

Ecology Syllabus

EEOB 3410 Summer 2025

Course Information

- **Course times and location:** Monday, Wednesday, and Friday, 8 a.m.- ~4 p.m. in 300 Stone Laboratory
- **Credit hours:** 4
- **Mode of delivery:** In Person

Instructor

- **Name:** Layne Gaynor, Doctor of Evolution, Ecology, and Organismal Biology, Ohio State
- **Email:** gaynor.44@osu.edu
- **Phone Number:** 606-231-8912
- **Office location:** TBD
- **Office hours:** TBD
- **Preferred means of communication:**
 - My preferred method of communication for questions is **email**.
 - My class-wide communications will be sent through the Announcements tool in CarmenCanvas. Please check your [notification preferences](https://go.osu.edu/canvas-notifications) (go.osu.edu/canvas-notifications) to be sure you receive these messages.

Course Prerequisites/Co-Requisites

BIO 1114 or equivalent college-level introductory Biology course.

Course Description

Distribution and abundance of species, population dynamics, community ecology, ecosystem dynamics, and applied perspectives.

Course Learning Goals and Outcomes

By the end of this course, students will:

- Understand how ecologists think:
 - Understand how evolutionary principles apply to ecological problems.



- Appreciate the importance of systems thinking in ecology.
- Appreciate the need to consider scale when trying to interpret spatial and temporal patterns in nature.
- Appreciate the importance of change in ecology.
- Understand how ecology is done:
 - Understand how ecologists use the scientific method.
 - Understand the difference between using observational and experimental approaches to understanding nature.
 - Appreciate how models are used to understand nature.
 - Learn techniques used in the collection of ecological data
 - Learn the need for, meaning of, and use of statistics as a tool to understand nature.
- Have knowledge of ecological concepts and connections:
 - Understand the ecology of the individual organism.
 - Understand what factors and processes affect population size, structure, and growth rate.
 - Understand how interactions among species and among species and the environment affect community structure & function.
 - Understand the flow of energy and nutrients through ecosystems.
 - Appreciate the role of global processes in ecology.
- Appreciate linkages between human actions and the environment:
 - Understand what types of careers are available in ecology.
 - Appreciate the existence of a basic-to-applied continuum in ecology.
 - Understand and value the difference between appraisals based upon the scientific method and values-based appraisals.
 - Be able to “think outside the box” and realize that understanding ecology involves transdisciplinary thinking, including disciplines such as economics, sociology, environmental chemistry, toxicology, and ethics.



How This Course Works

Mode of delivery: This course is taught in person. Students are expected to attend class each week during the scheduled meeting sessions.

Credit hours and work expectations: This course meets three times per week. Instructional days will be a mix of lecture, lab work, and field work. This is a 4 credit-hour course. According to [Ohio State bylaws on instruction](http://go.osu.edu/credithours) (go.osu.edu/credithours), you should expect to spend about two hours outside of class for each hour of lecture and each three hours of lab in order to earn a grade of C. Clearly, this will be different for different students, and more time will be necessary to earn a higher grade; this is just an estimate to help you set expectations for your schedule.

Attendance and participation requirements: Research shows regular participation is one of the highest predictors of success. With that in mind, I have the following expectations for everyone's participation:

- **Lecture and Laboratory meetings:** Students are expected to attend and actively participate in all class sessions, including lectures and laboratory time. In the case of emergency or illness, contact the instructor as soon as possible to discuss possible accommodations at the discretion of the instructor and with appropriate documentation.
- **Field Trips:** This course will feature a number of day long field trips. Students are expected to attend all field trips. All transportation will be provided, but students should arrive at the indicated departure location no later than the designated departure time. In the case of emergency or illness, contact the instructor as soon as possible to discuss possible make-ups.

Course Materials, Fees and Technologies

Required Text

SimUText Ecology Summer 2024/2025. Cost: \$89. *Note that Chromebook and iPad or other tablets are not compatible with the interactive features of SimUText.* If you do not have a laptop or desktop computer, other options for accessing the interactive SimUText content are described on the course Carmen site and the SimUText site linked in step 1 below.

(Installation instructions to be added once SimUText course is set up)

If you do not have easy access to a PC or Mac, please talk with your lecture instructor to discuss alternate options for accessing the SimUText through a university lab computer.

Problems or questions? Visit [SimUText Student Support](#) to search the Knowledge Base and view Video Tutorials. If you are not able to find the answer to your question, you can submit a support request from the support page.

