College of Agriculture and Life Sciences -
THE UNIVERSITY OF ARIZONA

SWES 495F/595F AMAZON RAINFOREST CONSERVATION BIOLOGY IN ECUADOR

Description of Course
Located in the Amazon rainforest near the Equator, the Shiripuno River/Yasuni National Park region is considered to have the world’s greatest biodiversity. After arriving in Quito, the Capitol of Ecuador, we will travel to Puerto Francisco de Orellana, the gateway to the Amazon rainforest. From there we will travel by bus to the Shiripuno River (a tributary of the Amazon River) where Huaorani guides will take us by boat to the Shiripuno Field Station. Along the way we will see several species of macaws, tapirs, monkeys, and turtles.

The Shiripuno Field Station is maintained by the local Huaorani tribe and will function as our field station for the majority of the class. With comfortable accommodations and an extensive network of well-maintained trails in pristine rainforest, it is an ideal location to have a once-in-a-lifetime experience. We will conduct multiple tours of the area guided by Huaorani field experts to observe plants, birds, amphibians, reptiles, mammals, and many other unique features of this amazing area. Each student will be given the opportunity to develop and implement a unique research project. Research topics can include a biological inventory, working with Huaorani’s to understand their perspectives of the environment, and investigate the conflict of oil development with the tremendous natural resources of the region in one of the last untouched rainforests on Earth.

Locations and Times

Instructor Information
Dr. Hans-Werner Herrmann
Associate Research Scientist
Wildlife Conservation and Management
School of Natural Resources and the Environment
hw@u.arizona.edu
Forbes Building Room 415B
Tucson, Arizona 85721
(520) 626-3645

Dr. Thomas B. Wilson, Lecturer
Department of Soil, Water & Environmental Science
twilson@ag.arizona.edu
Saguaro Hall, Room 313
Tucson, Arizona 85721
(520) 621-9308

Course Objectives and Expected Learning Outcomes
Students will learn about conservation issues for the Huaorani tribe, government conservation services, international and national NGOs, and scientific institutions in Ecuador, and participate in ongoing conservation research (including monitoring programs and ecological research). Student presentations at the beginning of the course and research papers due upon completion will allow students to explore specific topics of interest. A final compilation of student papers, floral/fauna lists, daily protocols and notes will be created during the course and given to each participant and the course instructors.

By the end of the course students will be:
1) knowledgeable about the development and current status of conservation biology;
2) prepared to identify factors contributing to Ecuador’s biodiversity and cultural diversity;
3) adept at communicating results and conclusions from observational and/or experimental studies;
4) effective in maintaining a concise and detailed field notebook;
5) proficient in developing and conducting field observations;
6) experienced at working with others to operate a field camp.
Course Methodology

“In Situ” activities will allow students to experience field research techniques and methodology. Scientific approaches will be balanced with exposure to local social issues to give students a truly interdisciplinary experience. Students will have individual research topics that they present to the group and will allow them to focus on a particular subject of interest. Group discussion will be required throughout the program to help students develop their perspective of a new environment.

Teaching Format

Course topics will be addressed through a variety of methods:
• Instructor lectures and Specialist presentations
• Peer presentations
• Group discussion
• Individual research papers
• Visits to field sites and educational facilities

Required Texts

Students will be living and conducting studies in remote areas in primitive conditions and will have to be prepared with proper shoes, clothing, etc. Vaccinations and other prophylactics will be necessary.

Required or Special Materials

The course and activities are designed for students majoring in biology, environmental science, or a related field; however, the interdisciplinary approach will also appeal to students from other degree programs. A minimum coursework of general biology is encouraged.

Due to the remoteness of some areas, students should be physically fit and prepared for the unpredictable nature of field research in remote areas with little or no infrastructure. Hikes from basecamps to areas of interest or study sites (daily during study period). Trail difficulty is moderate. Students will be living and working as close group and will be expected to work as a team.

Grading Policy

Incomplete grades will be given only in special circumstances in compliance with University policy.

