Comparative Tropical Ecology
ENVI-3005 (3 Credits / 45 class hours)

SIT Study Abroad Program:
Panama: Tropical Ecology, Marine Ecosystems, and Biodiversity Conservation

Course Description
This course focuses on understanding the principle marine and terrestrial ecosystems of Panama. Through a comparative approach, students learn about different traits and attributes of distinct yet interdependent tropical ecosystems. The course visits and conducts field exercises in tropical cloud forests, rain forests, lowland dry forests, coral reefs, seagrass beds, coastal mangroves, and swamps. Course curriculum is imparted through lectures, readings, and extensive field experiences.

Course Objectives
Objectives of this course include:
- Expose students to the unique characteristics and features of Panama’s diverse terrestrial and marine ecosystems
- Provide students with hands-on learning opportunities in the ecosystems studied in order that they build a solid knowledge base of the major ecosystems of the tropics and how they function.
- Enable students to craft a realistic perspective of the challenges to conservation in tropical zones.
- Help students develop an understanding of how biophysical drivers shape species diversity, abundance, and ecosystem structures.

Expected Learning Outcomes
By the end of the course, students should have attained the following:
- The ability to discuss in-depth the similarities and differences among principle tropical ecosystems, including major flora, fauna, and biophysical processes.
- The capacity to think critically about ecosystem processes and their dependence on other natural phenomena.
- An acute understanding of ecological features and drivers that shape marine and terrestrial ecosystems in the tropics.

*This syllabus is representative of a typical semester. Because courses develop and change over time to take advantage of unique learning opportunities, actual course content varies from semester to semester.

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Course Structure and Readings

*Introduction to Tropical Terrestrial Ecology*

**Instructors:** Professor Milton Garcia and Dr. Omar Lopez

**Field sites:** Soberanía National Park, El Copé National Park, Campana National Park, Sarigua National Park, La Amistad International Park (UNESCO World Heritage Site and Biosphere Reserve), Barro Colorado Island Smithsonian Institute Research Station


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Introduction to Birds and Mammals of Panama
Instructor: Professor Francisco Ponce
Field site: La Amistad International Park (UNESCO World Heritage Site and Biosphere Reserve)


Introduction to Tropical Marine and Coastal Ecology
Instructors: Professor Angel Vega and Dr. Juan Maté
Field Sites: Chiriqui Gulf National Marine Park and Eastern Pacific Marine Corridor, Colon Island, Smithsonian Institute Bocas del Toro Research Station

- Angehr GR 2003 Site descriptions: Colon Island. Directory of Important Bird Areas in Panama. Sociedad Audubon de Panama, Panama. 95-107 pp
- Peralta, C Evaluación Preliminar del Impacto Causado a los Cetáceos por el Uso de Trasmallo en el Golfo de Chiriquí, Panamá.

Course Requirements
Readings
Students are responsible for all the required readings, and should be prepared to bring them to bear during program activities. The readings aim to help students place the classes in their context, to engage lecturers, to generate questions for class discussions, and to deepen students’ knowledge of particular topics.

Assignments
Timely completion of all assignments is expected. Late hand-ins will be penalized. All assignments are evaluated according to organization, analytical quality, depth of understanding, argumentation, and presentation of evidence.

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Course assignments consist of the following:

Cumulative ecosystems comparison assignment  25%
Discussion questions (all sections)        30%
Final exam                               25%
Participation                            20%

Participation is crucial to student success in this course and will be gauged based on student contribution to discussions, involvement during excursions, respect for the host culture, punctuality, cooperation, and flexibility. Attendance at all program activities is mandatory.

**Grading Scales and Criteria**
Grades are given both fairly and rigorously and in accordance with the system below. They will reflect a combination of absolute quality of performance, progress made, and the ability to take into account and assimilate the Academic Director’s and the teachers’ advice in assessing the work done. An “A” letter grade reflects exceptional work, perfect combination of academic competencies and personal research and analysis. It shows great ability to integrate field-based investigation and personal reflection into a structured and well-argued paper. A “B” letter grade reflects serious and methodical work as well as a substantial effort at analyzing and understanding cross-cultural issues. A “C” letter grade shows the work meets the requirements but needs more in-depth reflection and personal involvement. A “D” letter grade is insufficient and clearly reflects lack of work or serious deficiencies.

The grading scale for all classes is as follows:

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<tr>
<th>Grade</th>
<th>Percentage</th>
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<tr>
<td>A</td>
<td>94-100%</td>
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<td>A-</td>
<td>90-93%</td>
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<td>B+</td>
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<td>B</td>
<td>84-86%</td>
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<td>B-</td>
<td>80-83%</td>
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<td>C+</td>
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<td>D</td>
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<td>below 64%</td>
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Please see the SIT Study Abroad student handbook for policies on academic integrity, ethics, academic warning and probation, diversity and disability, sexual harassment, and the academic appeals process.

**Please Note:** Course contents, lecturers, and readings may be modified as needed. Should any change of class topics or lecturers may be necessary, students will be promptly notified.

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