



**Ceiba Foundation for Tropical Conservation**  
**TROPICAL CONSERVATION SEMESTER**  
**Spring Semester 2017**

**CONSERVATION BIOLOGY (3 cr.)**  
**January 15 – April 20**

**Instructors and Teaching Assistant:**

Joe E. Meisel, Ph.D.  
[jmeisel@ceiba.org](mailto:jmeisel@ceiba.org)  
098-638-7430

Catherine L. Woodward, Ph.D.  
[cwoodward@ceiba.org](mailto:cwoodward@ceiba.org)  
098-297-3339

Carolina Toapanta  
[ctoapanta@ceiba.org](mailto:ctoapanta@ceiba.org)  
099-168-7330

**Purpose of the course:**

Conservation biology differs from other sciences in that it carries with it a value-driven goal of preserving species and natural communities for the common good. The field takes the “hard sciences” into the practical realm and provides multidisciplinary approaches for addressing human-enhanced threats to biodiversity. The purpose of this course is to build upon the factual and theoretical information from the basic sciences by applying it to the assessment, protection and management of biodiversity and natural resources.

**Course structure:**

Conservation Biology bridges the science content courses (Terrestrial Ecology and Marine Biology) and prepare you for your conservation internship. Thus, the course will be taught in two parts, concurrently with terrestrial ecology (Part 1) and marine biology (Part 2) to enable a direct and immediate application of scientific principles covered in those courses. Conservation biology content will be included in separate sections of both the terrestrial and marine exams, and graded separately.

**Learning Objectives:**

- Explain what comprises biodiversity and its measurement, how it is distributed, and key hypotheses on its origin and maintenance.
- Describe the processes of evolution, speciation and extinction.
- Articulate the major threats to biodiversity, and synergisms among them.
- Identify conventions, treaties, organizations and legal mechanisms that protect biodiversity.
- Apply practical approaches for conservation and management of species, habitats and ecosystems.
- Draw on scientific literature to investigate conservation problems and inform decision-making.
- Be able to articulate why conserving biodiversity is important and what actions individuals can take to make a difference.
- Outline the ways conservation is financed, and write a grant proposal.
- Discuss the above learning objectives at multiple scales and in the context of species, populations, communities, ecosystems, and the entire planet.

**Grading:**

See Terrestrial and Marine ecology syllabi for more detail on how graded items are evaluated.

Participation		20%
Assignments		20%
Quiz	Mon. 2/5	10%
Written Exam I (Midterm, with Terrestrial Final)	Thu. 3/8	25%
Written Exam II (Final, with Marine Final)	Wed. 4/18	25%

**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 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 professional, respectful, and safe manner.

**Textbook:**

Primack, Richard. 2012. *A Primer of Conservation Biology (5th edition)*. Sinauer Associates.

**Additional Course Materials:**

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

These materials are for your use only. Never share your login or password with people outside the program:

Login: tcs2018  
Password: tcs2018

**Lecture Topics** (see course website for detailed schedule)

## Part 1 (with Terrestrial Ecology)

- Tropical Biodiversity: Origins, Patterns, Processes
- Population Biology
- Evolution, Extinction & Speciation
- Conservation Approaches
- Reserve Design and Management
- Social Dimensions of Conservation
- Land Use & Sustainability
- Oil Development in the Amazon
- Threats to Biodiversity: Habitat Loss and Fragmentation
- Threats to Biodiversity: Hunting, Invasive Species, and Climate Change

## Part 2 (with Marine Biology)

- History of Marine Conservation: Local, National & International Approaches
- Series on Marine Threats and Solutions
  - Fisheries and Aquaculture
  - Pollution and Eutrophication
  - Climate Change
  - Invasive Species
  - Threatened Marine Taxa (Cetaceans, Seabirds, Sea Turtles, Sharks)
- Marine Protected Areas
- Marine Restoration
- Marine Conservation Organizations and Personal Action