THE SCHOOL FOR FIELD STUDIES

Directed Research
SFS 4910

Syllabus, Spring 2017

William Helenbrook, Ph.D.
Katie MacDonald, Ph.D.
Adrian Tejedor, Ph.D.

The School for Field Studies (SFS)
Center for Andes-Amazon Studies (CAS)
Urubamba, Peru

Course Overview

The aim of this course is to provide students with the opportunity to apply the scientific process in a field research project addressing a local issue related to the environment. This course prepares students to distinguish hidden assumptions in scientific approaches and separate fact 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 Andes-Amazon region. Students will go through the 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 and/or statistical data analyses; and presentation of results to the 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 integrate concepts and methodologies learned in class, field lectures, and field exercises to deliver technical reports directly to a local audience. Each student in the Spring 2015 program will engage in one of the projects listed below.

Assessments

Assessment Item	Value (%)
Proposal/Literature Review	10
Research Methods	30
Research Paper	30
Oral Presentation	25
Contribution to public presentation	5
Total	**100**

Assessment Descriptions

Research Methods

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.

Literature Review / project proposal

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

Research Paper

The most important deliverable of the Directed Research project will be a research report written in the form of a scientific manuscript. Research paper rubrics will be handed out separately by each professor.

Oral Presentation

An oral presentation with accompanying visuals will be delivered to an audience composed of all Center SFS staff and students. Presentations will be 12 minutes long and must include a stream of slides (e.g. in Microsoft Office PowerPoint) and a script, both to be handed in at the end of the presentation session. Emphasis will be made on setting the context (introduction) and in the results, implications, and conclusions. Font and colors should be selected in a way that enhances meaning and information, and 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
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 working under a professor 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. 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.

Grading Scheme

A	95.00 – 100.00%	B+	86.00 – 89.99%	C+	76.00 – 79.99%	D	60.00 – 69.00%
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

Plagiarism - Using the ideas and material of others without giving due credit is cheating and will not be tolerated. A grade of zero will be assigned if anyone is caught cheating or aiding another person to cheat actively or passively (e.g., allowing someone to look at your exam). All assignments unless specifically stated should be individual pieces of work.

Deadlines
Deadlines for written and oral assignments are instated for several reasons: They are a part of working life to which students need to become accustomed and promote equity among students, and deadlines allow faculty time to review and return assignments before others are due.

Assignments will be handed back to students after a one-week grading period. Late assignments will incur a 10% penalty for each day that they are late. No assignment will be accepted after three days.

Participation
Since we offer a program that is likely more intensive than you might be used to at your home institution, missing even one activity 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 program is mandatory because your actions can significantly affect the experience you and your classmates have while at SFS. Therefore, it is important that you are prompt for all land and water based activities, bring the necessary equipment for field exercises and directed research, and simply get involved.

Course contents: classroom component

Code (Type)	*Hrs*	*Lecture Title and Description*		*Readings*
DR1 (L/Discussion)	**1**	**Introduction to DR** Course objectives, design, pace, selection of topics, evaluation, professors' interests.	AT, WH, KM	
DR2 (Discussion)	**2**	**Science** Truth, reality, knowledge, pattern, process, evidence, observation, and experimentation. The goals, methods, and power of science.	AT, WH, KM	**Optional:** Sagan, 1995. Demon Hunted World
DR3	**2**	**Qualitative methods:** In this class we will introduce the use and practice of qualitative methods in social research, and will explore the parallel issues of voice, representation, and power in the practice of qualitative research.	KM	Garcia-Yi and Grote, 2012.
DR7 (Panel Discussion)	**1**	**Publish or perish** Writing and publishing scientific papers	KM, WH	
DR6 (L/Discussion)	**2**	**Reality or delusion:** statistics as the quantitative tool to find truth	AT, WH	
DR3 (L)	**1**	**Research ethics:** In this class we will discuss what constitutes plagiarism and data integrity, and will survey opinions on the humane treatment of fellow species.	KM, WH, AT	plagiarism.org http://iacuc.yale.edu/
DR5 (L)	**1**	**Storytelling** How to make (almost) anyone interested in what you have to say.	AT, KM, WH	**Optional:** Olson, R. 2009
DR8 (L)	**1**	**Directed research topics for Fall 2015**	AT, KM, WH	
DR9 (discussion)	**2**	**DR team meetings**	AT, KM, WH	
	13	**TOTAL CONTACT HOURS**		

Course Readings:

Garcia-Yi, J. and U. Grote. (2012). Data Collection: Experiences and Lessons Learned By Asking Sensitive Questions in a Remote Coca Growing Region in Peru. Survey Methodology, 38(2): 131-141.

Olson, R. (2009). Don't be such a scientist. Island Press.

Sagan, C. (1994). Demon hunted World: Science as a candle in the dark. Random House.