Tropical Field Ecology
ECOL 3100 (L)
Maymester 2018

Meeting Times:
Lecture: Daily
Laboratory: 3-4X Weekly
4 credit hours

Instructor:
Dr. Scott Connelly
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Course Overview:

This course is an interdisciplinary field program conducted in the Neotropics. We will explore various tropical environments, and discover their biological wealth and the natural history of organisms that we encounter. We will examine the ecological patterns, processes, and interactions that characterize tropical systems, and will gain a better understanding of which, if any, ecological principles are exclusive to the tropics: What makes tropical systems unique? We will focus on the observation of tropical organisms in the wild, address threats to biodiversity, and examine current conservation approaches in Costa Rica and elsewhere. Although several class topics will be presented in a formal classroom setting, participants will more often be challenged during outdoor activities and excursions throughout the country, and as much material will be presented out-of-doors as possible. We will visit sea turtle nesting sites, volcanoes, coastal reefs, and mangroves, and work in tropical dry forests, cloud forests, rain forests, and coastal systems, all found within Costa Rica.

This is an intensively taught course. Students will be required to attend class and laboratory activities at various times throughout the course of the day. For example, several times during the program we will document bird populations and their behavior, often beginning at 5:30am. Similarly, we may be found characterizing nocturnal animal communities at midnight. In order to cover the widest range of tropical ecology topics feasible, most days will be very long, and we will be spending over 90 hours together in either the class setting or field locations exploring Costa Rica's tropical ecosystems. Your attention and active engagement will be required throughout this very challenging Maymester.

Course Objectives:
The following course objectives and topics will be addressed during the semester:

- Understand the major patterns of geology, geography, biogeography, climate, and soils of Costa Rica.
- Gain proficiency in natural history and the observation of wildlife.
- Develop skills of analysis and critical thinking.
- Be aware of the interplay of structure, function, and behavior in the evolution and ecology of plants and animals.
- Recognize the major groups of tropical flora and fauna, including plants, insects, amphibians, reptiles, birds, and mammals, and learn to identify them in the field.
- Apply skills of observation and field taxonomy on visits to new areas, in order to identify unfamiliar species.

Text:
Kricher, James. 2011. *Tropical Ecology*. Princeton University Press, New Jersey. 640 pp. Access to the text will be provided.

Reading and Additional Material:
Most of the concepts in Kricher will be covered throughout the semester. Several related additional peer reviewed readings may be provided. You are responsible for all of the material that is covered in class, presented during field excursions, in sections covered in the text and in assigned readings.

Natural History Presentations:
One day will be devoted to a student led discussion based on the natural history of a species encountered during our stay in Costa Rica. Each student will investigate an organism's natural history and present their findings formally during the discussion period (12-15 minutes each). More information to follow…

Course Journal:
Each student is required to keep a course journal. The journal is to be a valid, informative, detailed record of what you have learned and experienced on this program. It will include all class lecture notes, field notes, illustrations, and daily writing. You will use it as a reference and a resource for your own work during the program. Other details on what to include as part of your journal will be discussed in Costa Rica.

Academic Honesty:
The Institute of Ecology adheres to the University's standards in defining academic honesty; you are bound by the rules governing academic honesty at UGA. Cases of suspected academic dishonesty will be reported to the Office of Judicial Programs. Ignorance of what constitutes plagiarism or dishonest work is no excuse. Conviction will result in a grade of "F" for the course and may incur additional penalties from the University. Please refer to the UGA Academic Honesty Policy, located on the web at: www.uga.edu/honesty/ahpd/culture_honesty.htm

Special Needs:
Students with disabilities who may require assistance should consult with the instructor as soon as possible.

Course Grading:
Grading will be determined by a natural history formal presentation, quality and completeness of journal, a midterm exam, a final exam, and overall preparation and professionalism. The exams will be short answer and essays. Questions will be written to assess your ability to synthesize the material presented in class and during all field locations, including travel time. You will be tested on material from the lectures, course text, and any discussions. The final exam will be comprehensive. The grading distribution will be:

Natural History Presentation:	10%
Journal	20%
Field Practical:	25%
Comprehensive Final Exam:	30%
Preparation, Participation & Professionalism:	15%

The plus/minus grading system will be used, according to UGA policy.