



THE SCHOOL
FOR FIELD STUDIES

Directed Research

SFS 4910

Syllabus
4 credits

The School for Field Studies (SFS)
Center for Amazon Studies
Tarapoto, Peru

This syllabus may develop or change over time based on local conditions, learning opportunities, and faculty expertise. Course content may vary from semester to semester.

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COURSE CONTENT SUBJECT TO CHANGE

Please note that this is a copy of a recent syllabus. A final syllabus will be provided to students on the first day of academic programming.

SFS programs are different from other travel or study abroad programs. Each iteration of a program is unique and often cannot be implemented exactly as planned for a variety of reasons. There are factors which, although monitored closely, are beyond our control. For example:

- Changes in access to or expiration or change in terms of permits to the highly regulated and sensitive environments in which we work;
- Changes in social/political conditions or tenuous weather situations/natural disasters may require changes to sites or plans, often with little notice;
- Some aspects of programs depend on the current faculty team as well as the goodwill and generosity of individuals, communities, and institutions which lend support.

Please be advised that these or other variables may require changes before or during the program. Part of the SFS experience is adapting to changing conditions and overcoming the obstacles that they may present. In other words, this is a field program, and the field can change.

Center Research Direction

The global research question that we want to address during this research course is:

What conditions are necessary for effective conservation and sustainable socioeconomic development in Peru?

Course Overview

The aim of this course is to provide students with the opportunity to apply scientific methods to address local social and environmental issues. Students will be prepared to identify hidden assumptions and separate facts from interpretation, cause from correlation, and advocacy from objectivity. Through Directed Research students will contribute to a growing body of scientific research that informs local conservation, development, and resource management decisions.

This course will give you an intensive practical field experience conducting research in tropical areas on a topic of immediate relevance to specific clients working in the context of tropical ecology, conservation biology, and political ecology of the Amazon region. Students will go through all steps of the research process: identification of relevant questions within the ecological and political/cultural context of the region; research design and proposal writing; field data collection; methods of qualitative or quantitative data analysis; and presentation of results to interested parties and the scientific community. To achieve this, students will integrate the information provided in the core courses of the SFS Program and will apply it to the problem at hand under the guidance of a faculty member. In their research projects, students will use concepts and methodologies learned in class, field lectures, and field exercises to deliver technical reports and present to a local audience.

Learning Objectives

The core skills students will learn in this course are field techniques, analytical methods, skills, and critical thinking, as well as teamwork, and time management. The specific objectives of the course are:

1. Understand the process of **designing** a field research project
2. **Conduct** field sampling
3. Manage, interpret, and analyze **data** sets
4. **Communicate** research results to diverse audiences
5. Manage teamwork within the context of **collaborative** research

Assessment

Assessment Item	Value (%)
Project Proposal	20
Research Skills	10
Data Management	10
Research Paper – Draft	10
Research Paper – Final	20
Presentation	20
Contribution to Public Presentation	5
Reflective Assessment	5
TOTAL	100

Project Proposal (20%)

The project proposal has two elements: a *Literature Review* and a *Project Summary*.

1. Literature Review

The main objective of the Literature Review is for students to familiarize themselves with previous research and publications in their chosen Directed Research project. This should draw upon a literature base (where possible) to initially review the status of research in the field and then to build a setting and justification for research that still remains to be done.

The Literature Review should include:

- a. A full literature review: A critical evaluation of knowledge in the subject area
- b. An exploration of the DR project status within the literature: Highlight knowledge gaps and how the proposed project fits within the current literature

2. Project Summary

The main objective of the Project Summary is for students to develop a detailed outline for their Directed Research. The Project Summary should include:

- a. Aims/Hypothesis(es): A list of questions that the student would like to answer as a result of the research project they will design
- b. Materials & Methods: A detailed description of the methods to be used and why these methods will be used over other potential methods. This should include sampling design, as well as the physical data collection methods to be employed
- c. Predicted Findings & Importance: A list of predicted findings and implications

Research Skills and Application (10%)

Your Directed Research Skills will be graded throughout the semester by your supervisor. Your final grade will depend upon your attendance at all DR activities, active involvement and competencies in field data collection, data entry, and group participation/support.

