

Course Syllabus Spring Semester 2023

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Study Abroad - Tropical Field Studies (ENV120) – 4 credits

This course is an investigation of the ecology, conservation, and diversity of tropical ecosystems. As part of a study-abroad student team, students will learn and participate in scientific field research methods on location in a tropical country. By participating in a variety of trips, and activities students will also investigate the interrelationship of local culture, ecotourism, and conservation. Students will be required to complete a self-designed scientific field research project and participate in a community services project while in the country of study. Past studies have occurred in Costa Rica and Nicaragua but future trips are not limited to these two tropical countries.

Course requires additional travel fees and purchase of personal field supplies. Study-Abroad scholarships are available for qualified students. Course meets General Education “Science & Technology” Requirement Area 5.

Prerequisite: Submission of Study-Abroad application and approval of the Science Department – No previous science background required.

Course Structure

Classroom instruction at BHCC prior to travel (dates to be determined)

Two-week intensive field work and study in the country visited.

Attendance

Attendance at all pre-trip orientation meetings, scheduled on-campus classes, and participation in all activities while in the country of study is mandatory.

Course Topics

Presented at BHCC by Faculty Trip Leaders

1. Geology (of the study country)
2. Tropical Climate
3. Major Ecosystems in the Study Country
4. Rainforest Diversity, Adaptations, and Natural Selection
5. Survey Methods in Field Research
6. Precautions While Working in the Rainforest

Presented in Study Country by Local Field Station Staff and/or Guides

1. Conservation in Tropical Ecosystems
2. Wildlife Observation
3. Economic and Medicinal Uses of Native Botanical Species
4. Tropical Agriculture
5. Visited Country’s Educational System
6. Visited Country’s History, Government, and Culture
7. Brief Introduction to Visited Countries Language

Learning Outcomes

1. Student will be able to compare and contrast the visited countries culture to his or her own life situation.
2. Student will be able to describe how various agricultural and commercial activities have affected the natural ecosystems in the country of study.
3. Student will be able to compare and contrast the various tropical ecosystems found in the country of study.
4. Student will be able to compare and contrast tropical ecosystems to those found in New England.
5. Student will be able to describe the types of public and private conservation areas that have been established in the country of study.
6. Students will be able to discuss how advances in technology are threatening and preserving the stability of tropical ecosystems.
7. Student will be able to identify various flora and fauna indigenous to the country of study.
8. Student will be able to explain the adaptations required for survival by the flora and fauna indigenous to the various ecosystems of the country of study.
9. Student will be able to list the flora and fauna indigenous to the country of study that are endangered or threatened with extinction.
10. Student will be able to describe various biological field research methods.
11. Student will be able to design and conduct a field investigation using proper scientific methods.
12. Student will be able to critically interpret and analyze, and draw conclusions from research data collected in their field investigation.
13. Student will be able to work as a team in completing a community service project while in the country of study.

Required Text:

Tropical Nature by Adrian Forsyth and Ken Miyato, Simon and Shuster Pub., ISBN 0684187108
Journal, Field Notebook and Field Lab Manual will be provided

Learning Activities – Will take place at BHCC and in the country of study

1. Student will read *Tropical Nature* and present a written summary of one of the chapters with references to related observations actually made the country of study.
2. Student will attend all orientation sessions and classroom seminars on tropical ecology prior to departure.
3. Student will maintain and submit a species list of flora and fauna observed while in the country of study
4. Student will participate as a team member in a service-learning project while in the country of study and record reflections of their service learning experience in their journal.
5. Student will present a research paper (minimum 750-1000 words) on a conservation issue related to the tropical environments i.e. Affect of Global Warming on Tropical Ecosystems, Agriculture and Rainforest Sustainability, Central American “Green Corridor”, Balancing Ecotourism with Ecosystem Preservation, etc.
6. Student will execute field investigations while in the country of study and will submit a written report of the investigation and present an oral report of the investigation to the Study-Abroad Team.
7. Student will maintain a daily journal of all activities, presentations, and observations while in the country of study.
8. Student will develop an e-portfolio that will contain his or her perceptions as to what they expect to get out of the experience before they travel, entries describing their activities while in the country of study, and their personal reflections on the experience after they return home.

Scholarship Students Only

Scholarship students will be required to assist the Study-Abroad program with future recruitment activities (Assist with Study-Abroad Fair, serve on Study-Abroad selection committee, assist with Study-Abroad orientations, etc). Scholarship students will also be required to complete an International Center Study-Abroad summary evaluation.

Evaluation

1. Satisfactorily completing all activities listed above (1-8) – Final Grade awarded “A”
2. Satisfactorily completing five activities listed above in addition to the student journal and e-portfolio. – Final Grade awarded “B”
3. Satisfactorily completing four activities listed above in addition to student journal and e-portfolio. – Final Grade awarded “C”
4. Less than four activities completed in addition to student journal and e-portfolio. – No credit will be awarded