

Syllabus

Field Survey Management (ENVM 680-01)

Credit Hours: 2 Credits

Course Description

Management and research of natural resources is inherently tied to information needed from the physical world. There is an art and a science to collecting and managing field data in a way that assures high quality, is efficient, scientifically valid, legally defensible, and useful in the long term. Assuring that data is obtained properly from fieldwork is critical, because that information is the basis for later analysis, management decisions, and resource protection. This course teaches applied skills for managing field projects and staff, conducting fieldwork and collecting data, or using data collected outside of an office or lab for analysis and management. This course is taught with natural resources examples, such as wildlife and vegetation, however the skills will have broader applicability. This course would be complemented by a course in field methods, but does not cover the same topics.

Learning Goals and Objectives, Learning Outcomes

This course covers topics spanning from pre-field planning to project wrap-up. The intent of this course is to give graduates a solid foundation to work in and/or manage field-based projects. At the conclusion of this course, students should know the logistical considerations of running a quality field program, including:

- Documenting field surveys through mapping, notes, and photographs;
- Practice with GPS, and an understanding of basic GIS concepts;
- Composing written survey results and writing field survey project instructions;
- Be familiar with regulations, protocols, qualifications, and permits;
- Exposure to data management protocols;
- Considerations for putting together a quality field team;
- How to avoid common field survey pitfalls;
- And be better prepared to organize and manage natural resource field projects.

Instructional Strategies

The course will be presented using a variety of teaching methods, including lectures, field trips, and class discussions. Assignments are described briefly below. Separate handouts that describe each assignment in detail will be provided in class. I will be available in between classes for questions and clarification.

Reference Materials

Required and optional reading material for each course topic will be available as electronic files via USF's Canvas as Modules. **Students are required to read these articles before the topics are discussed in class.** Students will be required to find additional scientific articles and/or written resources for their course assignments. **Please be sure to view Canvas sections - Modules (for Reading), Assignments, and Quizzes each week.** ***I heavily use the online learning portal Canvas. Please don't hesitate to let me know if you run into a glitch.***

Instructor Information

Name: Aviva Rossi

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Grading

Testing

1. Quizzes

There will be four short multiple-choice quizzes during the course. These quizzes are based on lectures, open note and can be completed during the lectures. They will be due via Canvas by the Monday following lecture.

2. Final Exam

The final exam will be comprehensive, covering lecture (including guest lecture) and reading material, as well as field activities. It will be a take-home exam and will be available via Canvas on the last day of class. This exam should be completed independently (i.e. do not work together on it). **It will be due via Canvas by October 19th.**

Written Assignments

1. Field Survey Memorandums and Associated Field Documentation

Written documentation of field survey activities, complete with maps, photographs, datasheets, and field notes will be due for the field project conducted on Day 1, 2, and 3. Only Field Notes and Datasheets will be due for the field activity conducted on Day 4. The details of this assignment will be provided separately in class, and posted to Canvas Assignments for Day 1, 2, 3, and 4.

2. Project Instructions

You will prepare a written set of Project Instructions, written for a field survey team. These can be done for a hypothetical project, or one of your actual projects. These Project Instructions must be based on real existing field survey protocols at an actual location. The subject, protocol, and location will be of the students choosing. The only exception is that you cannot use the survey protocol or location we use in class. Students will see some examples Project Instructions during the class. Additional details about requirements will be posted to the Canvas Assignments site for Day 3, although they will be available sooner. As always, professional format and writing count. *Please do not underestimate how long these will take. You should start a few weeks ahead of time. This is meant to be a fun project, but it will take thought, effort, and time to do well enough for a good grade.*

Field Surveys

Students will conduct 4 field exercises during the course. The first one will be held at the USF main campus, and the remaining three will be in the San Francisco Presidio. **You will be responsible for your own transportation to the field sites. Fieldwork will not be cancelled for rain or other unpleasant weather conditions.** If the weather is wet, I highly recommend waterproof (not just quick dry) pants, a waterproof jacket, and something to keep your backpack contents dry.

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On Day 1, students will return the classroom after the field exercise. On the remaining days, we will not return to the classroom in the afternoon.

Attendance and Participation

Your learning in this class depends heavily on your participation in all classes, field trips and lab activities. Absences must be excused in advance by the instructor (except in dire emergencies); if you miss one class without prior approval, you will receive one-half grade reduction; **missing two classes will result in a failing grade.** You are expected to arrive on time, and assist your classmates in the field.

Evaluation Strategies

Component	Percentage
Field Survey Project Instructions	35%
Field Notes/Photologs	15% (combined)
Field Survey Summary Reports	15% (combined)
Class Participation	5%
Quizzes	10%
Final Exam	20%

Grading Scale

A+	97-100	C+	76-78
A	92-96	C	72-75
A-	89-91	C-	69-71
B+	86-88	D	61-68
B	82-85	F	60
B-	79-81		

Equipment

- Appropriate clothing and shoes for fieldwork in a variety of weather conditions, including sun, wind, rain, and fog.
- Digital camera (those on a phone, or a disposable camera, are fine)
- Clipboard (provided)
- Pencil/Pen (in the rain, a pen will not work well)
- Binoculars (optional, purely a recreational addition to this field survey)
- Smartphone with GPS (optional, but please bring one if you can, we will be using them in class activities. **Please remember to fully charge it prior to class, as the GPS functions tend to use a lot of battery.**)

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Course Sequence and Assignment Due Dates

Day 1	Introductions Terminology and Definitions Data Collection and Documentation Introduction to Basics of GPS/GIS Reporting Field Practice 1 Quiz 1 If time: Ex. Field Project Presentation	Quiz 1 Due August 28 Field Notes and Memo 1 Due September 4
Day 2	Pre-Field Planning Intro. to Survey Protocols Intro to Wildlife Camera Trapping Overview of Field Practice 2 and 3 Quiz 2 Field Practice 2	Quiz 2 Due September 18 Field Notes and Memo 2 Due September 21
Day 3	Qualifications Avoiding Common Pitfalls Regulations and Protocols Ethics and Responsibility Quiz 3 If time: Ex. Field Project Presentation Field Practice 3	Quiz 3 Due Oct 2 Field Notes and Memo 3 Due Oct 9 Project Instructions Due October 9 <i>Please do not underestimate how long these will take. You should start a few weeks ahead of time.</i>
Day 4	Quality Control Data Management and Analysis Health and Safety Archiving Collecting Overview of Field Practice 4 Field Practice 4 Quiz 4 Take Home Final Assigned	Field Notes 4 Due October 14 Final Exam Due October 19
All assignments are due by 10pm on the date specified above.		