

Welcome to ECOL 3500: General Ecology

Tuesday/Thursday 12:45PM - 2:00PM

Room 201 Ecology

University of Georgia, Fall 2022

COURSE DETAILS

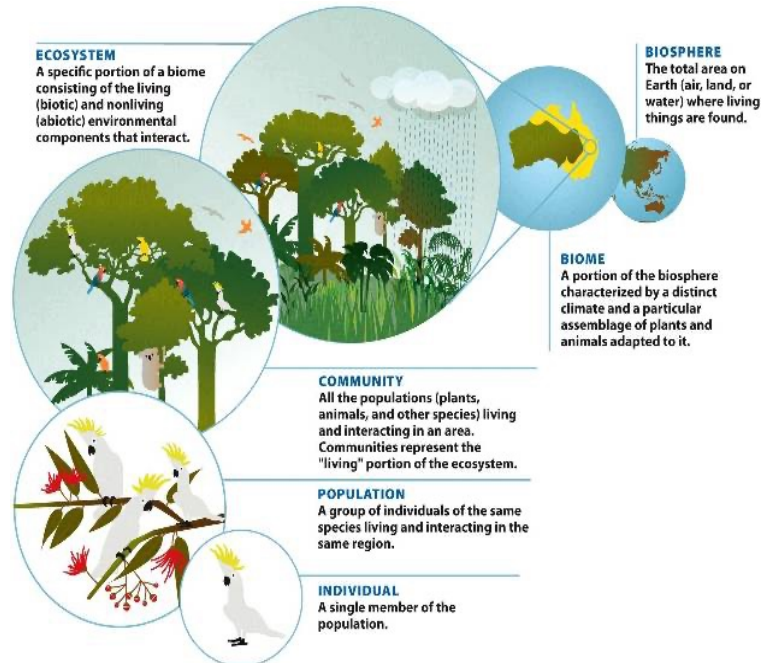
3 Credits Lecture

required 1 credit hour co-req ECOL 3500L

REQUIRED RESOURCES: Achieve eBook Access for Relyea, *The Economy of Nature* 9th edition (ISBN: 9781319460068) and iClicker (must register through link on our eLC page- this is important for grades to connect eLC to your Achieve account).

PREREQUISITES: (BIOL 1104, 1108+L, or PBIO 1220+L) and (CHEM 1211+L or 1311H+L)

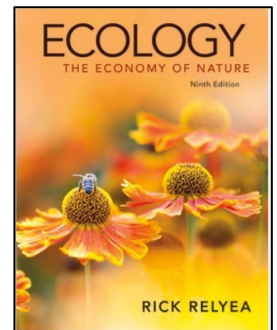
COURSE FORMAT: Face to Face and eLC website



Hierarchical organization of ecological systems (Houtman et al. 2013)

COURSE DESCRIPTION

Ecology is the study of how organisms interact with each other and their environment at the population, community, and ecosystem levels. This course is an introduction to core principles, classic experiments, current events, and ongoing research in ecology. We will examine processes at numerous scales, from individuals to the biosphere. As humans are also organisms, we will also explore how ecological processes shed light on human-environment interactions. Class activities aim to build the confidence needed for you to become a creator of knowledge and the interpersonal skills needed to collaboratively problem-solve with your peers.



Cover of E-Book



INSTRUCTOR

Dr. Amanda Rugenski

atrugenski@uga.edu

Office: 138 Ecology

Student hours will be held in my office unless otherwise stated



GRADUATE TA

Kristen Zemaitis

kzemaitis@uga.edu

Student hours will be held in the Odum lobby or library

STUDENT HOURS

Student hours ("office hours") are an opportunity to connect with us to go over course content and get support or just come by to say hi.

Mondays 9-10AM AND Tuesdays 2:30-3:30PM

If these times do not work for you, we are happy to arrange another time via zoom or in person. Please email with at least 24 hours notice and we will do our best to accommodate you.

**There will be review sessions before and after exams. Dates and times will be communicated throughout the semester.*



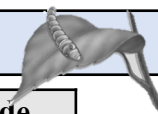
COURSE LEARNING OBJECTIVES

This course is designed to give a solid, fundamental understanding of how organisms interact with their environment and other life forms, shaping the world around us. This primary goal for your learning is supported by course content divided into 4 units, in class team work, quizzes, and reflections.