Please note that the course instructor is not able to help resolve any problems that you may have purchasing, downloading, or troubleshooting the SimUText application at any point in the semester. If you have problems or questions, contact the SimUText support desk at the link above.

Required Equipment

- **Computer:** current Mac (MacOS) or PC (Windows 10) with high-speed internet connection. **Note that iPads, tablet, or chromebooks may not work with SimUText.**
- A mobile device (smartphone or tablet) to use for BuckeyePass authentication
- Water-proof field notebook (suggested Write-in-the-Rain)
- Waterproof pens (suggested Pigma Micron 0.05 Black)
- Wooden pencils
- Field clothes (that will get wet/dirty)
- Closed toe shoes (that will get wet/dirty)
- Field work durable swimwear (that will get wet/dirty)

If you do not have access to the technology you need to succeed in this class, review options for [technology and internet access](#) (go.osu.edu/student-tech-access).

Required Software

Microsoft Office 365: All Ohio State students are now eligible for free Microsoft Office 365. Visit the [installing Office 365](#) (go.osu.edu/office365help) help article for full instructions.

Recommended/Optional Materials and/or Technologies

- If you would like a more traditional textbook I would recommend Smith, R.L. and T.M. Smith. 2015. *Elements of Ecology, 9th edition* or Sher, A. and M. Molles. 2021. *Ecology: Concepts and Applications, 9th edition*.
- Binoculars
- Flashlight
- Camera

CarmenCanvas Access

You will need to use [BuckeyePass](https://buckeyepass.osu.edu) (buckeyepass.osu.edu) multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you do each of the following:

- Register multiple devices in case something happens to your primary device. Information can be found at [BuckeyePass](https://buckeyepass.osu.edu) (buckeyepass.osu.edu).
- Users will only receive one SMS passcode at a time. Using the “Trust Browser” feature on a user’s first authentication log in of the day will allow the user to bypass the need for another passcode for 24 hours.
- [Install the Duo Mobile application](#) on all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service.

If none of these options will meet the needs of your situation, you can contact the IT Service Desk at [614-688-4357 \(HELP\)](tel:614-688-4357) and IT support staff will work out a solution with you.

Technology Skills Needed for This Course

- Basic computer and web-browsing skills
- [Navigating CarmenCanvas](https://go.osu.edu/canvasstudent) (go.osu.edu/canvasstudent)
- [CarmenZoom virtual meetings](https://go.osu.edu/zoom-meetings) (go.osu.edu/zoom-meetings)

Technology Support

For help with your password, university email, CarmenCanvas, or any other technology issues, questions or requests, contact the IT Service Desk, which offers 24-hour support, seven days a week.

- **Self Service and Chat:** go.osu.edu/it
- **Phone:** [614-688-4357 \(HELP\)](tel:614-688-4357)
- **Email:** servicedesk@osu.edu

Grading and Faculty Response

How Your Grade is Calculated

Assignment Category	Points
In-Lecture Activities	60
SimUText Readings and Assignments	140
Lab Assignments (5 worth 20pts each)	100
Group Research Project	100
Exam 1	75
Exam 2	75
Final Exam	100
Total:	650

See [Course Schedule](#) for due dates.

Descriptions of Major Course Assignments

Exams

Description: There will be two midterm exams, worth 75 points, and one final exam, worth 100 points in this course. Exams will cover materials from both the lecture and field trips. Each midterm will only cover new materials, and the final will be cumulative (roughly 40% material from the midterms, and 60% new material). Exams will be composed of T/F, fill-in-the-blank, multiple choice, and short answer questions. Exams must be completed on your own without use of any external sources (including but not limited to notes, textbooks, websites, or other persons). You are allowed the use of a calculator for Exams and an equation sheet will be provided.

Group Research Project

Description: Students will work in groups of two and will present and write a term paper based on an ecological study. The entire class will help set up the experiment and collect data. Each group will be responsible for data analysis, making a presentation, and turning in a 10–15 page

(including tables, figures, and bibliography) term paper, in total worth 100 points. More information about this project will be handed out in class.

Lab Assignments

Description: There will be five lab assignments each worth 20 points. Students will work in groups to complete some of the lab activities, but each student should submit their own copy of the completed lab assignment for grading. Lab assignments will be due on the date listed in the schedule.

