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Independent Study Project

ISPR 3000 (4 credits)

Ecuador: Comparative Ecology and Conservation

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.

Course Description

The Independent Study Project (ISP) provides an opportunity for students to study a topic of particular academic interest in greater depth. Project topics typically relate to the academic themes of the program, including but not limited to: ecology, biology, conservation, field methodologies, environmental policy, and grassroots initiatives. Through class lectures, field exercises, group discussions students begin preparing for their Independent Study Project in the two months before the ISP begins. ISP topic and site selection options are carefully analyzed in individual meetings with the Academic Director, with priority on requests for desired student projects solicited from the program's Ecuadorian contacts. Appropriate projects must adhere to the following:

- Can best be done in Ecuador (versus the United States).
- Does not require extensive library research.
- Provides extensive contact with host nationals, the scientific community, or Ecuadorian ecosystem.
- Yields a significant, specific insight into an aspect of Ecuadorian ecology or environment and a grasp on new learning skills.

Before the project period begins, under the guidance of the academic director, students are required to prepare a well-developed written proposal on the focus and design of their investigation. Each student works closely with a project advisor, as well as with the Academic Director, throughout the ISP process. The final product of the ISP consists of oral and written presentations in a form to be mutually agreed to by the student, project advisor, and Academic Director.

Learning Outcomes

By the end of the course students will be able to:

- Discuss in detail the results of their independent field research with academic and non-academic audiences
- Ascertain appropriate field methodologies for proposed ecological field research in relation to their topic of study

- Interact and collaborate with partners, scientists and/or personnel involved in the development of a science project
- Organize and analyze ecological field data relevant to their research topic
- Propose and develop appropriate future research for their topic of study

Readings

- Selections from the ERME Reading Packets covering both anthropological and ecological field methods and techniques applicable to the ISP
- Reference articles and books from program library and SIT's electronic library database specifically related to student's ISP topic.

Human Subject Review and Environmental Review

All ISP proposals must reflect a responsible, culturally-and environmentally-appropriate consideration of the effects of the inquiry upon the local environmental and the participants in the project. To this end, students are required to submit two applications for review of their research in accordance with standards developed for ethical study of human subjects and low impact on the natural setting. The minimal standards for these reviews reflect local academic practice with additional support and consultation if needed from the Local Review Board and SIT's Institutional Review Board. ISPs that may be further disseminated after the program must confirm to the more stringent standards of the Office for Human Research Protections.

See below for further details on the academic and ethical integrity standards expected of all

Writing a Project Proposal (ISP Proposal)

When writing a project proposal attention should be given to the clarity of your project objective(s), the definition of the hypothesis (if any), and your plans (methodology) for achieving your objective(s). Proposed timing is another key element of the project proposal. It is important to underline that with your project you will make a realistic attempt to solve a specific science and/or conservation problem or part of it. You should clearly indicate in your project proposal that you have developed an in-depth research of the other related science articles or papers produced by other researchers (Citations and Bibliography).

A project proposal usually contains the following chapters: Proposed Title (it may change after the ISP research is completed); Objective(s) and/or Hypothesis (focusing on problem solving); Proposed Methodology (it may change during your ISP time); Expected Outcomes (what you anticipate to obtain in order to solve the problem); and Bibliography (this is very important because you have to read as much as possible about other studies related to your topic). ISP Proposal: usually 3 pgs.

Writing the ISP Paper

The information must be presented using a clear, direct and concise writing style. The paper should refer to its audience, but at the same time should be understandable by people from almost any background. This means that it will still be necessary to briefly define any specific science terminology so the reader will follow any complex theories, methods, or ideas presented in the paper. Most scientific papers follow the outline presented below:

Title and Sub-title: The title should be short and direct; the sub-title can be a bit longer and self-explanatory. Try not to go over 50 characters including spaces.

Abstract: It's a summary of the paper, usually consisting of one or two paragraphs in English

and Spanish. A brief statement presenting the very basic background information should precede the study's objectives and hypothesis. Important results should be included to support the conclusion. It is usually best to write the abstract after you have written the paper.

Acknowledgements: Includes the names and titles of all people that contributed to the development of your research, unless identifying informants compromise them in any ways.

Introduction: In this section any relevant background information is presented and contextualized based on previous studies, scientific articles and authors. Citing the results and ideas presented in previous studies helps to explain your research and justify the importance of your work. Indicate the geographic location of your study site and the ecological description; use maps and/or satellite images. The background information should lead into the statement of your question or hypothesis. Describe the general approach of your study. Indicate your hypothesis and/or question(s), and list your goals.

Methods and Materials: This section should outline the materials actually used, and present the way you conducted the study, such that anyone could replicate it. Methods, tests (especially statistical tests) and other techniques should be clearly explained.

