

BIOL 200 Lecture Syllabus, Fall 2021

Lecture and Lab Instructor

Angie Roles (she/her)
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Drop-in Student Hours:
MWF 10–11am, 1:30–2:30pm, or email
for appointment

Lab Instructor and Coordinator

Katherine Cullen (she/her)
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Student Hours: M 2–4pm, W 8:30–
9:30am, W 5–6pm, or email for appoint-
ment

Student Hours

Student Hours are times that we have set aside specifically to meet with students in our course(s). We will be in our offices and available – you can just stop by and give the door a knock! You can drop in by yourself or bring friends; you may have specific questions or just want to say hi – any reason is good enough. If you aren't available during these intervals, we're happy to find another time that works. For help using Google Calendar to schedule a meeting with Angie: www2.oberlin.edu/faculty/aroles/studenthourssignup.html

Class Meetings

Lecture: MWF 9-9:50am in Sci Ctr A155

Lab: T or W 1:30-4:20pm in Sci Ctr K119

Enrollment in both lecture and laboratory is required of all students.

Course Description

This course provides biology majors and others with an integrated introduction to key principles of ecology and evolution, including selection, drift, sources of variation, and patterns of diversity, as well as factors and processes governing biotic and abiotic interactions that influence the distribution and abundance of organisms. Labs feature indoor and field exercises and discussions designed to develop critical thinking and quantitative skills in data collection, analysis, and interpretation. Field trips required. Prerequisites: BIOL 100. Attributes: 4NS, QFR.

Course Objectives

Students completing this course should be able to:

- Understand and apply fundamental evolutionary and ecological concepts.
- Apply all parts of the scientific method to ecological and evolutionary questions.
- Appreciate the nature of variation and the importance of random events in natural systems, across levels of organization from the molecule to the ecosystem.
- Be aware of the broad diversity of life, past and present, and the major patterns of life through time.

- Practice interpreting graphical presentations and statistical analyses of data representing the relationship between two (or more) variables.
- Learn some of the basic techniques of field biology.
- Recognize the relationship of biology to other sciences, disciplines, and society.

Statement on Accessibility and Inclusion

Central to this course is an understanding and appreciation of diversity across the tree of life. In line with that value, we aim to make this course accessible and inclusive of all students. Each individual brings with them a unique set of experiences which inform their perspective when interacting with others and learning new information. All are welcome in this class and expected to put in the work to learn more than you knew coming in. You have the right to ask for assistance, access, or additional resources to meet your learning needs. If you find yourself unable to fully access the course in any way, you are welcome to contact us to discuss your needs. During the first week of classes, we will discuss community norms to guide us in our interactions.

In case of emergency...

Should circumstances arise that prevent you from fulfilling your responsibilities, such as completing exams on time or making it to lab, you should contact the lecture or lab instructor ASAP. If you anticipate issues or conflicts arising in advance, please contact your instructor so that we may make arrangements.

Course Structure

This course adopts a flipped classroom style for all lecture meetings and uses contract grading for assessment. Each week, video recordings are provided, to be studied outside of class meeting times. During the MWF lecture meetings, we will work on case studies or problem sets relating to that week's material. Weekly lab sessions will focus with greater depth on selected lecture topics and associated skills.

Reference Material / Textbooks

- There are no required textbooks for this course. You are welcome to use your Biology 100 textbook as a reference; the current Biology 100 text is available on reserve in the Science Library.
- All materials will be shared via [Google Drive](#) (lecture) or Bb (lab).
- The open-source text [Biology 2e](#) is recommended for many topics when you may wish more information or a different presentation than given in the video lectures.

Honor Code

You are expected to adhere to and sign the Honor Code:

1. On exams and quizzes, affirming the work is your own, without giving or receiving aid;
2. For Organism Reports, affirming the work is that of the group members without external aid given or received;
3. On problem sets, affirming that the work is your own and, when appropriate, that you have cited references accurately;
4. On lab assignments, affirming that you have worked only with classmates (when permitted) and have used only course material provided for the current academic term.

Your instructors are required to report any suspected violations of the Honor Code to the Honor Committee. Independent of any deliberations of the Honor Committee, in this course suspected violations of the Honor Code may result in amendment of the grade contract to a D or F if appropriate. More information on the Oberlin Honor Code may be found here: <https://www.oberlin.edu/dean-of-students/student-conduct/academic-integrity>.

Resources Offering Support

- All instructors are available for individual consultation during student hours or by appointment.
- **Students who have been approved by the [Center for Student Success](#) (Peters Hall 118) for accommodations should speak with the appropriate instructor (Roles for lecture or Cullen for lab) to be sure that your needs are being met in this course. For exam accommodations, please reach out to the instructor in advance so that arrangements can be made.**
- Peer Tutors are available through the Academic Advising Resource Center (AARC), <https://www.oberlin.edu/aarc/peer-tutoring> or email peertutoring@oberlin.edu. This service is free and you are encouraged to arrange for a tutor as soon as you like.
- The Executive Functioning Program offers peer tutors, freely available through the Center for Student Success. If you struggle with planning and organization skills, you might contact this program! You can find out more at <https://www.oberlin.edu/center-student-success/efg>, where you can also sign up to meet with a an EF tutor.
- We do not have OWLs or HOOTs for this course but you are encouraged to use the [Quantitative Skills Drop-in Tutoring Center](#) (Science Center K100). They can assist students with math skills, statistics, computer software like Excel, or programming languages. No appointment is necessary.

Assessment

In this course, we will use contract grading, a method of assessment in which you write a contract laying out the work you will complete (to a satisfactory level) in order to earn the grade you specify. For details, see the template contract shared at [this link](#) and located in the biol-200share folder. Links to course materials are also available via Angie's webpage: <http://www2.oberlin.edu/faculty/aroles/biol200.html>

Expected Weekly Schedule – Fall 2021

Week	Dates	Topics/Exams Coverage
1	Oct 04–08	Introduction, Biodiversity, Phylogenies
2	Oct 11–15	Cells, Eukarya, Genomes
3	Oct 18–22	Info Transmission and Life Cycles
4	Oct 25–29	Genes, Transcription, Translation
Fri 10/29: Finish Exam 1 material		
5	Nov 01–05	Sex Determination, Segregation, Dominance
6	Nov 08–12	Independent Assortment, Hardy Weinberg, Evolution
7	Nov 15–19	Genetic Variation, Mutation, Gene Flow
Fri 11/19: Finish Exam 2 material		
	Nov 20–28	Thanksgiving Break (no classes)
8	Nov 29–Dec 03	Genetic Drift, Nonrandom Mating, Natural Selection
9	Dec 06–10	Heritability, Speciation, Population Ecology
10	Dec 13–17	Life History, Behavior, Learning
Fri 12/17: Finish Exam 3 material		
11	Dec 20–24	Genetics of Behavior, Interspecific Interactions
Wed Dec 22: Last day of classes before winter break		
	Dec 23–Jan 02	Winter Break (no classes)
12	Jan 03–07	Competition, Community Structure, Ecological Succession
13	Jan 10–14	Energy Flow, Biodiversity Patterns, Nutrient Cycling
Fri 1/14: Finish Exam 4 material		
	Jan 16–19	Reading Period
	Jan 20–24	Finals
Thu 1/20: 2:00-4:00pm Final Exam Period		