In-Lecture Assignments

Description: Attendance and participation in lecture is required. Most lectures will include some active learning strategies that will require student involvement, including synthesizing new information, interpreting data, and/or sharing student work, among other activities. In-lecture activities may include worksheets, small group activities, and a small number of random-call questions for individual responses. The total opportunities for in-lecture activity points will be greater than the maximum possible points in this grade category (60 points), so there is some flexibility built in for cases of illness or other absences that are beyond the student's control. It is not possible to make up missed participation points, so be prepared to attend and participate in lecture on a regular basis.

SimUText Readings and Assignments

Description: Each lecture has associated SimUText readings, and these readings should be completed BEFORE the lecture. To encourage student preparation for lecture, reading and completion of the simulations and end-of-section questions will be worth 5 points for each assigned section of the book. The total point opportunities (205) associated with the assigned SimUText sections is much greater than the maximum points you can earn (140) for this grade category. This means that there is flexibility in the sections that you choose complete for credit, though you are encouraged to at least read through all of the sections even if you don't complete the questions for credit. For the sections that you complete for credit, all answers must be submitted by **11:59p.m. the day before lecture**. After this deadline, responses may not be submitted for credit. Note that while you can work through the SimUText assignments offline, you need an Internet connection in order for your answers to be recorded for credit.

What if I am having issues accessing or effectively using the SimUText? SimBio, the creator and administrator of our SimUText app, has provided a couple of different ways for students to get help. First, if you are having any technical difficulties with the SimUText site (e.g., cannot install the program, cannot download it, cannot register answers), then please check out [SimBio's support page](#), which contains information on how to properly subscribe and install SimUText, as well as on known issues with the software. If you still are having technical

difficulties, then you should email SimBio at simutextsupport@simbio.com. Their policy is to respond within 24 hours of any request, and most likely it will be much sooner. Second, SimBio has created numerous video tutorials that can help you use SimUText effectively. The full list of tutorials can be found at <http://simbio.com/support/simutext>. **We strongly encourage you to watch all of these tutorials.** The 15 or so minutes that you spend watching these tutorials could save you countless hours later, and help ensure that you are using the SimUText chapters and website to your maximum benefit.

Why are we using an interactive textbook instead of a “real” textbook? The instructors of EEOB 3410 have chosen to use an electronic textbook for several reasons. First, a growing body of research has shown that interactive learning approaches can help students retain information for a longer period of time than simply reading. SimUText offers numerous ways (e.g., model building, mathematical exercises, answering questions) to help you learn and remember difficult concepts. Second, we will use a lot of active learning methods in class instead of simply lecturing with examples from a text. By having you answer questions online as you do the SimUText readings, I can better identify which concepts are being misunderstood, and in turn, focus our lecture time on those concepts. In addition to helping ensure that you learn difficult information, this can avoid wasting time on easily understood information and allow more time to focus on other material that is not in the SimUText assigned readings. Third, by assigning points to SimUText questions, you will be more inclined to read the material, which will improve your grade and help ensure that you are achieving our learning objectives. Fourth, students in previous offerings of this course have indicated that they prefer using SimUText to a traditional textbook.

Late Assignments

Please refer to Carmen for due dates. Due dates are set to help you stay on pace and to allow timely feedback that will help you complete subsequent assignments.

Late assignments due to an excused absence with proper documentation will be accepted as soon as possible (by next class session unless otherwise arranged). It is the students' responsibility to contact the instructor and supply the necessary documentation. Even in the case of an excused absence, assignments must be made up in a timely manner; in the event of an extended absence, it is the students' responsibility to make arrangements with the instructor.

Assignments that are late for any reason other than an excused absence will face an automatic deduction of 30% for the first day, and an additional 30% on the second day. On the third day no points will be awarded.

Instructor Feedback and Response Time

I am providing the following list to give you an idea of my intended availability throughout the course. Remember that you can call [614-688-4357 \(HELP\)](tel:614-688-4357) at any time if you have a technical problem.

- **Preferred contact method:** If you have a question, please contact me first through my Ohio State email address. I will reply to emails within **24 hours on days when class is in session at the university**.
- **Class announcements:** I will send all important class-wide messages through the Announcements tool in CarmenCanvas. Please check [your notification preferences](http://go.osu.edu/canvas-notifications) (go.osu.edu/canvas-notifications) to ensure you receive these messages.
- **Grading and feedback:** For assignments submitted before the due date, I will try to provide feedback and grades within **seven days**. Assignments submitted after the due date may have reduced feedback and grades may take longer to be posted.