Results: Make an introductory and general comment of your results. Present your main data and results (not all raw data and details). Relevant data should be clearly presented in a written form and on tables, charts, and graphs. Statistical analysis should be outlined and explained for the general public. No deep analysis of data should be included in this section.

Discussion & Conclusion: This section is where the results are analyzed and put into the context of other studies (other articles and authors). Like the introduction, your discussion should demonstrate your knowledge of the literature and your ability to synthesize your ideas from the combination of your results and the conclusions from other studies. Any

problems you encountered with your methodology should be addressed here, with ideas on how to improve it. Conclude with statements about potential related studies and new directions for the future.

Bibliography: All resources, including personal communications and especially all written science/social papers used (articles, news, etc.) should be listed under a science format (this format will be discussed with your AD prior the ISP, and depending on your topic; usually it should follow the APA format/system).

Appendix/Annexes: This section includes all other important but not as relevant data and materials, such as other data tables, graphs, pictures, interviews, etc.

Making Oral Presentations

Clarity is key. Be concise and go directly to the point. You must think about the 2-3 things that you want your audience to remember after your talk is over. Speak loud enough so all your audience can hear you. Avoid reading as much as possible.

Introduction, Hypothesis/Question. Introduce the topic and establish the context. Develop the ideas in the context of previous works (articles from other authors, etc.), define any critical issues and describe your goals. Then your hypothesis/question should follow logically. Describe your main points for choosing the hypothesis/question and add important elements if necessary.

Methods. Describe your experimental design and point out how appropriate are the methods and the test of the hypothesis/question that you implemented.

Results. Start with a general statement; then use tables and figures: make sure that your figures and tables are self-sufficient. Do not show computer outputs and raw data or show figures or tables without legends. If you use figures and tables correctly, you should be able to summarize your results quickly and clearly.

Discussion & Conclusions. Summarize your results in the context of your hypothesis/question and compare them with other studies. Address the following:

- The results support the hypothesis or answer the question?
- Suggest future experiments that should be conducted based on your results.
- Always end on a positive note.

Acknowledgments. Here you must acknowledge those individuals and organizations that helped make your work possible.

Leave time for questions.

Answering questions. Make sure that your responses are clear, short and direct. Do not monopolize time at any means during this section of the presentation.

Evaluation and Grading Criteria

ISP Proposal: This assignment evaluates the student's capacity, self-sufficiency, and maturity for preparing a reliable research plan, including academics, administrative issues, logistics, supplies and other planning elements. Usually 3 pages, single space.

ISP Paper: The ISP Paper is a fully developed paper about the student's research in the field (20 to 25 pages single space). This paper should be written as a publishable article with the international required parameters. Please use APA system for writing your paper.

Oral Presentation: This is a presentation about the ISP paper to the student's peers and other interested people that may be part of the audience. Duration: 15 minutes (not including the questions/answers following section).

ISP Proposal: 10%
ISP Paper: 80%
Oral Presentation: 10%

Grading Scale

The grading scale for all classes is as follows:

94-100%	A
90-93%	A-
87-89%	B+
84-86%	B
80-83%	B-
77-79%	C+
74-76%	C
70-73%	C-

67-69%	D+
64-66%	D
Below 64	F

SIT Policies and Resources
Please refer to the SIT Study Abroad Handbook and the Policies section of the SIT website for all academic and student affairs policies. Students are accountable for complying with all published policies. Of particular relevance to this course are the policies regarding: academic integrity, Family Educational Rights and Privacy Act (FERPA), research and ethics in field study and internships, late assignments, academic status, academic appeals, diversity and disability, sexual harassment and misconduct, and the student code of conduct.

Please refer to the SIT Study Abroad Handbook and SIT website for information on important resources and services provided through our central administration in Vermont, such as Library resources and research support, Disability Services, Counseling Services, Title IX information, and Equity, Diversity, and Inclusion resources.

Student research (Independent Study Project) is a product of field work and as such students have an obligation to assess both the positive and negative consequences of their field study. Ethical field work, as stipulated in the SIT Statement of Ethics, results in products that are shared with local and academic communities; therefore copies of ISPs are returned to the sponsoring institutions and the host communities, at the discretion of the institution(s) and/or community involved. World Learning/SIT Study Abroad may archive, copy, or convert the ISP for non-commercial use, for preservation purposes, and to ensure future accessibility. World Learning/SIT Study Abroad may archive ISPs in the permanent collection at the SIT Study Abroad local country program office and/or at any World Learning office. World Learning/SIT Study Abroad has a non-exclusive, perpetual right to store and make available, including electronic online open access, to the ISP. Students retain all ownership rights of the ISP product and retain the right to use all, or part, of my project in future works. Please refer to the Student Handbook or the Access, Use, and Publication of ISP form.