

San José State University
College of Social Science/Department of Environmental Studies
ENVS 110 (42309 and 42310), Natural Resource Analysis, Fall 2024

Course and Contact Information

Instructor:	Rachel Lazzeri-Aerts
Class Days/Times/Location:	Lab: Mon/Wed 10:30-11:45am in WSQ 113 Lect: Tue/Thurs 10:30-11:45am via Zoom Access all class Modules, materials, assignments through Canvas LMS
Contact Me:	Canvas Messages/Inbox (preferred) or rachel.lazzeriaerts@sjsu.edu
Office Hours:	Mon/Wed 9:30-10:15am and by appointment
Prerequisites:	ENVS 001, ENVS 010, STAT 95

Course Overview and Description

Quantitative analysis of Earth's natural resources. Topics typically include the status and trends of resources such as topsoil, agriculture, water, energy, wildlife and the impacts of human population growth on these resources. Emphasis is on problem solving and computational methods applied to resource management problems. Prerequisite: ENVS 1, ENVS 10, STAT 95.

Natural resources include all of the materials that we use to sustain our lives, build our civilizations, and create the luxuries and entertainments that we enjoy. There is nothing that we have that does not originate from the earth, from the sea, or from the sky. In an era of super-abundance it is easy to lose touch with the importance of these resources and the processes that renew them, but as resources become scarce our dependence on them is apparent. Human populations are increasing globally, escalating the pressure on limited resources. Throughout much of human history our response to natural resource deficits has been post-hoc, and reactionary. Our growing understanding of resource use on a global scale gives us an opportunity for conscious stewardship, not only of individual resources, but of the ecological cycles and processes that allow for sustainable productivity over the long term.

Learning Objectives

ENVS Program Learning Objectives (PLOs)

- 1) Students are able to write a logical analytical paper using good writing style and construction supported by appropriate research. Assignments will require students to understand and summarize materials in relevant scholarly/technical articles, and to identify basic solutions from an interdisciplinary standpoint.
- 2) Students are able to determine, apply, and interpret appropriate basic statistical or other quantitative analyses to environmental data. Students will be able to articulate and test hypotheses, and read and understand graphs and basic statistics.

Course Learning Objectives (CLOs)

This course has been designed to help students explore and analyze issues related to natural resource management. After successfully completing this course:

- 1) Students will be able to describe the ways natural resources are used and summarize issues surrounding natural resource use.
- 2) Students will undertake independent research in a topic related to natural resources, their use, or their regulation. Students will be able to identify important topics, conduct a literature review, and analyze data to answer question about their topic.
- 3) Students will be able to evaluate solutions to issues of natural resource use and management including issues of environmental justice, diversity, and inclusion.

Information Literacy Learning Objectives (ILLOs)

- 1) An information literate student determines the nature and extent of the information needed. The information literate student defines and articulates the need for information, as well as identifies a variety of types and formats of potential sources for information.
- 2) An information literate student evaluates information and its sources critically and incorporates selected information into his/her knowledge base. Students summarize the main ideas to be extracted from the information gathered, articulates and applies criteria for evaluating both the information and its sources, and synthesizes main ideas to construct new concepts.
- 3) The information literate student understands the economic, legal, and social issues surrounding the use of information, and accesses and uses information ethically and legally.

Required Course Materials

Readings

Stokes, Dale. 2014. *The Fish in the Forest*. UC Press. ISBN 10:9 0520269209.

Townend, John. 2003. *Practical Statistics for Environmental and Biological Scientists*. Wiley. ISBN 13: 9780471496656.

The both books are available in the SJSU Bookstore and on Amazon ([Stokes](#), [Townend](#)). All additional course readings and materials will be available on Canvas.

Technology

You will need consistent access to a computer with an Internet connection. You should be using the latest version of Chrome, Firefox, Edge, Respondus Lockdown Browser (as applicable), or Safari, and can view a complete list of [Supported Browsers through Canvas Guides](#). We will be using Zoom for class activities and/or communication. Additionally, we will sometimes be using video recordings to share thoughts and ideas as part of activities or discussions. Canvas has a built-in Media Recorder that is easy to use.

Students are expected to have the following basic computer skills:

- Utilize Canvas LMS and associated tools/features
- Microsoft Office including Word, Excel, and PowerPoint
- File management including downloading, uploading, creating, editing, and saving
- Email including sending, receiving, and managing attachments
- University library searches
- Navigating internet searches, websites, and interactive components

Please note that I do not provide technical help beside instructions on how to access or utilize a particular application. If you need computer or technical help, please utilize the following resources:

- [Student Canvas Help Guide](#)
- [SJSU Information Technology](#)
 - itservicedesk@sjsu.edu
 - 408-924-1530
- In Canvas, click the “Help” button in the left-side menu for several options.

Library Liaison

Peggy Cabrera (peggy.cabrera@sjsu.edu or 408-808-2034) is the Library Liaison for the Department of Environmental Studies. She is a great resource. Email her for help via email or to set up a Zoom appointment.

Course Requirements and Assignments

Class Format

The lecture portion of this course will be completely online through Canvas and Zoom. The lab portion of the course will have both in-person and online components. Readings, video lectures, some class content, assessments, activities, and exams will be organized into Modules within Canvas, the Learning Management System used by SJSU. The course is designed to expand and grow with each Module, and many sections will refer back to previous Modules. Complete the tasks in the order presented to get the most out of the course.

While some of the material can be done at a time of your choosing, there are specific due dates for activities, assessments, discussions, and exams. You must complete these components at the due date and time. Late work is not accepted. Additionally, there will be required Zoom meetings most weeks for lecture and in-person and/or Zoom lab meetings every week. All meetings (Zoom and in-person) will be during our scheduled class time. Exact dates are provided in the Course Schedule, with the exception of one Saturday morning field trip in October or November.

