

ECOL 3530 Conservation Biology Section I (AM; CRN 10642)
Fall 2020

Time: 3 hours per week. Tuesdays and Thursdays 9:35 - 10:50 am

Place: Ecology auditorium (room 201)

Instructor of record:	Richard Hall, Ph.D.	rjhall@uga.edu
Co-instructors:	JP Schmidt, Ph.D. Cathy Pringle, Ph.D.	jps@uga.edu cpringle@uga.edu
Teaching Assistant:	Kaylyn Barnes	Kaylyn.Barnes@uga.edu

Prerequisites: BIOL 1104 or (BIOL 1108 and BIOL 1108L)

UGA COVID policy (August 2021): The University System of Georgia recognizes COVID-19 vaccines offer safe, effective protection and **urges all students, faculty, staff and visitors to get vaccinated** either on campus or with a local provider. Additionally, **everyone is encouraged to wear a mask** or face covering while inside campus facilities.

Format: Following UGA guidelines, this class will take place face-to-face in the classroom listed above. Please check eLC course announcements regularly in case the pandemic requires a shift to online learning.

Overview

This 3 credit-hour course is an introduction to the rapidly expanding field of conservation biology. We will cover the foundational principles of conservation biology, and use case studies to illustrate these principles in practice. The goals of the course are as follows:

- (i) To understand what biodiversity is, how it is measured and valued, and how biodiversity changes through time via speciation and extinction.
- (ii) To recognize the principal current threats to biodiversity, and how these threats are mitigated.
- (iii) To understand the practice and complexity of preserving biodiversity and ecosystem function through a multi-disciplinary lens and applied case studies.
- (iv) To be familiar with how species are monitored, and actions taken to maintain the viability of threatened populations

Readings

Some classes have accompanying readings from the scientific literature to be read before the class period; these form the basis of in-class paper discussions, quizzes and homeworks. Required readings will be announced in the prior class period and uploaded to eLC.

Attendance and illness-related absence

To achieve the highest grades in this class, regular in-person attendance is necessary. Attendance is assessed by unannounced in-class quizzes in each module, comprising 20% of your final grade. In the event that you display even mild COVID-like symptoms, we ask you to stay home, get tested and email the class TA in advance of the class so arrangements can be made to make up any missed quizzes. For serious illnesses or other crises that result in you missing multiple classes, we will ask you to provide proof of the emergency (such as a doctor's note) to the class TA.

Evaluation

Grades will be based on class participation (20%; based on unannounced in-class quizzes), individual coursework (30%), three mid-term exams (30%), and a group project (20%). ***If you do not complete the in-class or pre-class activities, it will be very difficult for you to do well in this class.***

The mid-term exam dates are set (Thursday, September 16th, Thursday, October 14th and Thursday, November 11th). Students can miss any one of the three exams for any reason without any penalty. In the event that a student completes all three exams, the lowest exam score will be dropped. Make-up exams will only be allowed in an instance where a student experiences very serious personal illness or an immediate family emergency on the date of the exam and who meet all of the following requirements: 1) Student must notify the TA of the reason for their absence prior to the exam, 2) Student must provide official documentation of serious personal illness or immediate family emergency within 2 days of the exam date, and 3) If the documentation is confirmed, the make-up exam will be taken at the earliest possible date following the scheduled exam. The exam may differ from the class exam, and may be entirely essay based.

Your grade for the group projects will be based on a combination of individual contributions to the project and the overall group score. Each group will create a presentation to be delivered to the class in the last week of class. Projects will be graded on the basis of delivery, content, quality and clarity of the accompanying slides. As part of your individual contribution score, and instead of a final exam, everyone will write a short reflection based on the group presentations. This reflection is due in eLC by the end of the scheduled final exam period (11AM on Tuesday, December 14th).

The plus/minus grading system will be used, according to UGA policy. This course grading will strictly follow this plus/minus grading scale: A = 93-100, A- = 90-92.9, B+ = 87-89.9, B = 83-86.9, B- = 80-82.9, C+ = 77-79.9, C = 73-76.9, C- = 70-72.9, D = 60-69.9, F = <60. ***We are providing opportunities to enhance your grade (i.e., dropped exam score). Therefore, all grades are final and cannot be rounded up at the end of the semester.***

Honors option: Honors students wishing to pursue an honors option can write a term paper based on a book or collection of scientific papers on a topical issue in conservation biology. The topic and the readings must be agreed with an instructor ***prior to the midterm break***. Papers are due by the last class period of the semester, Thursday, December 2nd.