Upon completion of this course, you will be able to apply the principles of ecology to:

1. **Explain** the distribution and abundance of **organisms** and how they **interact** with each other and their **environment**
2. **Describe** core ecological concepts as they apply to **individuals, populations, communities and ecosystems**
3. **Apply** ecological concepts to **evaluate** the **structure and function** of the natural world
4. **Analyze** and **interpret ecological data** in scientific literature
5. **Assess** the impacts of **humans in ecosystems** using current global and local examples

ASSESSMENT



Assessment	% Of Final Grade
Exams	50%
Exam 1 (covering unit 1): 12%	
Exam 2 (covering unit 2): 12%	
Exam 3 (covering unit 3): 12%	
Exam 4-Final (covering unit 4 and some cumulative material): 14%	
Ecological Application (EA) Assignments (5)	20%
Quizzes (<i>open note-best 6 out of 7</i>)	10%
In-Class Activities & iClicker Questions	10%
Reflections: Human-Environment Interactions (4)	10%

ACTIVE LEARNING & HOW TO BE SUCCESSFUL IN THIS COURSE

Your Success and Well-Being Matter

ECOL 3500 is an active learning class where you will be engaged in the learning process. You are expected to actively engage with the course material by participating in class activities, working with peers, and applying the concepts learned in class to evaluate ecological information.

Lectures will not be recorded but all lecture content will be available on eLC. I will do my best to post lectures before class, but they will always be posted immediately after class.

If there are aspects of this course that prevent you from learning or exclude you, please let me know as soon as possible. Together we will develop strategies to meet both your needs and the requirements of the course.

Tips for success

- ✓ Come to class knowing what topic is being covered.
- ✓ Complete out-of-class readings and assignments before each class. I will post journal articles that relate content to lectures and on Ecological Issues & Applications.
- ✓ At the end of each Relyea chapter are concept checks and study questions. Can you answer them?
- ✓ Actively engage in in-class discussion of concepts and frameworks, quantitative analyses, case discussion, and team work. Constantly review and integrate concepts into your own frameworks and decision-making.
- ✓ *Use the textbook in your learning.* Content from the text book provides depth and clarity on lecture topics. Not every part of each chapter of the book will be covered in the class. The lecture materials should be your first guide for knowing what to study.
- ✓ Find a study partner that you get into the habit of discussing concepts that are covered in lecture—past students have found this to be the most helpful.



A CULTURE OF SAFETY, INCLUSION, & HONESTY

COVID

Attendance and participation in class is expected as long as you are well. If you are sick or need to quarantine or isolate, please do not come to class. Therefore, if you need to quarantine or isolate, please reach out to me as soon as possible to begin discussing accommodations.

Honesty:

As a University of Georgia student, you agreed to abide by the UGA academic honesty policy. Academic honesty means performing all academic work without plagiarism, cheating, lying, tampering, stealing, receiving illegitimate or unauthorized assistance from any other person, or using any source of information that is not common knowledge without providing proper documentation. Turning in academic work that is not your own is the highest academic violation. *A Culture of Honesty, the University's policy and procedures for handling cases of dishonesty, can be found at: <https://honesty.uga.edu/>*

Sensitivity to Religious Practices

Many of our faculty, staff, and students commemorate various events of importance to their particular religions. My practice is to make every reasonable effort to allow members of the University community to observe their religious holidays without academic penalty. You should address potential conflicts with me within the first 10 days of the semester so that arrangements can be made to accommodate the religious observance if that accommodation does not create an undue hardship. Absence from classes or examinations for religious reasons does not relieve you from responsibility for any part of the coursework required during the period of absence. If you have religious or cultural observances that coincide with this class, **please notify me through email by August 26, 2022**. If I do not hear from you by August 26, 2022, I will assume that you plan to attend all class meetings.