Data Management (10%)

It is important to record and store research data in a manner that is useful. You will need to provide (as applicable) Excel sheets with your research data in a format that is intelligible to someone else. You may need to provide both raw and manipulated data you used to create figures, tables and to run statistical tests. You need to annotate your spreadsheets (use text boxes if appropriate) so that an outsider can understand what the data are. You may be required to provide field notes on your findings for review.

Research Paper (30%; Draft 10%, Final 20%)

The final report is written in the style of a peer-review submission to a journal in the appropriate field. You will have ample opportunity for guidance from your DR supervisors throughout the DR period and especially during DR data analysis week. The analytical tools for research workshops in the DR course (and complementary classes in other courses) are designed to prepare you for producing the Results section and improve the quality of your work. You will be required to hand in a draft that includes the introduction, methods, and results and a final version that improves on the draft using the faculty feedback and the discussion section. A research paper rubric will be handed out separately.

Presentation (20%)

An oral presentation with accompanying visuals will be delivered in a conference style to an audience composed of all Center SFS staff and students. The presentation will be 30 minutes long with additional

time for questions and must include a stream of slides (e.g., PowerPoint) to be handed in at the beginning of the presentation session. Emphasis will be made on setting the context (introduction) and the results, implications, and conclusions. Attention should be paid to the visual design and composition of figures and images. The correspondence of visuals with the idea presented, plus the logical flow of ideas and sections within the presentation will be evaluated, as well as the selection of appropriate font sizes and figure colors.

Contribution to Public Presentation (5%)

SFS strives to produce information that local authorities and the public can use to manage their natural resources. Presenting research results in the local language to the public is therefore critical to SFS’s mission. Every group of students is expected to put together a public presentation based on their individual research results. The presentation has to communicate the significance, goals, and main findings of every group in a way that is accessible and inspiring to a general audience. Students are encouraged to explore creative ways to transmit their message to their audience. Not all students have to present but all have to participate in the production of the public presentation and their individual contribution to the final result will be evaluated.

Reflective Assessment (5%)

At the end of the DR period, each student will write a brief one-page reflection that self-assesses their DR experience. Students should reflect on challenges faced, goals achieved, their time management, and what they might improve or have learned for the future.

Grading Scheme

Grade corrections in any of the above items should be requested in writing at least 24 hours after assignments are returned. No corrections will be considered afterwards.

A	95.00 - 100.00%	B+	86.00 - 89.99%	C+	76.00 - 79.99%	D	60.00 - 69.99%
A-	90.00 - 94.99%	B	83.00 - 85.99%	C	73.00 - 75.99%	F	0.00 - 59.99%
		B-	80.00 - 82.99%	C-	70.00 - 72.99%		

General Reminders

Intellectual Property – There are many implications about intellectual property and the use of data and research frameworks beyond your semester experience. Many DR projects form part of ongoing and developing research lines at SFS Centers, the work of which is the intellectual property of SFS faculty. However, faculty are always interested in continuing collaborations, and there is often the possibility for student *co-authorship* on future academic publications. We will discuss the ethics of data gathering and academic publications during the semester, but you can also review in advance SFS’s [data policy](#).

Honor Code/Plagiarism – SFS places high expectations on their students and we hold students accountable for their behaviors. SFS students are held to the honor code below. SFS has a zero-tolerance policy towards student cheating, plagiarism, data falsification, and any other form of dishonest academic and/or research practice or behavior. Using the ideas or material of others without giving due credit is cheating and will not be tolerated. Any SFS student found to have engaged in or facilitated academic and/or research dishonesty will receive no credit (0%) for that activity.

“SFS does not tolerate cheating or plagiarism in any form. While participating in an SFS program, students are expected to refrain from cheating, plagiarism and any other behavior which would result in a student receiving credit for work which they did not accomplish on their own. Students are expected to report any instance of cheating or plagiarism by others.”

