



Ceiba Foundation for Tropical Conservation
TROPICAL CONSERVATION SEMESTER
Spring Semester 2017

TROPICAL ECOLOGY I: TERRESTRIAL ECOSYSTEMS (4 cr.)
Jan. 9 – Mar. 3

Instructors and Teaching Assistant:

Joe E. Meisel, Ph.D.
jmeisel@ceiba.org
 098-638-7430

Catherine L. Woodward, Ph.D.
cwoodward@ceiba.org
 098-297-3339

Lauren Feierstein
laurenfeierstein@gmail.com

Purpose of the Course:

Our twin goals are to learn more about tropical ecosystems while mastering advanced concepts in ecology. The course focuses surveys major tropical ecosystems and explores the underlying reasons for why they differ from each other, and from temperate zone systems. We also will cover major ecological concepts applicable to all natural systems, and demonstrate them with tropical as well as temperate examples. Field visits to tropical ecosystem types found in Ecuador provide an opportunity to cement classroom learning with on-site teaching, field activities, and research projects.

Learning Objectives:

- Understand over-arching ecological principles including patterns of diversity, evolution, species interactions, biogeochemical cycles, and community organization.
- Describe the geographical, abiotic, and biotic characteristics of the tropics, and compare these to the temperate zone.
- Identify the most common tropical plant families
- Identify common tropical animal taxa, including common bird species and insect orders
- Describe the ecological characteristics of tropical terrestrial ecosystems and explain the biotic adaptations to them.
- Formulate a testable hypothesis, collect data, apply appropriate statistical analyses, and formulate valid scientific conclusions.
- Present scientific research in written and oral formats.
- Articulate the ecological impacts of human activities on species and ecosystems, with a focus on tropical ecosystems.

Course Expectations & Grading:

This program is highly interactive and encourages *you* to be the leader of your own learning. Participation scores are based on student involvement in classroom and field activities, input in group discussions, inquisitiveness and engagement in learning, respect and helpfulness towards others, and overall contribution to the success of the course. The quiz will cover ecological concepts and tropical communities prior to departure to the Amazon. A variety of in-class and homework assignments will be given, including field mini-projects. The final exam comprises field and written portions, the latter containing short answer and essay questions. Students conduct a scientific research project in small groups at the Tiputini Biodiversity Station, and present their findings in written and oral formats.

Participation		15%
Quiz	Thu. 1/26	10%
Assignments		10%
Field Final Exam	Wed. 2/8 (TBS)	15%
Written Final Exam	Fri. 3/3	15%
Group Research Project		
Paper rough draft due (individual)	Mon. 2/13	
Oral presentations (as a group)	Fri. 2/17	10%
Final paper due (individual)	Fri. 2/17	15%
Field Notebook	Wed. 3/3	10%

Grading Scale*: A=100-92%, AB=91.9-88.0%, B=87.9-82.0, BC=81.9-78.0, C=77.9-70.0, D<70.0

**Please note the USFQ online grade system only displays whole letter grades; your actual final grade will appear correctly on your transcript from UW-Madison.*

Academic Conduct:

Since Ceiba is a UW-Madison affiliated and accredited program, we abide by the same rules governing academic conduct. All homework, quizzes, tests, and written assignments require your own thought and effort. Any student found to have submitted plagiarized material, or have otherwise obtained information falsely, will be subject to rules governing UW Academic Misconduct. Consequences of academic misconduct may range from failure on the assignment, failure in the course, or (in extreme cases) expulsion from the Tropical Conservation Semester program without refund. Finally, please bear in mind that you are a foreigner in Ecuador and a representative of the Ceiba Foundation: we ask you to act at all times in a cordial, professional, and respectful manner.

Text: Kricher, John. 2011. *Tropical Ecology*. Princeton University Press.

Additional Course Materials:

There will be readings and activities assigned throughout the course. Articles, handouts and other course materials (web links, syllabi, bird calls, etc.) will be posted on the course website.

These materials are for your use only. Do not share your login or password:

Login: tcs2017

Password: tcs2017

Lecture Topics (see course website for detailed schedule):

- The Tropics & Global Climate
- Tropical Botany & Montane Families
- Montane Forests
- Orchids & Epiphytes
- Ecological Interactions
- Intro to Tropical Birds
- Alpine Ecosystems
- Experimental Design and Analysis of Ecological Data
- Intro to Geographic Information Systems (GIS)
- Seasonally Dry Tropical Forests
- Soils & Land Uses
- Tropical Insects & Entomology
- Rainforests Structure and Diversity
- Rainforest Dynamics
- Rainforest Forest Fauna
- Primates & Ethology
- Tropical Bird Communities
- Freshwater Ecosystems
- Cats, Bats, and Rats, & Ecological Concepts
- Reptiles and Amphibians
- Sustainable Forestry & Alternative Land Uses