Diversity and Inclusion:

Diversity encompasses acceptance and respect: I would like to create a learning environment that supports a diversity of thoughts, perspectives and experiences, and honors your identities (including but not limited to race, ethnicity, national origin, sexual orientation, gender, class, socioeconomic status, religion, ability). To help accomplish this:

- If you have a name and/or set of pronouns that differ from those that appear in your official UGA records, please let me know.
- If you feel like your performance in the class is being impacted by your experiences either inside or outside of class, please don't hesitate to come and talk with me. I want to be a resource for you. You can also see information below for UGA resources.
- Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups.

Accommodations- Learning occurs in diverse ways. Our classroom, our practices, and our interactions will be as inclusive as possible. Any student with particular needs should contact the [disability resource center \(DRC\)](#). All necessary information will be provided to me through the DRC. I will work with you and DRC for any accommodations needed for you to be successful. *If you determine that formal, disability-related accommodations are necessary, it is very important that you be registered with the Disability Resource Center (Voice: 706-542-8719 or TTY: 706-542-8778)*

COURSE FORMAT & ASSIGNMENT DESCRIPTIONS

Course Access:

eLearning Commons. The eLearning Commons (eLC) is an online course environment where you can download digital course materials. Your name and email has been added to the eLC course site.

Participation:

Attendance and participation in class is expected as long as you are well. If you are sick or need to quarantine, please do not come to class. In that scenario, we will work with you to ensure that you don't fall behind on course content. Typically, you will not be able to make-up any in-class activities unless you have an excused absence.

There may be times where you have to miss class for a variety of legitimate reasons (e.g, other commitment, illness). **I have structured the class and grading to minimize the impacts of missing class for legitimate reasons.** You can miss a certain amount of class (see below) and still earn full credit. You do not need to let me know you are missing class unless you need an accommodation or extension. If you miss class, use the slides and other resources posted eLC to learn about what you missed.



EXAMS (50% OF FINAL GRADE)

Purpose: Exams will assess your ability to synthesize and apply the material presented in class.

Approach: There will be 3 mid-term exams covering units 1-3, the final and 4th exam will be 85% unit 4 with 15% cumulative material. Exams will not be handed back but there will be post-exam review sessions. Exams cannot be taken home or shared.

Missed Exam: Make-up exams will be allowed only in extreme cases and only if there is a well-documented absence due to acute illness, jury duty, and other exceptional circumstances that is clearly beyond your control. **Exam absences must be documented *in advance* of the exam day, with the exception of emergencies that can be documented up to 24-hr after the exam time.** After proper documentation is submitted, I will determine how to proceed.

ECOLOGICAL APPLICATION (EA) ASSIGNMENTS (20% OF FINAL GRADE)

Purpose: The act of exchanging reasoning and explaining your own understanding with your peers improves your own learning. We will read peer-reviewed scientific articles of ecological importance to (1) enhance your understanding of ecological concepts, phenomena and processes, and (2) apply this knowledge to increase your critical thinking and communication.

Approach: The semester includes 5 Ecological Application Assignments. These two-part assignments include an out-of-class Reading Assurance Assignment (RAA) completed solo (due by 11AM the day of the in-class activity) and an in-class Application Assignment completed with a team (but submitted individually). **Note: RAAs must be submitted by the start of class in order to receive full credit on the in-class team assignment (see below for late assignment policy).** The RAA will ask you questions about the assigned reading, and should take ~20-30 minutes to complete after reading the paper. The in-class assignment will consist of an activity that may include multiple choice and short answer questions, concept mapping, and describing figures. You must be present in class to receive full points for the second part of the assignment.

COURSE FORMAT & ASSIGNMENT DESCRIPTIONS CONT'D

QUIZZES (10% OF FINAL GRADE)

Purpose: Quizzes are intended to keep you on top of the course material and highlight important concepts covered in class that you should be familiar with.

Approach: Quizzes will be **open note** with no time limit, but must be **taken alone**. This policy is self-enforced and falls under UGA's Academic Honesty Policy. Quizzes will be administered through the Achieve platform (explained in course resources) and will be open for 24 hours. You will have two attempts for each question. Correct first-responses will earn 100% of the points available for the question; if the first response is incorrect but the second is correct, you will instead earn 50% of the available points. You will know immediately if you get an answer incorrect. There are a total of 7 quizzes and the top 6 will count. You may miss one quiz without being penalized.