Office hours

Office hours are scheduled by appointment only and will be conducted via Zoom. Please contact instructors or the class TA with questions relating to material from their modules at the email addresses listed above.

Accommodations

Please contact Dr. Hall if you require special accommodations due to learning disabilities, religious practices, physical or medical needs.

General Notes

- (i) All academic work must meet the standards contained in the University's Academic Honesty Policy. Students must follow the UGA Honor Code: "I will be academically honest in all of my academic work and will not tolerate academic dishonesty of others", and are responsible for informing themselves about those standards before performing any academic work. Please familiarize yourselves with the guidelines on academic honesty found here: <http://honesty.uga.edu/>
- (ii) The course syllabus is a general plan for the course; deviations announced to the class by the instructors may be necessary. Changes to the class schedule will be announced in class and on eLC announcements, and an updated schedule uploaded to eLC.

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 resources for students seeking mental health services (www.uhs.uga.edu/bewelluga/bewelluga) or crisis support (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.

Coronavirus Information for Students

What do I do if I have symptoms? Students showing symptoms should self-isolate and schedule an appointment with the University Health Center by calling 706-542-1162 (Monday-Friday, 8 a.m.-5 p.m.). Please DO NOT walk-in. For emergencies and after-hours care, see www.uhs.uga.edu/info/emergencies.

What do I do if I test positive? Any student with a positive COVID-19 test is **required** to report the test in DawgCheck and should self-isolate immediately. Students should not attend classes in-person until the isolation period is completed. Once you report the positive test through DawgCheck, UGA Student Care and Outreach will follow up with you.

Class schedule

Th 8/19	Introductions; course outline and logistics, coursework	All
Module 1. Intro to Conservation Biology, Biodiversity and Extinction		
Tu 8/24	One Health – connecting human, animal and ecosystem health	Schmidt
Th 8/26	What is biodiversity?	Schmidt
Tu 8/31	Speciation	Schmidt
Th 9/2	Measuring biodiversity	Schmidt
Tu 9/7	History of Conservation Biology	Stephens
Th 9/9	The extinction crisis	Schmidt
Tu 9/14	Extinction risk /midterm prep	Schmidt
Th 9/16	FIRST MIDTERM EXAM	Schmidt
Module 2. Conserving small populations and threats to biodiversity (Hall)		
Tu 9/21	Conservation Genetics	Hall
Th 9/23	Problems with small populations	Hall
Tu 9/28	Global Climate Change	Stephens
Th 9/30	Overexploitation	Hall
Tu 10/5	Habitat loss and fragmentation	Hall
Th 10/7	Invasive species	Hall
Tu 10/12	Infectious diseases and Conservation; midterm prep	Hall
Th 10/14	SECOND MIDTERM EXAM	Hall
Module 3. Conservation in practice: threats to aquatic and terrestrial ecosystems (Pringle)		
Tu 10/19	Threats to freshwater biodiversity and ecosystems	Pringle
Th 10/21	Species invasions: an aquatic perspective	Pringle
Tu 10/26	Challenges facing protected areas: case study Kruger Natl. Park	Pringle
Th 10/28	Protecting Georgia's native and endangered plants at the State Botanical Garden	Affolter
Tu 11/2	How do we address the major conservation challenge of persistent organic pollutants (POPs)?	Pringle
Th 11/4	The challenge of integrating conservation science, management and policy: case study El Yunque National Forest, Puerto Rico	Pringle
Tu 11/9	Some recent success stories in conservation! & midterm prep	Pringle
Th 11/11	THIRD MIDTERM EXAM	Pringle
Module 4: Valuing, monitoring and management of threatened populations (Hall)		
Tu 11/16	Conservation Economics; introduction to group projects	Hall
Th 11/18	Estimating current and future population sizes	Hall
Tu 11/23	Captive breeding and release strategies	Hall
Th 11/25	NO CLASS - THANKSGIVING	
Tu 11/30	Group presentations part 1	Hall
Th 12/2	Group presentations part 2	Hall
Tu 12/14	Individual reflection due by 11AM	