

**ECOL 3600 Tropical Ecology: From Organisms to Ecosystems**  
**University Of Georgia**  
**Spring 2021**  
(subject to modification)

**Meeting Times:** Tu/Tr 12:45-2pm

Odum School of Ecology, Rm #117

**Instructor:**

Dr. Scott Connelly

Odum School of Ecology, Rm #20

scottcon@uga.edu

Office Hours: by appointment

*(Please contact me through email, and **not** the eLC system discussion board)*

**Course Overview:** Tropical ecosystems cover 1/3 of Earth's land area, and are home to a disproportionately high percentage of our planet's biodiversity. What makes these tropical systems unique? How do we explain the relatively high levels of species richness found in many tropical systems? This course explores what tropical ecosystems are, how they were formed, what plants, animals and other life forms they contain, and how these ecosystems both support and are impacted by a growing human population. We will characterize ecological patterns and processes, and study the interactions that are unique to the variety of tropical systems found around the globe. We will address current threats, such as deforestation and ocean acidification, to these ecosystems and the biodiversity they contain, and will examine on-going conservation approaches.

**Course Objectives:**

- Introduce students to the biotic diversity of tropical systems, and compare these ecosystems to temperate systems
- Understand the major patterns of geology, geography, biogeography, climate, and soils of tropical ecosystems.
- Provide an understanding of the biotic and abiotic interactions found in tropical environments
- Create an awareness of the interplay among structure, function, and behavior in the evolution and ecology of tropical plants and animals.
- Recognize major groups of tropical flora and fauna, including plants, insects, amphibians, reptiles, birds, and mammals, and learn characteristics that make them uniquely adapted to living in various tropical ecosystems.
- Gain an appreciation of the historical and current influence of humans on global tropical systems.

**Text:**

- Kricher, James. 2011. *Tropical Ecology*. Princeton University Press, New Jersey. 640 pp.

**Additional Readings & Materials:**

- Forsyth, Adrian. 1987. *Tropical Nature: Life and Death in the Rain Forests of Central and South America*. Charles Scribner's Sons. 248pp. (will be provided by instructor)
- In addition, several current event tropical-related short articles will be assigned during the semester.

The instructor will provide on-line partial copies of all PowerPoint lectures, which be made available through UGA eLearning Commons (eLC).

The PowerPoint lectures may include material in the text and additional material covered in class. The PowerPoint handouts are intended to reduce the amount of note taking required during lectures; *they are not intended to replace the need to attend class, as additional material will be presented during lectures.*

Additionally, students will be required to read several news articles throughout the semester. These papers will be uploaded to eLC, and announced through eLC. Each article has been chosen because of its relevance to our course. You will be expected to have read and understood the main points in each article. Although it may not be possible (due to time constraints) to discuss each paper during class, *several questions on each exam will be related to these readings.*

**Hybrid Synchronous Format:**

This course will be instructed in a hybrid synchronous environment. That is, lectures will be presented in real-time face-to-face in the SLC auditorium, following social distancing guidelines that allow students the opportunity to attend in-person every other lecture (based on last name):

Last Names A – P: Thursdays

Last Names P – Z: Tuesdays

On the days in which you do not have an in-person option, you should attend class live via Zoom (Zoom link on eLC). All lectures will be recorded and posted on eLC. Live attendance during lectures (either in person or on Zoom), will not be mandatory, although is strongly encouraged. *In the event that you have a strong desire to attend every class in person, please contact the instructors, and **if social distancing guidelines permit**, we would allow attendance for all lectures.*

**Electronics:** The use of computers, cell phones, tablets etc., during class time must be directly related to class activities.

**Course Grading:** Grading for the lecture portion of the course will be determined by 3 in-class exams, a book review oral exam, a research paper, and a Natural History Presentation. The exams will be multiple choice and short answer. Questions will be written to assess students' ability to synthesize material presented in class (including any videos) and assigned readings.

The final grading distribution will be:

15% Natural History Presentation

15% Research Paper

20% Tropical Nature book oral exam

40% Exam #1, Exam #2, Exam #3 (best 2 grades count)

10% Final Exam (Questions will be drawn from your presentations)

Exams: Three open-note exams will be administered prior to the final exam. Students can miss any one of the first three exams for any reason (sickness, travel, transportation issues, death in the family, etc.) without any penalty. In the event that a student completes all three exams, the lowest score of the **first 3** exams will be dropped. The final exam is mandatory, and students may not drop the score on the final exam. Make-up exams **will not be allowed** for any exam except in the rare instance where a student experiences **very serious** personal illness or immediate family emergency on the date of the exam and who meet all of the following requirements: 1) Student must notify the instructor 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 will not be identical to the class exam, and may be essay based.

Students can schedule (through email) a virtual office visit to review their answers and scores on past exams. Any grading dispute must be addressed within **one week** from the date that the relevant exam grade is posted on eLC.

Natural History Presentations & Paper: Several days will be devoted to student presentations, which will be based on the natural history of a plant or animal species found in the tropics. Each student will independently investigate an organism's natural history and present their findings in a formal symposia-type setting (12-15 minutes each). These presentations may be based on ecological interactions or phenomena mentioned in Forsyth (1987), our assigned reading, or any other source. A short research paper, including primary literature citations, summarizing the talk will be required at the end of the semester. More information to follow...