IN-CLASS ACTIVITIES & ICLICKER QUESTIONS (10% OF FINAL GRADE)

Purpose: Studies show that learning is more comprehensive and lasting when done in an interactive environment. You will learn better by being engaged in the learning process. We will have frequent in-class iClicker questions and other in-class activities. This will allow you to engage with the course material and for me to gauge your understanding and comprehension of topics and adjust accordingly (Course Learning Outcomes 1,2, and 3).

Approach: We will start documenting engagement with activities after drop/add (starting Aug. 25). For these activities we are not grading them for correctness but completeness (many answers will be provided in class). You will be asked to collaborate and work with your classmates. There are 25 classes that are not exam days or holiday. To receive the full 10% you must be present for 22 of the non-exam class days (88%) and respond to iClicker questions and work on in-class activities. **You will earn credit based on the percent of days you are present and engaged (i.e., answering questions).** If you are there for 88% of non-exam days you will earn full credit (10%). For less than 88%, you will receive that percentage (e.g., if you are present for 85% you will earn 8.5 %). It is your responsibility to make sure your responses are recorded as you submit them. **Please contact iClicker for technical support if you are having problems.** Please let me know within 24 hours if you have a well-documented excused absence (e.g., COVID, jury duty, acute illness, medical, law, or dental school interview, or other exceptional circumstance that is beyond your control).

HUMAN-ENVIRONMENT INTERACTION DISCUSSION BOARD (10% OF FINAL GRADE)

Purpose: Human activities at global and local scales are changing our natural systems, and every place on earth is impacted to some degree by humans and every human need is shaped by the environment. This connection even led to a new geological epoch, the Anthropocene. Humans use ecological systems to shape and manage resources/ecosystems/the environment, and scientist (ecologists) and other stakeholders must engage with society to address complex ecological problems to find solutions for a sustainable future. Understanding these connections is critical to how natural systems work and to better predict how they are going to respond to change.



Approach: For each unit you will address a human-environment interaction and answer a discussion prompt in eLC based on a short video or article. The prompts will be consistent for all units, but the material will change for each unit (a rubric and guidelines are provided on eLC).

Late Assignments (EA pre-class and Human-Environment assignments)- If you submit <1hr late (no points lost), 1-24hr (penalized by 25%), 24-48hr (penalized by 50%), 49-72hr (penalized 75%). You may not submit the in-class EA late without an excused absence.

COURSE SCHEDULE: The schedule, policies, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or by the instructor to ensure better student learning. **Please check the schedule in eLC for any changes or updates.**

