

Environmental Studies 270 – Field Studies in Water Resource Management

Lecture:	Tuesdays, 3:00PM – 5:45PM in Sweeney Hall 314
Activity:	Wednesdays, 1:30PM-3:30PM, in Dudley Moorhead Hall 166 & other off-campus locations*
Instructor:	Costanza Rampini, Ph.D. WSQ 111C, costanza.rampini@sjsu.edu Office Hours: Tuesdays 1:30pm – 2:45pm, or by appointment

Important: Please sign up for office hours [here](#) 24 hours prior to your visit. Appointments are in 15 minute blocks. You may sign up for more than one consecutive time block.

COURSE DESCRIPTION AND OBJECTIVES:

Catalog Description: A field investigation of water resource agencies and projects to acquaint resource managers, environmental quality specialists and other interested students with projects and philosophies unique to particular geographic areas. Prerequisite: Upper division standing and ENVS 128 or ENVS 129, or instructor consent.

This course is an intensive field investigation of water resource management issues and local water agencies, with a focus on urban water use and urban streams. It has three major themes: 1) drinking water quality and management; 2) surface water quality and management; and 3) emerging issues in today's water resource management field, particularly water reuse and climate change. This course fulfills the field requirement for Environmental Studies majors.

You will use concepts from both the natural and social sciences to collect quantitative and qualitative data related to water resources management, analyze it, and reflect on how your findings are related to current issues facing water resource agencies. This class is excellent preparation for those interested in working in the area of water or natural resources management and those wanting to pursue graduate degrees in the field of water resources.

This course has two components: 1) a weekly lecture, during which you will learn concepts and methods for investigating various water resource issues 2) a weekly fieldtrip or activity, during which you will apply the concepts and methods learned in lecture. Generally, we will meet twice weekly for lectures, in-class exercises, discussions, as well as fieldtrips. **However, some fieldtrips will occur outside of our regular class times.** We will take several trips off-campus and we will be spending considerable time outside. It is key that you are present for all lectures and fieldtrips, especially since each fieldtrip is different and fieldtrips generally can't be made up. Additionally, you collect data during your fieldtrips and activities that you will use for your final research paper and presentation.

This is a graduate-level course and you will be expected to do graduate-quality work. This means that I expect you to engage deeply with the readings and class materials, do all assigned readings *before* class, be proactive in helping the class plan and execute field assignments, submit your work on time, be able to work with your classmates on group projects, and produce high-quality written assignments and presentations. It also means that your active presence and participation is crucial and mandatory. This means that you should not make a habit of: arriving to class late, talking with your neighbors, text messaging, social media-ing or emailing during class. Also, please remember that active participation should not entail monopolizing the class discussion, but rather creating a platform for others to discuss as well. Finally, you are expected to act professionally and respectfully towards your instructor, your classmates, and anyone you interact with during our fieldtrips.

Over the semester, you will:

- Gain a working familiarity with our local streams, the South Bay shoreline, and key local water issues
- Understand the relationship between various water management issues
- Have an opportunity to work alongside and understand the role of local water agencies and non-profits
- Learn how to apply concepts learned in class while in the field
- Practice qualitative and quantitative data collection and analysis
- Design their own water field studies fieldtrip & activity
- Practice communicating your findings to others, orally and in writing
- Work closely with your instructor and classmates

REQUIRED COURSE MATERIALS:

- There is no textbook required for this course. Readings will be assigned and available via the class Canvas website.
- Most fieldtrips will be free of cost, but you may be required to pay a small fee for one or two fieldtrips.
- You need to purchase knee-high waterproof boots by Sept. 24

PERFORMANCE EVALUATION:

Grades for the course are based on the following assignments. Assignments are due at the beginning of class, unless otherwise stated.

- *Homework & Class Participation (25%)*: Students are expected to attend lectures, come to class prepared to engage with readings and class material, and actively participate in class discussions and fieldtrip activities. Student participation will be evaluated via online reading responses available on Canvas, as well as the submission of write-ups linked to activities done during lecture. Students will also be evaluated for their active participation in fieldtrip activities.
- *Field Notes (20%)*: After each field trip, students will submit a 1,000-1,500 word write-up describing their participation in the activity and, when relevant, summarizing the data they collected. Write-ups will be submitted individually or in groups depending on the field activity.
- *Field Activity Design (10%)*: In groups of 2, students will submit a 2,000-word conceptual plan for an EnvS 270 field activity. The conceptual plan should explain

the issue that your activity is trying to address, describe the site in detail, and clearly outline the various steps of the activity, equipment needed, and expected results.