Grading Scale

93–100: A
90–92.9: A-
87–89.9: B+
83–86.9: B
80–82.9: B-
77–79.9: C+
73–76.9: C
70–72.9: C-
67–69.9: D+
60–66.9: D
Below 60: E



Other Course Policies

Ohio State's Academic Integrity Policy

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's Code of Student Conduct, and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University's Code of Student Conduct and this syllabus may constitute Academic Misconduct.

The Ohio State University's Code of Student Conduct (Section 3335-23-04) defines academic misconduct as: Any activity that tends to compromise the academic integrity of the University or subvert the educational process. Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University's Code of Student Conduct is never considered an excuse for academic misconduct, so I recommend that you review the Code of Student Conduct and, specifically, the sections dealing with academic misconduct.

If I suspect that a student has committed academic misconduct in this course, I am obligated by University Rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the University's Code of Student Conduct (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact the instructor for this course.

For more information:

- [Committee on Academic Misconduct](http://go.osu.edu/coam) (go.osu.edu/coam)

Copyright for Instructional Materials

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Creating an Environment Free from Harassment, Discrimination, and Sexual Misconduct

The Ohio State University is committed to building and maintaining a community to reflect diversity and to improve opportunities for all. All Buckeyes have the right to be free from harassment, discrimination, and sexual misconduct. Ohio State does not discriminate on the basis of age, ancestry, color, disability, ethnicity, gender, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, pregnancy (childbirth, false pregnancy, termination of pregnancy, or recovery therefrom), race, religion, sex, sexual orientation, or protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment. Members of the university community also have the right to be free from all forms of sexual misconduct: sexual harassment, sexual assault, relationship violence, stalking, and sexual exploitation.

To report harassment, discrimination, sexual misconduct, or retaliation and/or seek confidential and non-confidential resources and supportive measures, contact the Civil Rights Compliance Office:

Online reporting form at civlrights.osu.edu
 Call 614-247-5838 or TTY 614-688-8605,
 Or Email civilrights@osu.edu

The university is committed to stopping sexual misconduct, preventing its recurrence, eliminating any hostile environment, and remedying its discriminatory effects. All university employees have reporting responsibilities to the Civil Rights Compliance Office to ensure the university can take appropriate action:

- All university employees, except those exempted by legal privilege of confidentiality or expressly identified as a confidential reporter, have an obligation to report incidents of sexual assault immediately.
- The following employees have an obligation to report all other forms of sexual misconduct as soon as practicable but at most within five workdays of becoming aware of such information: 1. Any human resource professional (HRP); 2. Anyone who supervises faculty, staff, students, or volunteers; 3. Chair/director; and 4. Faculty member.



Diversity

The Ohio State University affirms the importance and value of diversity of people and ideas. We believe in creating equitable research opportunities for all students and to providing programs and curricula that allow our students to understand critical societal challenges from diverse perspectives and aspire to use research to promote sustainable solutions for all. We are committed to maintaining an inclusive community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among all members; and encourages each individual to strive to reach their own potential. The Ohio State University does not discriminate on the basis of age, ancestry, color, disability, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, race, religion, sex, gender, sexual orientation, pregnancy, protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment.

In addition, this course adheres to **The Principles of Community** adopted by the College of Food, Agricultural, and Environmental Sciences. These principles can be found at <https://cfaes.osu.edu/about/cfaes-principles-community>. If you have been a victim of or a witness to harassment or discrimination or a bias incident, you can report it online and anonymously (if you choose) at <https://civilrights.osu.edu/>.

Your Mental Health

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing.

If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling 614-292-5766. CCS is located on the 4th floor of the Younkin Success Center and 10th floor of Lincoln Tower. You can reach an on-call counselor when CCS is closed at 614-292-5766 and 24-hour emergency help is also available through the 24/7 by dialing 988 to reach the Suicide and Crisis Lifeline.

Religious Accommodations

Ohio State has had a longstanding practice of making reasonable academic accommodations for students' religious beliefs and practices in accordance with applicable law. In 2023, Ohio State updated its practice to align with new state legislation. Under this new provision, students must be in early communication with their instructors regarding any known accommodation requests for religious beliefs and practices, providing notice of specific dates for which they request alternative accommodations within 14 days after the first instructional day of the course. Instructors in turn shall not question the sincerity of a student's religious or spiritual belief system in reviewing such requests and shall keep requests for accommodations confidential.

With sufficient notice, instructors will provide students with reasonable alternative accommodations with regard to examinations and other academic requirements with respect to students' sincerely held religious beliefs and practices by allowing up to three absences each semester for the student to attend or participate in religious activities. Examples of religious accommodations can include, but are not limited to, rescheduling an exam, altering the time of a student's presentation, allowing make-up assignments to substitute for missed class work, or flexibility in due dates or research responsibilities. If concerns arise about a requested accommodation, instructors are to consult their tenure initiating unit head for assistance.

