics
18	19 Jul	Final Exam