

## Environmental Studies 200 – Environmental Methods

<b>Class Days/Times:</b>	Thursdays, 2:40pm– 5:25pm
<b>Location:</b>	Clark 243
<b>Instructor:</b>	Rachel O'Malley WSQ 118B, <a href="mailto:rachel.omalley@sjsu.edu">rachel.omalley@sjsu.edu</a> Office Hours: Wednesdays 10:00am – 12:30pm, or by appointment

### COURSE DESCRIPTION AND OBJECTIVES

The main focus of this course is to help you develop and write the methods section of your proposal. You should have completed or be in the process of completing EnvS 297, Thesis Proposal Writing, in which you refine a thesis topic and produce the research questions or hypotheses that you will study. In this course, you will explore the literature in your field to determine the types of methods available for collecting and analyzing data to address your research objectives. Ultimately, with the help of your thesis committee, you will determine the specific methods you will use for your research. The methods that environmental scientists use to conduct their research are as varied as the questions themselves. Research topics among M.S. students in this department range from those in the social sciences to topics in natural science and engineering fields. Each discipline has typical research methods, but all fields are united by the following principles of good research design:

- Data/information must be collected by methods that meet the standards of the field
- Methods must be repeatable
- Limitations of the methods must be clear
- Confidence levels of the data/information must be clear
- Data and analysis must withstand peer review.

The research questions/hypothesis and the methods used to address them are the most essential parts of your thesis; these are the elements that are critical in obtaining funding. Many government agencies, non-profits, and businesses provide grants for projects. A competitive grant proposal has clearly defined research questions that address important gaps in current knowledge with methods designed to address those questions. By completing your methods section, you will be positioned to seek funding, finish forming your thesis committee, complete your proposal, and begin your research.

### COURSE LEARNING OUTCOMES (CLO)

Upon successful completion of this course, you will be able to:

1. Review the literature and evaluate appropriate research methods.
2. Explain a range of methods used in your thesis research field and the field of environmental studies in general.
3. Develop a valid research design appropriate to your research topic.
4. Formulate the appropriate analytical framework (statistical, qualitative, or both) to analyze data for your thesis question, and
5. Understand the limitations of your thesis research methods.

## READINGS

Most course readings will be provided at the following folder: [https://drive.google.com/drive/folders/11-gg6a9rQXMptGWkRw8Kww2OPVWrOxu5?usp=drive\\_link](https://drive.google.com/drive/folders/11-gg6a9rQXMptGWkRw8Kww2OPVWrOxu5?usp=drive_link) or on Canvas

### RECOMMENDED REFERENCE TEXT:

Feinsinger, P. 2001. Designing field studies for biodiversity conservation. Island Press. Washington. DC.

## LIBRARY LIAISON

The Environmental Studies Library Liaison is Peggy Cabrera. She is wonderful! Plan to use her assistance. Peggy.Cabrera@sjsu.edu, or 408-808-2034.