A student's request for time off shall be provided if the student's sincerely held religious belief or practice severely affects the student's ability to take an exam or meet an academic requirement and the student has notified their instructor, in writing during the first 14 days after the course begins, of the date of each absence. Although students are required to provide notice within the first 14 days after a course begins, instructors are strongly encouraged to work with the student to provide a reasonable accommodation if a request is made outside the notice period. A student may not be penalized for an absence approved under this policy.

If students have questions or disputes related to academic accommodations, they should contact their course instructor, and then their department or college office. For questions or to report discrimination or harassment based on religion, individuals should contact the [**Civil Rights Compliance Office**](#).

Policy: [**Religious Holidays, Holy Days and Observances**](#)

Weather or other short-term closing

Although Ohio State strives to remain open to ensure continuity of services to students and the public, extreme conditions can warrant the usage of the university's [**Weather or**](#)

Other Short-Term Closing Policy. Please **visit this webpage** to learn more about preparing for potential closings and planning ahead for winter weather.

ACCESSIBILITY ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

Requesting Accommodations

The university strives to maintain a healthy and accessible environment to support student learning in and out of the classroom. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion.

If you are ill and need to miss class, including if you are staying home and away from others while experiencing symptoms of a viral infection or fever, please let me know immediately. In cases where illness interacts with an underlying medical condition, please consult with Student Life Disability Services to request reasonable accommodations. You can connect with them at slds@osu.edu; 614-292-3307; or slds.osu.edu.

Disability Services Contact Information

- Phone: [614-292-3307](tel:614-292-3307)
- Website: slds.osu.edu
- Email: slds@osu.edu
- In person: [Baker Hall 098, 113 W. 12th Avenue](#)



Accessibility of Course Technology

This online course requires use of CarmenCanvas (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations as early as possible.

- [CarmenCanvas accessibility](https://go.osu.edu/canvas-accessibility) (go.osu.edu/canvas-accessibility)
- Streaming audio and video
- [CarmenZoom accessibility](https://go.osu.edu/zoom-accessibility) (go.osu.edu/zoom-accessibility)



Course Schedule

Refer to the CarmenCanvas course for up-to-date due dates.

Week	Day	Topic	Assignments Due	Points
1	Jun-16	AM: None PM: Orientation		
	Jun-18	AM: What is Ecology?, Statistics and Experimental Design, Project Descriptions, Science Citation Index PM: Evolution an Ecology, Biodiversity		
	Jun-20	AM: Biodiversity field trip (Kelley's Island) PM: Biodiversity field trip (Kelley's Island)		
2	Jun-23	AM: Behavioral and Physiological Ecology PM: Collect fish for animal behavior study (Gibraltar)		
	Jun-25	AM: Behavioral Ecology study (Greater Cleveland Aquarium) PM: Behavioral Ecology study (Greater Cleveland Aquarium)	Statistics Assignments and SCI/Annotated Bib	40
	Jun-27	AM: EXAM 1 PM: Population Dynamics		75
3	Jun-30	AM: Community Ecology – Interactions and Structure PM: Intermediate Disturbance Hypothesis study (Gibraltar)		
	Jul-2	AM: Mark-Recapture study (South Bass) PM: Population Dynamics study (Put-In-Bay Cemetery)		
	Jul-4	AM: NO CLASS PM: NO CLASS		
4	Jul-7	AM: Community Ecology – Changes in Community PM: Forest Community Composition study (South Bass)	Population Study Assignments	40
	Jul-9	AM: Ecosystem Ecology – Nutrient Cycling and Energy Flow PM: Aquatic Community Ecology		
	Jul-11	AM: Lake Erie field study PM: Lake Erie field study		



5	Jul-14	AM: EXAM 2 PM: Landscape Ecology	Community Composition Assignment	95
	Jul-16	AM: Biomes PM: Biomes		
	Jul-18	AM: Aquatic Community study (Old Woman Creek and Huron River) PM: Aquatic Community study (Old Woman Creek and Huron River)		
6	Jul-21	AM: Global Ecology PM: Global Ecology		
	Jul-23	AM: Work on Papers and Presentations PM: Work on Papers and Presentations		
	Jul-25	AM: Presentations PM: Final Papers Due		100
	Jul-26	AM: FINAL EXAM PM: None		100