30 points - Active participation in group discussions, instructor presentations, specialist presentations, and visits to field sites and educational facilities.

20 points - Active participation in camp activities. Students are responsible for determining and implementing their specific responsibilities and tasks throughout the course with a minimum of supervision.

10 points - Preparation of a field notebook. Late policy: 5 points will be deducted for each day it is late.

10 points - Twenty minute peer presentation. Students will be expected to prepare prior to departure.

30 points - Research paper on a specified subject that will be due 2 weeks after returning. These papers (in addition to the daily protocols) will be copied and given to each participant and the Instructors. Late policy: 10 points will be deducted for each week it is late.

For graduate course credit, students will need to develop a species list (insects, plants, etc) to be included with the final deliverables.
Grading Criteria

A: > 90%  B: 80% - 89%  C: 70% - 79%  D: 60% - 69%  E: < 59%

Attendance Policy

While students will by default be present at all times of this course, active participation will be necessary to carry out set goals. Sufficient free-time will be allocated to allow for preparation of food, washing laundry, supply shopping etc.

Assignment/Testing Schedule/Due Dates

1. Students will be required to prepare a peer presentation topic prior to their arrival in Quito.
2. Students will maintain a field notebook throughout the class period; it will be reviewed by the instructors after the first week and at the end of the class.
3. A final paper will be due two weeks after returning.

Assignment Format

The field notebook should be in the format specified by the instructors. The final paper should be 8-10 pages double-spaced and submitted electronically.

Bibliography

Current research and/or writings
Access and availability

An extensive literature list will be provided. Students are responsible for obtaining literature on their presentation subjects.

Classroom Behavior

Students will be expected to actively participate in group activities including discussion, presentations, visits to field sites and educational facilities, and camp preparation and cleanup. Because students will live and work together as a group, they will be expected to be particularly tolerant and amicable. Students will need to be respectful of each other, local customs, and local culture.

Notification of Objectionable Materials (if applicable) N/A

Special Needs and Accommodations Statement

Students who need special accommodation or services should contact the Disability Resources Center, 1224 East Lowell Street, Tucson, AZ 85721, (520) 621-3268, FAX (520) 621-9423, email: uadrc@email.arizona.edu, http://drc.arizona.edu/. You must register and request that the Center or DRC send me official notification of your accommodations needs as soon as possible. Please plan to meet with me by appointment or during office hours to discuss accommodations and how my course requirements and activities may impact your ability to fully participate. The need for accommodations must be documented by the appropriate office.
Student Code of Academic Integrity

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See: http://w3.arizona.edu/%7Estudpubs/policies/cacaint.htm. ABOR Policy 5-308, prohibits threats of physical harm to any member of the University community, including to one’s self. See: http://policy.web.arizona.edu/~policy/threaten.shtml.

Confidentiality of Student Records

http://www.registrar.arizona.edu/ferpa/default.htm

Subject to Change Statement

Information contained in the course syllabus may be subject to change with advance notice, as deemed appropriate by the instructors.

Tentative Class Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity/Location</th>
<th>Assignment:</th>
</tr>
</thead>
<tbody>
<tr>
<td>28-Dec</td>
<td>Quito</td>
<td>First Day of Class</td>
</tr>
<tr>
<td>29-Dec</td>
<td>Quito- Puerto Francisco de Orellana</td>
<td>Transfer</td>
</tr>
<tr>
<td>30-Dec – 10-Jan</td>
<td>Shiripuno Field Station, Amazon Rainforest</td>
<td>Evening peer presentations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Half hour observation of field subject</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Field notebook due for review</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Field study of lizard populations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Student Projects: Subject selection, select methods</td>
</tr>
<tr>
<td>11-Jan</td>
<td>Puerto Francisco de Orellana</td>
<td>Transfer</td>
</tr>
<tr>
<td>12-Jan</td>
<td>Quito</td>
<td>Last Day of Class</td>
</tr>
</tbody>
</table>