Panama

Tropical Ecology, Marine Ecosystems, and Biodiversity Conservation

Credits 16
Program Base Panama City
Language Study Spanish
Homestay Panama City, 3 weeks
Rural Visit/Homestays Sea turtle conservation community, subsistence agriculture community, indigenous community, rural village in Costa Rica
Educational Excursions Including Smithsonian Institute's Barro Colorado Island and Bocas del Toro Research Station, La Amistad UNESCO International Biosphere Reserve, El Copé National Park, EARTH University in Costa Rica, Caña Island Endangered Sea Turtle Reserve
Environmental Components Terrestrial environments including comparative forest canopy ecology and mammal ecology and tracking; marine and coastal environments including coral reef ecology and mangrove biology; human dimensions of conservation
Independent Study Project 4 weeks
Prerequisites Please see details below.

Tropical Ecology, Marine Ecosystems, and Biodiversity Conservation Seminar

ENVI 3000 / 4 credits / 60 class hours

An interdisciplinary course conducted in Spanish and English, with required readings and a strong field component. Through academic field study and firsthand experiences, students examine the ecological, international, and sociocultural factors affecting tropical biodiversity conservation in Panama, home to one of the world's most diverse terrestrial and marine ecosystems. Collaborators utilized in the delivery of course content include the Smithsonian Tropical Research Institute, the University of Panama, and EARTH University in Costa Rica. Lectures and discussions for this course generally include the following topics:

Tropical Ecology
Community ecology; biodiversity and conservation biology; canopy studies and plant physiology; mammal ecology; forest dynamics; botany; ecology of insect-plant relationships; bird behavior and ecology.

Marine Ecology and Conservation
Marine biodiversity and ecological systems; ecology and conservation of coral reef communities, mangrove forests, and tropical wetlands; sea turtle conservation.

Sustainable Development
Protected areas; poverty and natural resource management; rural community forestry management; indigenous cultures and natural resource use; cultural values and perspectives on the environment; sustainable agriculture; grassroots organizations, nongovernmental organizations, and environmental issues; ecotourism and culture; conflicting perspectives on environmental problems and resources.

Educational Excursions
The program has seven weeks of field study, including courses at the Smithsonian Tropical Research Institute in Bocas del Toro and Barro Colorado Island; bird research at an Audubon Society "top 10" birding site; wetland ecology course at an international RAMSAR site; terrestrial ecology and tropical botany course in an isolated rainforest; hiking the Barú Volcano National Park; a sustainable agriculture course at EARTH University, Costa Rica; and a sea turtle ecology and conservation course held at a rare sea turtle nesting ground (*arribadas*) on the Pacific coast.

Intensive Language Study: Spanish

SPAN 2004-4004 / 4 credits / 60 class hours

Emphasis on speaking, reading, and writing skills through classroom and field instruction. Based on in-country evaluation, including oral proficiency testing, students are placed in intensive intermediate or advanced classes, with further language practice in homestays, lectures, and field visits.

Environmental Field Study Seminar

ENVI 3500 / 4 credits / 60 class hours

A course in field research methods in both the natural and social sciences. The main focus is on learning how to collect, analyze, integrate, and report ecological data to further the understanding of complex issues involving terrestrial and marine ecological conservation. Field studies can include designing research projects; writing research proposals; interviewing; surveys; mapping; maintaining a field journal. Specific ecological field study methods can include micro- and macrohabitat analysis; biotic sampling and analysis; fauna and flora identification; biodiversity monitoring; population analysis; animal behavior; water analysis. Introduction to the Independent Study Project. Field study ethics and the World Learning/SIT Human Subjects Review Policy.

Independent Study Project

ISPR 3000 / 4 credits / 120 class hours

Conducted in cloud forest highlands, coral reefs, lowland forests, mangroves, rural villages, indigenous communities, or other places appropriate to the topic. Sample topic areas: comparative resource use of *campesino* and indigenous groups; medicinal plant use; community resource management; regeneration of canopy emergents in primary forest; non-timber forest products and local use; sustainable agriculture; agroforestry; ecotourism as a community development alternative.

Homestay

Three weeks in Panama City, a subsistence agriculture *campesino* community homestay, an indigenous village homestay, a sea turtle conservation coastal community homestay, and a rural village stay in Costa Rica.

Prerequisites

Previous college-level coursework and/or other significant preparation in environmental studies, ecology, biology, or related fields, as assessed by SIT. Three recent semesters of college-level Spanish or equivalent and the ability to follow coursework in Spanish, as assessed by SIT.

Tropical ecology studies in Panama include bird research projects. Photo by Aly Dagang.