UNIT 1: Organisms & their Environment				
Week		Tuesday		Thursday
1			Aug. 18	1.1 Course Introduction: 8 Key Concepts
2	Aug. 23	1.2 Nature of Ecology Chp. 1	Aug. 25	1.3 Climate & Biomes I Chp. 2
3	Aug. 30	1.4 Climate & Biomes II Chp. 2 <i>In Class Activity: BiomeViewer</i>	Sep. 1	1.5 Adaptation to Aquatic & Terrestrial Environments Chp. 3 & 4 (select sections) Quiz 1 (open for 24 hours)
4	Sep. 6	1.6 Evolution, Adaptation, & Natural Selection I Chp. 5 & 6 EA Assignment 1: Kelp responses to climate change Reading Assurance Due by 11AM	Sep. 8	1.7 Evolution, Adaptation, & Natural Selection II Chp. 5 & 6 Human-Environment Interaction Discussion Board
5	Sep. 13	Exam 1		
UNIT 2: Populations Across Space & Time				
Week		Tuesday		Thursday
5			Sep. 15	2.1 Life Histories Chp. 7
6	Sep. 20	2.2 Reproductive Strategies & Social Behavior I Chp. 8 & 9	Sep. 22	2.3 Reproductive Strategies & Social Behavior I Chp. 8 & 9 <i>In class Activity: Bower Birds</i> Quiz 2 (open for 24 hours)
7	Sep. 27	2.4 Properties of Populations: Distributions & Range limits Chp. 10	Sep. 29	2.5 Population Growth & Regulation I Chp. 11 <i>In class Activity: Population Growth Models</i>
8	Oct. 4	2.6 Population Growth & Regulation II EA Assignment 2: Crocodile populations Reading Assurance Due by 11AM Quiz 3 (open for 24 hours)	Oct. 6	2.7 Population Dynamics & Species Interactions Chp. 12 Human-Environment Interaction Discussion Board
9	Oct. 11	Exam 2		
UNIT 3: Species Interactions & Communities				
Week		Tuesday		Thursday
9			Oct. 13	3.1 Predation I Chp. 13
10	Oct. 18	3.2 Competition I Chp. 15	Oct. 20	3.3 Competition II & Mutualism Chp. 15 & 16 EA Assignment 3: Predation & Competition Problem Set
11	Oct. 25	3.4 Parasitism & Infectious Disease I Chp. 14 Quiz 4 (open for 24 hours)	Oct. 27	3.5 Parasitism & Infectious Disease II EA Assignment 4: Land Use/Infectious Diseases Reading Assurance Due by 11AM
12	Nov. 1	3.6 Community Structure I Chp. 17 Quiz 5 (open for 24 hours)	Nov. 3	3.7 Community Structure II Chp. 17 Human-Environment Interaction Discussion Board
13	Nov. 8	Exam 3		
UNIT 4: Ecosystems, Biodiversity & Conservation				
Week		Tuesday		Thursday
13			Nov. 10	4.1 Primary Productivity & Movement of Energy Chp. 19
14	Nov. 15	4.2 Ecosystem Function: Carbon & Decomposition Chp. 20	Nov. 17	4.3 Nitrogen & Phosphorus Cycles Chp. 20 <i>In Class Activity: Human impacts on nutrient cycles</i> Quiz 6 (open for 24 hours)
15	Nov. 22	4.4 Succession & Landscape Ecology Chp. 18 & 21 (select sections)	Nov. 24	THANKSGIVING BREAK: NO CLASS PLEASE TRY TO ENJOY SOME FREE TIME
16	Nov. 29	4.5 Conservation Ecology Chp. 22 EA Assignment 5: Safe Operating Space for Humanity Reading Assurance Due by 11AM	Dec. 1	4.6 Environmental & Climate Justice Course Wrap-up Quiz 7 (open for 24 hours) Human-Environment Interaction Discussion Board
17	Dec. 8	Final Exam 12:00-3:00PM		

UGA RESOURCES

Here are some valuable university resources. Most importantly, please reach out to me if you are having any issues with this course:

- **Academic Coaching** - assistance with time management, test and performance anxiety, note-taking, motivation, text comprehension, test preparation, and other barriers to success at UGA. Link for the [Office of Academic Enhancement](#).
- **Student Care and Outreach** - connects students with resources across campus and oversees the request and approval process for hardship withdrawals. Link for the [Office of Student Care and Outreach](#).
- **Disability Resource Center** - Learning occurs in diverse ways. Our classroom, our practices, and our interactions will be as inclusive as possible. Any student with particular needs should contact the [disability resource center \(DRC\)](#). All necessary information will be provided to me through the DRC. I will work with you and DRC for any accommodations needed for you to be successful. *If you determine that formal, disability-related accommodations are necessary, it is very important that you be registered with the Disability Resource Center (Voice: 706-542-8719 or TTY: 706-542-8778)*

Mental Health and Wellness Resources:

- If you or someone you know needs assistance, you are encouraged to contact Student Care and Outreach in the Division of Student Affairs at 706-542-7774 or visit <https://sco.uga.edu/>. They will help you navigate any difficult circumstances you may be facing by connecting you with the appropriate resources or services.
- UGA has several resources for a student seeking mental health services (<https://www.uhs.uga.edu/bewelluga/bewelluga>) or crisis support (<https://www.uhs.uga.edu/info/emergencies>).
- If you need help managing stress anxiety, relationships, etc., please visit BeWellUGA (<https://www.uhs.uga.edu/bewelluga/bewelluga>) for a list of FREE workshops, classes, mentoring, and health coaching led by licensed clinicians and health educators in the University Health Center.
- Additional resources can be accessed through the UGA App.

FERPA Notice:

The Federal Family Educational Rights and Privacy Act (FERPA) grants students certain information privacy rights. See this link for the [UGA registrar's explanation of FERPA](#).