



BIOLOGY 389 – Field Course in Conservation Biology

Spring, 2011.

Pre-requisites : Biology 133

Dates: May 2- May 10, 2011

Instructor : Dr. Carol Gibbons Kroeker, PhD
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Text : Field and Laboratory Methods for General Ecology, by James Brower, Jerrold Zar, Carl N. von Ende, McGraw-Hill, 2008.

Course Description:

This course will be a travel trip to Costa Rica to engage in hands-on conservation ecology. On-course, students complete at least 20 hours of research while patrolling the remote beach at the Pacuare Reserve in partnership with the Endangered Wildlife Trust. This 9-day program also includes over 30 hours coursework and instruction in subjects like sea turtle biology, rainforest ecology, and research methodology.

Students will collect data on nesting sea turtles including carapace width and length, and number of eggs laid. Using that information they will develop a field-based research project.

After completing their field work, students meet their Costa Rican peers when they visit a University attended by local program participants. Students spend time together giving joint presentations, sharing research data, engaging in the powerful exchange of ideas, and realizing their collaborative strength.

Learning Objectives:

1. Students will have the opportunity to study the rainforest and marine ecosystems in Costa Rica
2. Students will gain competence in research methods and research design, as well as working on a collaborative research project. The research will be presented to the group.
3. Students will gain knowledge in rainforest ecology and conservation, sea turtle biology and ecology, and the impact of plantations on Costa Rican ecology
4. Cultural exchange with University students in Costa Rica, with research presentations made

Mark Distribution	:	Field Work / Pre-trip work	35%
		Research project	25%
		Research presentation	10%
		Research and term papers	30%

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Trip Itinerary:

Day 1: Arrival in San Jose

- Meet the instructor team
- Get to know Costa Rica

Days 2-4: Leatherback sea turtles at the Pacuare Nature Reserve

- Learn about sea turtle biology, ecology, and conservation issues
- Explore the wildlife of the lowland tropical ecosystems
- Collect data on nesting sea turtles during nightly patrols
- Restore turtle nesting habitat on the beach

Days 5-6: From the turtle reserve to the rainforest

- Travel northwest to a private rainforest reserve
- Learn about the banana and pineapple plantations in the area
- Observe rainforest creatures on night hikes
- Play sports with local students

Day 7: Intercultural exchange day and mountain lodge

- Present the results of student-led research projects
- Meet local University students and learn about each other's cultures
- Spend the evening in a mountain lodge with a volcano view

Day 8: Rafting the Pacuare River

- Raft the spectacular rapids of the Pacuare River
- Float through vibrant jungle canyons and past waterfalls

Day 9: Departure from San Jose International Airport

Itinerary subject to change

This program is offered in conjunction with the non-profit organization, **Ecology Project International (EPI)**.

EPI's vision is to create an ecologically literate society where the world's youth are empowered to take an active role in conservation.

EPI's mission is to improve and inspire science education and conservation efforts worldwide through field-based student-scientist partnerships.

EPI's Goals: Education, Conservation, and Cultural Exchange

Learn best by doing Experiential education at EPI means that students work at the field site on applied research projects. Our programs integrate art, language and culture, with an emphasis on science.

Educational goals at EPI include:

- Understand ecological systems and processes through participatory field science;
- Apply the scientific method and appropriate tools on a real-world conservation project;
- Increase interest in science and awareness of conservation science.

Scientific collaboration is a principal emphasis of our program

EPI participants work with scientists to protect species, collect data, and restore habitats. Students learn first-hand what scientists do, how they do it, and why they do it. Conservation goals at EPI include:

- Help to protect or restore threatened ecosystems and species;
- Collect high quality data that is used by scientists;
- Integrate local residents in applied conservation work.

Creating site-based partnerships and cultural connections

They forge connections between local residents and international collaborators. The majority of the students we work with live within or adjacent to the ecosystem being studied. Cultural goals at EPI include:

- Foster cooperation between international and local students through research partnerships;
- Increase communication and understanding between scientists and the general public;
- Promote international dialogue and the individual's participation in global environmental issues.

Ecology Project International has teamed with several non-profit groups within Costa Rica:

EARTH University EARTH is an international, non-profit university dedicated to education in the agricultural sciences and natural resources in order to contribute to sustainable development in the tropics.

Endangered Wildlife Trust (EWT) EWT is a British organization that owns the Pacuare Reserve on the Caribbean coast of Costa Rica. Their mission is to protect the critically endangered Leatherback sea turtles along its 4 miles of beach.

La Suerte Biological Station La Suerte is a privately owned biological station that provides boarding, research facilities, and a variety of college-level field and research courses.