Tropical Nature Book Oral Exam: We will schedule time during the last couple of weeks of the semester to have one-on-one meetings (~30 minutes) to discuss the Tropical Nature book. You will be expected to have read and thoroughly understood 6 chapters (of your choosing) from the book. I will present you with a series of questions for you to address. These questions will be drawn from the chapters that you chose, and will gauge your comprehension of the material presented.

Videos: The instructors will present videos to complement or illustrate class material during the weekly lecture sessions; these videos address a variety of current environmental issues and concerns. When possible, the instructors will post videos on eLC. Most videos have been tested to play with a VLC player run through Firefox. If students anticipate needing to view these videos through eLC, they must ensure that the system they are using will play the videos well in advance of any exam that relates to the video content.

Please remember that all written work in this course is intended to be individual work, and it would be considered a violation of The University of Georgia's Academic Honesty policy to use unauthorized assistance or to plagiarize any material.

The plus/minus grading system as shown below will be used, according to UGA policy, and grades are not rounded up:

A: 93% and above; A-: 90 - <93%; 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: below 60

### **Summary of Important Dates to Remember:**

<b>Calendar Event</b>	<b>Date(s)</b>
Add/ Drop	Jan 13-20
MLK Holiday	January 18, Monday
Exam #1	Feb 9, Tuesday
Instructional Break	Feb 17, Wednesday
Exam #2	Mar 11, Thursday
Instructional Break	Mar 12, Friday
Withdrawal deadline	Mar 23, Tuesday
Exam #3	Apr 15, Thursday
Instructional Break	Apr 8, Thursday
Reading Day	May 4, Tuesday
Final Exam due by	May 11, Tuesday 3 pm

**Lecture schedule** (timing of topics is subject to change)

<b>Week</b>	<b>Date</b>	<b>Topic</b>
1	Jan 14	Introduction and Course Goals
2	Jan 19 & 21	Biogeography and Evolution (CH 2)
3	Jan 26 & 28	Inside Rain Forests: Structure & Biodiversity (CH'S 3 & 4)
4	Feb 2 & 4	Rain Forest Tree Species Diversity (CH 5)
5	Feb 9 & 11	<b>Exam #1</b> / Rain Forest Development & Dynamics (CH 6)
6	Feb 16 & 18	Biotic Interactions and Coevolution /Trophic Dynamics (CH'S 7 & 8)
7	Feb 23 & 25	Carbon Flux & Nutrient Cycling (CH'S 9 & 10)
8	Mar 9 & 11	Tropical Savannas & Dry Forests (CH 11) / <b>Exam #2</b>
9	Mar 16 & 18	Other Tropical Systems (CH 12)
10	Mar 23 & 25	Humans as Part of the Ecosystem / Forest Fragmentation (CH'S 13&14)
11	Mar 30 & Apr 1	Conservation Outlook (CH 15)
12	Apr 6	Conservation (Con't)
13	Apr 13 & 15	Amphibian Declines & Consequences / <b>Exam #3</b>
14	Apr 20 & 22	Oral Exams / Presentations
15	Apr 27 & 29	Oral Exams / Presentations
	May 11	<b>Final Exam due, 3pm</b>

### **Fine Print:**

#### **Available Help (Class-Related and Technical Issues):**

Please let us know if you need individual help. We want to get to know you and hear about what interests and questions you have about ecology.

For *technical problems* with eLC or other issues, contact: UGA's Enterprise Information Technology Services (EITS) Help Desk at 706-542-3106, or email: [helpdesk@uga.edu](mailto:helpdesk@uga.edu).

#### **University Honor Code & Academic Honesty**

As a University of Georgia student, you have agreed to abide by the UGA academic honesty policy, "A Culture of Honesty", and the Student Honor Code ("I will be academically honest in all of my academic work and will not tolerate academic dishonesty of others."). All academic work must meet the standards described in "A Culture of Honesty" found at: <http://honesty.uga.edu>.

You are responsible for informing yourself about the university's standards before performing any academic work. Lack of knowledge of the academic honesty policy is not a reasonable explanation for a violation. Please ask if you have questions related to course assignments and

the academic honesty policy. Any form of possible academic dishonesty will be reported to the UGA Office of the Vice President for Instruction.

### **Face Coverings**

Effective July 15, 2020, the University of Georgia—along with all University System of Georgia (USG) institutions—requires all faculty, staff, students and visitors to wear an appropriate face covering while inside campus facilities/buildings where six feet social distancing may not always be possible. Face covering use is in addition to and is not a substitute for social distancing. Anyone not using a face covering when required will be asked to wear one or must leave the area. Reasonable accommodations may be made for those who are unable to wear a face covering for documented health reasons. Students seeking an accommodation related to face coverings should contact Disability Services at <https://drc.uga.edu/>.

### **Accommodations for Disabilities**

If you require a disability-required accommodation, it is essential that you register with the Disability Resource Center (Clark Howell Hall; <https://drc.uga.edu>; 706-542-8719 [voice]; 706-542-8778 [TTY]) and notify me of your eligibility for reasonable accommodations. We can then plan how best to coordinate your accommodations. Please note that accommodations cannot be provided retroactively.

### **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. For details, please visit <https://apps.reg.uga.edu/FERPA>.

### **Syllabus Disclaimer**

The course syllabus is a general plan for the course; deviations announced to the class by the instructors may be necessary.