- *Field Activity Design Presentation (5%)*: Students will present their conceptual plan for an EnvS 270 fieldtrip and activity. One of the field activities presented in class on September 17 will be selected by the instructor, and we will work together as a class to plan, organize, and lead that field activity during the semester.
- *Final Group Presentation (Group grade, 15%)*: Students will present the findings of their research paper in class on **Tuesday, December 3rd**.
- *Group Research Paper (Group grade, 25%)*: 4,000 words. In groups of 3, students will use data collected during one of our fieldtrips and supplement it with independently collected data to analyze a current local water issues and related programs and policies, and make recommendations for water managers. **Due on Canvas on Wednesday, December 11th at 5PM.**
- *Extra Credit*: The instructor may assign some optional extra credit assignments.

You cannot earn an A or A- in this course, if you miss 2 or more class periods (lecture or fieldtrip). Letter grades will be assigned according to the following point scale:

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

TIME EXPECTATIONS:

At SJSU, students are expected to spend at least two hours outside of class for every one-hour of in-person class time. Because this is a **4 unit course**, you can expect to spend at least **8 hours per week outside of class** completing class-related assignments and readings. **Careful time management is required** to keep up and succeed.

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.**

ELECTRONIC DEVICES: Cell phones and all instant-messaging programs must be turned off prior to class meetings. NO text messaging or phone use is permitted in the classroom and during our fieldtrips, and laptops may only be used for taking notes. This will be strictly enforced.

OFFICE VISITS AND COMMUNICATION: I encourage all students to come visit me at least once during office hours to talk about the course, and any other topic related to the field or your life. I am interested in your academic development and personal well-being. It is

especially important that you communicate with me, preferably in person, if you are experiencing a problem that is preventing you from performing well in the course. I also encourage you to email me articles and other materials that you think are relevant to our class and let me know why they caught your attention!

EMAIL ETIQUETTE: Email to a professor and to potential interviewees 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.

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.

ACADEMIC INTEGRITY: Your commitment as a student to learning is evidenced by your enrollment at San Jose State University. 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.

Instances of academic dishonesty will not be tolerated. 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 in the assignment, as well as potentially in the course and sanctions by the University. For this class, all assignments are to be completed by the individual student unless otherwise specified. If you would like to include your assignment or any material you have submitted, or plan to submit for another class, please note that SJSU’s Academic Policy S07-2 requires approval of instructors.

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.

LEARNING ASSISTANCE RESOURCE CENTER: The Learning Assistance Resource Center (LARC) is located in Room 600 in the Student Services Center. It is designed to assist students in the development of their full academic potential and to inspire them to become independent learners. The Center's tutors are trained and nationally certified to provide content-based tutoring in many lower division courses (some upper division) as well as writing and study skills assistance. Small group, individual, and drop-in tutoring is available. Visit the LARC website for more information: www.sjsu.edu/larc/.

CLASS SCHEDULE

Schedule may be amended with fair notice. Field trips may be canceled due to weather.