## CLASSROOM PROTOCOL

- 1) PARTICIPATION: *This course is premised on interaction.* You should expect to attend all class meetings; your classmates and I value your insightful comments and critique. Facilitators will lead discussion, but all students should read and participate.
- 2) GRADED ASSIGNMENTS (see below): The written work for this course consists of all the pieces of the Methods section of your thesis proposal. Each assignment will be shared with peers. You are expected to be in regular (at least bi-weekly) contact with your thesis chair, as well, to apprise them of your progress and to solicit feedback, so *some assignments must be signed by your thesis chair* when they are turned in. Chair signatures do not necessarily indicate their approval of the content. The final methods section compilation must be reviewed by your thesis chair and the proposal ready to sign by the end of the course.
- 3) PEER REVIEWS: Fellow students will critique each others' drafts in writing.
- 4) ORAL PRESENTATION: Each student will present a formal explanation of their research methods, followed by questions/critique.
- 5) LATE ASSIGNMENTS: Assignments, unless announced otherwise in class, are due on the date and time specified in the course's Canvas website and the Class Schedule. Late assignments are assessed a 20% penalty per each 24-hour period. Illness and extenuating family or personal circumstances are the only allowable excuses for late work. Extensions need to be requested in writing at least 24 hours in advance of the assignment due date and time. Assignments submitted more than seven full days late will not be graded and will earn zero course points.
- 6) TIME EXPECTATIONS: As per University Policy S12-3, SJSU classes are designed such that in order to be successful, it is expected that students will spend a minimum of forty-five hours for each unit of credit (normally three hours per unit per week), including preparing for class, participating in course activities, completing assignments, and so on. More details about student workload can be found in <http://www.sjsu.edu/senate/docs/S12-3.pdf>.
- 7) ELECTRONIC DEVICES: Cell phones and all instant-messaging programs should be turned off prior to class if possible. Please use the break for text messaging or phone use. Laptops may only be used for taking notes.
- 8) SJSU WRITING CENTER: The SJSU Writing Center is located in Room 126 in Clark Hall and is staffed by professional instructors and upper-division or graduate-level writing specialists from each of the seven SJSU colleges. Writing specialists have met a rigorous GPA requirement, and are well trained to assist all students at all levels become better writers. The Writing Center website is [www.sjsu.edu/writingcenter](http://www.sjsu.edu/writingcenter).
- 9) ACADEMIC INTEGRITY: The University's Academic Integrity policy, located at <http://www.sjsu.edu/senate/S07-2.htm>, requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development. The Student Conduct and Ethical Development website is available at [http://www.sa.sjsu.edu/judicial\\_affairs/index.html](http://www.sa.sjsu.edu/judicial_affairs/index.html). Plagiarism (presenting the work of another as your own, or the use of another person's ideas without giving proper credit) will result in a failing grade and sanctions by the University. For this class, all assignments are to be completed by the individual student unless otherwise specified.
- 10) EQUAL EDUCATIONAL ACCESS (CAMPUS POLICY IN COMPLIANCE): SJSU is committed to creating an academic environment that supports its diverse student body. If you are a student with a disability, who requires adaptations or accommodations to achieve equal access in this course, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 requires that students with disabilities requesting accommodations must register with the Accessible Education Center (AEC) at <http://www.sjsu.edu/aec/> to establish a record of their disability.

**ASSIGNMENTS & GRADING Grades for ENVS 200 are based on the following point system:**

Assignment	Points	
Rough draft: Curriculum Vitae/Resume	50	600 = done/not done
Rough draft: Research Objective, Question(s), Hypotheses	50	
Annotated bibliography - 5 articles	50	
Research article for discussion;	10	
IRB and IACUC training	20	
Rough draft: Study System	50	
Rough draft: Positionality	30	
Annotated bibliography - 5 more articles	30	
Draft Methods Literature review	50	
Rough draft: Study design	50	
Rough Draft: Data Collection	50	
Rough Draft: Timeline,	20	
Rough Draft: Budget	20	
Rough draft Analytic Methods;	50	
Rough Draft: Data Instrument	20	
Assembled/revised full draft Methods Section	30	
Meet with Chair to review proposed methods (signature due)	10	
Identify (tentative?) second, third committee members; revised timeline	xcred	
Revised Methods to Chair (meet)	10	
Formal methods presentation	50	
discussion facilitation	50	
peer reviews	50	
Discussion preparedness/participation	100	
Final signed proposal	150	
	1,000	total

Students who miss more than two class meetings are ineligible to receive an A or A- in the course. Letter grades will be assigned according to the chart below.

A	925 to 1000	B-	795 to 824	D+	665 to 694
A-	895 to 924	C+	765 to 794	D	625 to 664
B+	865 to 894	C	725 to 764	D-	595 to 624
B	825 to 864	C-	695 to 724	F	0 to 594