Deadlines – Deadlines for written and oral assignments are instated to promote equity among students and to allow faculty ample time to review and return assignments before others are due. As such, deadlines are firm; extensions will only be considered under extreme circumstances. Late assignments will incur a penalty of 10% of your grade for each day you are late. After two days past the deadline, assignments will no longer be accepted. Assignments will be handed back to students after a one-week grading period. Grade corrections for any assessment item should be requested in writing at least 24 hours after assignments are returned. No corrections will be considered afterwards.

Participation – Since we offer a program that is likely more intensive than you might be used to at your home institution, missing even one lecture can have a proportionally greater effect on your final grade simply because there is little room to make up for lost time. Participation in all components of the course is mandatory, it is important that you are prompt for all activities, bring the necessary equipment for field exercises and class activities, and simply get involved.

Course Content

L: Lecture, **Demo:** Demonstration; **D:** Discussion, **WS:** Workshop

DR Coursework Component: The coursework component of the DR is designed to prepare the students to conduct scientific research. The lectures are delivered throughout the semester, in conjunction with the topical courses, so that students are well prepared to work with their faculty mentor on meaningful research. Some of the course activities below will be delivered to the whole class, or as part of your specific DR group once you have selected a given project.			
No	Title and outline	Type	Hours
DR 01	Introduction to DR Course objectives, design, pace, evaluation, potential topics	L	0.8
DR 02	Literature review and scientific reading How to conduct a literature review. Strategies for reading scientific articles. Reference management.	L/Demo	0.8
DR 03	Methods of Scientific Inquiry We'll review inductive and deductive inquiry approaches and how they may be used when formulating and answering research questions (from identifying research questions to generating hypotheses) in different fields.	D	0.8
DR 04	Research Ethics In this class we will discuss what constitutes plagiarism and data integrity. We will survey opinions on the humane treatment of people and other research subjects, mitigation of negative impacts, and consent.	D	0.8
DR 05	Professional & Academic Writing We will discuss the expectations of professional writing in the natural and social sciences and introduce the format we expect reports to be generated at CAS.	L/Demo	0.8
DR 06	Directed Research Topics Research topic of the semester will be presented with the specific context and different aspects related to ecology, conservation, and politics. Students will choose what to focus on and how to work together.	D	0.8
DR 07	DR team meetings: Proposal Planning Instructions regarding specific proposal requirements will be given and how to use available information resources (databases. etc.). Identification of specific research questions will be workshopped with students.	D/WS	1.7

DR 08	Qualitative Methods Workshop In this class we will introduce the use and practice of qualitative methods in interdisciplinary research, and will explore the parallel issues of voice, representation, and power in the practice of qualitative research.	WS	1.7
DR 09	Quantitative Research Methods Basic statistical concepts will be introduced focusing on the basics of descriptive and inferential statistics: statistical distributions, uncertainty, and formal hypothesis testing. Practical examples will be provided.	WS	1.7
DR 10	DR Skills Workshops Project specific skills for data gathering, analysis and data management will be workshopped within each DR group (surveying, interview design, statistics etc.)	WS	1.7
DR 11	Time & Project Management How to set priorities, realistic benchmarks, and final goals for doing research projects within a timeframe. How to manage your workflow to meet deadlines.	L/Demo	0.8
DR 12	Risk Management in Field Research Groups will meet individually with the SAM and their advisor to discuss and analyze the most common risks in their DR projects. Emphasis will be given to planning for risk mitigation and a group plan will be brainstormed.	D	0.8
DR 13	Presentation Techniques How to make (almost) anyone interested in what you have to say: slide design, delivery, knowing your audience. Answering questions and critique.	WS	0.8
Total		14 Hours	
DR Research Component This portion of the DR course is made up of research time, which includes data collection, synthesis, and dissemination. Given the intense nature of the Directed Research project, students receive over 140 contact hours during this period.		Days Allocated	
Data Collection Students work within their DR group to go into the field to collect data		5 days	
Data Analysis Students work closely with their faculty mentors to analyze their collected data and write up their findings in a structured scientific paper		5 days	
Writing Students write up their findings in a structured scientific paper		5 days	
Research Dissemination Students prepare, practice, and deliver presentations for SFS and community audiences.		5 days	
Total		20 days	