Date	Description	Readings & Assignments
Wed. Aug. 21	Class Introduction	
Tues. Aug. 27	Guadalupe River & Stream Visual Assessment	Guadalupe River Park Master Plan (2002) Visual Assessments Information Paper Visual Assessments SOP
Wed. Aug. 28	Guadalupe River Visual Assessment Meet along Guadalupe River Trail at W Santa Clara St at 1:30PM	
Tues. Sept. 3	Water Waste Treatment & Recycling	SJSC WPC Plant Brochure SBWR 2014 Strategic and Master Plan Vol. 2 (Read only: Appendix 1A - SBWR Visioning Report , Page 1-16; Appendix A & B SBWR Background Information, pp. A1-A5, pp. B1-B7) Warren 2018 Desalination Fact Sheet (2015)
Wed. Sept. 4	Tour of Silicon Valley Advanced Water Purification Center Meet at 4190 Zanker Road, San Jose, at 1:20PM	
Tues. Sept. 10	South San Francisco Bay's Shoreline	Silicon Valley 2.0 Climate Adaptation Guidebook (2015) (Read only: Exec. Summary pp. i-1 to i-7, and Chapter 3S, pp. 3S-1 to 3S-29) Shoreline Project Overview (2015) Interim Feasibility Study Alviso Project Overview (2015)
Wed. Sept. 11	Alviso Slough Boat Tour Meet at 1195 Hope Street, Alviso, at 12:50PM	
Tues. Sept. 17	Field Activity Design Presentations In-Class	Field Activity Design Plan & Presentation Slides due on Canvas at 1pm
Wed. Sept. 18	TBD – Rapid Trash Assessment or No Class	
Tues. Sept. 24	Water Quality Monitoring	Chari et al. 2017 Turbidity Fact Sheet Temperature Fact Sheet pH Fact Sheet Beyond Vital Signs Herbst et al. (2001)
Wed. Sept. 25	Water Quality Monitoring along Stevens Creek w/ Grassroots Ecology Meet at McClellan Ranch Preserve, 1:30PM-4PM	

Tues. Oct. 1	Climate Change <i>S. Greene Guest Lecture</i>	SCVWD Climate Change Adaptation Tonkin et al. 2019 Smith 2018 CCW Historical Ecology Study Executive Summary DIY Coyote Creek Walk Posting observations with iNaturalist <i>Video</i> “Estimating tree canopy %”
Wed. Oct. 2	Bioblitz & Water Temperature along Coyote Creek w/ KCCB Meet at Hellyer Park Velodrome (near north entrance) at 1:30PM	
Tues. Oct. 8	South Bay Salt Ponds and Salt Marsh Restoration	SBSRP Adaptive Management Plan (2007) (Read only: pp. iv-25) Rush (2018) Bair Island Trail Guide
Sat. Oct. 12	Bair Island Wetland Restoration w/ POST, 9AM-12PM	
Tues. Oct. 15	I. Group Research Paper & Group Formation II. SJSU Water Use & Conservation	Mulhere 2015 CSU 2017 Sustainability Assessment Report (Read only the following sections: Introduction, Water) SJSU 2016 Sustainability Report ((Read only the following sections: Water + one section of your choosing that is related to water) SJSU OP-26 (2016) SJSU Landscape Master Plan (2013) (Read only: pp. 2-7, pp. 18-37) Read over research paper guidelines
Wed. Oct. 16	SJSU Facilities Tour Meet at CoGen Plant on campus at 1:30PM	
Tues. Oct. 22	TBD	TBD
Wed. Oct. 23	TBD – Student-Led Field Activity or Rapid Trash Assessment	
Tues. Oct. 29	Stevens Creek & Riparian Restoration	CA Riparian Habitat Restoration Handbook (2009) (Read only: pp. i-14, pp. 24-30, pp. 76-77) Stanford et al. (2018)
Wed. Oct. 30	Riparian Restoration along Stevens Creek w/ Grassroots Ecology Meet at McClellan Ranch Preserve, 1:30PM-4PM	

Tues. Nov. 5th	Household Water Use & Greywater Recycling	SF Graywater Design Manual (2017) (Read only: pp. 1-20, pp. 38-42) Ecology Center (2017) UC ANR Publication 8536 (2015)
Wed. Nov. 6th	Tour of Alan Hackler's Residential Greywater System	
Tues. Nov. 12	Group Research Paper - Data Analysis & Visualization	Bring laptop to class
Wed. Nov. 13	No Class	
Tues. Nov. 19	TBD	TBD
Wed. Nov. 20	TBD - Student-Led Field Activity or Rapid Trash Assessment	
Tues. Nov. 26	TBD	TBD
Wed. Nov. 27	No Class – Thanksgiving	
Tues. Dec. 3	Wrap-Up & Final Group Presentations	Submit your slides on Canvas by 10am
Wed. Dec. 4	Class Potluck in Santa Cruz & San Lorenzo River Walking Tour	
Wed. Dec. 11	Final Group Research Paper due on Canvas at 5PM	