

## Environmental Studies 200 – Environmental Methods

<b>Class Days/Times:</b>	Wednesdays, 10:30am – 1:15pm
<b>Location:</b>	WSQ 111
<b>Instructor:</b>	Costanza Rampini, Ph.D. <a href="mailto:costanza.rampini@sjsu.edu">costanza.rampini@sjsu.edu</a> Office Hours: Thursdays, 12:30p-1:30p in WSQ 111C or by appointment via Zoom. Please email me to sign up.

### 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 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 and value 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.

## REQUIRED TEXTS

Bernard, H.R. (2011). *Research methods in anthropology; qualitative and quantitative approaches*. 5th Edition. Maryland: AltaMira Press. - **Available online through the MLK library**

Smith, L.T. (1999). *Decolonizing methodologies: Research and indigenous peoples*. 2<sup>nd</sup> Edition. London & New York: Zed Books. - **Available online through the MLK library**

Additional readings and other content will be assigned on Canvas throughout the course. You will need a valid SJSU library account to access SJSU databases, ebooks, and other materials needed for your research.

## LIBRARY LIAISON

The MLK Library Liaison for our department is Peggy Cabrera ([peggy.cabrera@sjsu.edu](mailto:peggy.cabrera@sjsu.edu)). Additionally, Rachel Silverstein ([rachel.silverstein@sjsu.edu](mailto:rachel.silverstein@sjsu.edu)) specializes in data management and services. Both wonderful and very knowledgeable. However, your first stop, if you need direction on literature is your EnvS thesis chair.

## ASSIGNMENTS & GRADING

Grades for ENVS 200 are based on the following point system. Individual guidelines for each assignment will be posted on Canvas:

- Participation & Attendance (online reading responses & in-class activities) 20%
- IRB or IACUC Training Course 5%
- Positionality Statement 5%
- Methodological Review Paper & Presentation 15%
- Methods of Analysis Presentation 10%
- Final Methods Oral Presentation 15%
- Final Methods Paper (must be signed off by thesis chair) 30%

**N.B.:** Students who miss more than 2 class meetings are ineligible to receive an A or A- in the course Letter grades will be assigned according to the chart below.

A	92.5 to 100 percent	B-	79.5 to 82.4 percent	D+	66.5 to 69.4 percent
A-	89.5 to 92.4 percent	C+	76.5 to 79.4 percent	D	62.5 to 66.4 percent
B+	86.5 to 89.4 percent	C	72.5 to 76.4 percent	D-	59.5 to 62.4 percent
B	82.5 to 86.4 percent	C-	69.5 to 72.4 percent	F	0 to 59.4 percent

## 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 5 full days late will not be graded and will earn zero course points.

**COMMUNICATING WITH THE PROF:**

I encourage you to come and see me during office hours at least once over the course of the semester to discuss your research. Please email me to sign up for office hours. I am also available by e-mail, if you have questions I can answer briefly. But please note, you will receive the best feedback from me in a 20-minute face-to-face appointment. Email to a professor should be treated like a business letter. Please follow these tips when emailing your professor: <http://web.wellesley.edu/SocialComputing/Netiquette/netiquetteprofessor.html>. Emails that do not follow this “netiquette” will not receive a response.

**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>.

**ELECTRONIC DEVICES:** Cell phones and all instant-messaging programs must be turned off prior to class.

**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).

**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.

**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.

## CLASS SCHEDULE

Readings & assignments need to be completed *before* class. This schedule may be amended, with fair notice, to accommodate guest lectures & current events.

Date	Description	Readings & Assignemts
Wed. Jan. 25	Class Introduction	Latour & Woolgar (1986)
Wed. Feb. 1	I: Epistemologies	Miard et al. 2017 Starr et al. 2012
	II: The Scientific Method	Bernard (2011), Ch. 1
Wed. Feb. 8	Working with Non-Human and Human Subjects	Johnson (2018) Filardi (2015) Zielinsky (2010) Newkirk (2016) <b>Proof of IRB or IACUC training course completion due 2/10 at 11:59p</b>
Wed. Feb. 15	Decolonizing Methods and Positionality	Smith (1999), Introduction & Ch. 1 Naples (2003), Ch. 3 & 11 <b>Positionality Statement due at 11:59p</b>
Wed. Feb. 22	I: Research Design, Sampling & Study Site	<b>Bernard (2011), Ch. 3 (only up to and including the section about Milgram's experiment) &amp; Ch. 5</b>
	II: <i>Dr. Lynne Trulio ZOOM Guest Lecture: Working with birds &amp; other vertebrates</i>	Henderson & Trulio (2019)
Wed. Mar. 1	<b><i>I: Dr. Amanda Stasiewicz Guest Lecture: Focus Groups</i></b>	<b>Paveglio et al. 2019 Edgeley et al. 2020</b>
	II: Methodological Review Student Presentations	<b>Methodological Review paper and slides due at 11:59pm on 2/28 and in-class presentations</b>
Wed. Mar. 8	<i>I: Dr. Rachel O'Malley Guest Lecture</i>	Melen et al. 2016 (Intro + Methods sections only) Philpott et al. 2019
	II. Surveys & Interviews	Bernard (2011), Ch. 8
Wed. Mar. 15	Draft Methods Paper Peer Review	<b>Submit draft by 11:59p on 4/14, and bring a paper copy to class to discuss with peers and prof</b>

Wed. March 22	I: Observation  II: <i>Dr. Will Russell Guest Lecture</i>	Bernard (2011), Ch. 12 Sagarin & Pauchard (2010)  Russell (2020) Mahdizadeh and Russell (2021)  <b>Email Costanza your data analysis topic by Friday 4/24 at 11:59pm</b>
<b>March 27-31: Spring Break, No Class</b>		
Wed. April 5	I: <i>Dr. Metha Klock?</i>  II: Research Instruments for Data Collection	...  <b>At the end of class, turn in a draft research instrument template (survey, questionnaire, data sheet, sample plot lay out...)</b>
Wed. April 12	I: Archives  II: <i>Rachel Silverstein Pre-Recorded Guest Lecture: Data Management</i>	Ruiz et al. (2017) Vershina et al. (2020)  DMPTool DataONE Best Practices Promer Fisher 2016 Tsourkas 2017
Wed. April 19	Methods of Analysis	<b>Student presentations in class, submit slides on Canvas by 11:59p on 4/18</b>
Wed. April 26	I: Budget and budget justification - <b>Submit a draft budget and budget justification at the end of class</b> II: Career Center Speaker Kristin Keller	
Wed. May 3	<b>Final Student Presentations</b>	
Wed. May 10	<b>Final Student Presentations Final Methods Proposal due on Friday, May 12 at 11:59pm</b>	