Student Responsibilities

Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of 45 hours over the length of the course (normally three hours per unit per week) for instruction, preparation/studying, or course related activities, including but not limited to internships, labs, and clinical practica. Other course structures will have equivalent workload expectations as described in the syllabus.

It is your responsibility to access the Canvas course, come prepared to lecture and lab meetings, engage thoroughly with each Module and associated components, carefully read directions, prepare thoughtful submissions for assignments, discussions, and activities, submit all assignments on-time, and make a commitment to quality work in this course. If you are in doubt about something in the course, ask! Utilize the Question Café Discussion board, send me a Canvas Message, or attend office hours.

Assignments

There will be varying types of assessments, activities, labs, and assignments throughout the course. These assignments are designed to aid in your understanding of the course material, as well as develop skills in evaluating, analyzing, and communicating information about science and environmental issues. Assignments may include in-person activities and labs, low stakes short quizzes, lab reports, other written work, short video responses and discussions via Canvas, cases studies, and other activities to apply course concepts to real world examples. The culminating project for the course will be designing and completing a research project on a natural resource related topic of your choice.

Exam

One final exam will be given to test your understanding of, and ability to apply, the material presented. The exam will be cumulative, and may consist of multiple choice, true-false, matching, analysis, and short answer questions. Please do not miss the exam as you will not have the opportunity to make it up. Make-up exams may be considered for legitimate and documented circumstances (medical emergency, death in the family).

Participation

Students will be expected to actively participate in their learning. This means that you must actively engage with the material presented in the Canvas Modules. Do the reading. Watch the videos. Think about the questions presented to you. Additionally, as much of this course is based on activities, presentations, and discussions, each student's participation is necessary for the class to function successfully. Just because the course is presented in a hybrid modality across lecture and lab sections, does not mean collaboration with your peers is not essential. Discussions, video responses, class meetings, lab activities, and any other activities that come up during the semester may be used as participation points toward final course grade. **You must be present and prepared to receive participation points for activities; there are no makeup points for missed class activities.**

Formatting for Written Work

Please note that all assignments need to be formatted as follows: 12 point font, Times New Roman, 1 inch margins, doubled spaced, include a header with name and date, and use Turabian/Chicago, MLA, or APA author-year citation style where applicable. There will be a points deduction for not following these guidelines.

Grading Policy

Your grade will be based on your assessments, exam, assignments, and class participation. All assignments are to be turned in through Canvas before the specified due date and time unless otherwise specified in the assignment directions.

Grade Scale

<i>Grade</i>	<i>Percentage</i>
A plus	97 to 100%
A	93 to 96%
A minus	90 to 92%
B plus	87 to 89 %
B	83 to 86%
B minus	80 to 82%
C plus	77 to 79%
C	73 to 76%
C minus	70 to 72%
D	60 to 69%
F	Less than 60%

Late Work

All graded work is **due BEFORE 11:59pm on the due date**. Late work is **NOT** accepted. Plan accordingly, and do not wait until the last minute to submit an assignment. Exceptions may be considered for legitimate and documented circumstances (ie. medical emergency, death in the family).

Extra Credit

Students are responsible for recording the details of any offered extra credit assignments.

Rubrics

Most assignments may be graded using a rubric. For assignments and discussions that utilize a rubric, you can review the rubric before submitting your work to ensure you have met all assignment guidelines and requirements.

- [How to view a rubric for an assignment?](#)
- [How to view a rubric for a discussion?](#)
- [How to view rubric results for my assignments?](#)

Grading Overview

Please note that points possible may change based on class progression.

Assignment	Points	Learning Objectives
Popular Media + Current Events	40	CLO 1, 2; ILLO 1, 2, 3
Redwood Case Study Poster	30	PLO 1; CLO 1, 2; ILLO 1, 2, 3
Lab Report Dissection	20	PLO 1, 2
Lab Reports	180 (30 each)	PLO 1, 2; CLO 1, 2
Avian Mini Project	50	PLO 1, 2; CLO 1, 2, 3; ILLO 1, 2, 3
Research Project Proposal	30	PLO 2; CLO 2
Final Research Project Report	100	PLO 1, 2; CLO 1, 2, 3; ILLO 1, 2, 3
Research Project Presentation	50	CLO 3
Conservation vs Preservation Paper + Debate	60	CLO 1, 2
Final Exam	100	PLO 2; CLO 1, 2
Other Activities, Discussions, and Participation	300-400	PLO 1, 2; CLO 1, 2
TOTAL	~1,000	

University Policies

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' [Syllabus Information web page](#).

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 F15-7](#) 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](#) has more information. Instances of academic dishonesty will not be tolerated. **Cheating or 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. If you would like to include in your assignment any material you have already submitted, or plan to submit for another class, please note that SJSU's Academic Policy F15-7 requires approval of both instructors.

AI Tool Use

Generative artificial intelligence (AI) tools—software that creates new text, images, computer code, audio, video, and other content—have become widely available. Well-known examples include ChatGPT for text and DALL•E for images.

In this course, you may use generative AI tools only for assignments that include explicit permission in the assignment instructions. If you use generative AI tools on these assignments, you must properly document and

credit the tools themselves. Cite the tool you used both in-text and in the Works Cited and include a brief description of how you used the tool. This description should be included at the end of your assignment as an Appendix.

If you choose to use generative AI tools, please remember that there are limitations to the content produced. The datasets used to train AI are limited, often out of date, include copyrighted material, and may include biased information. This has the potential to result in AI created content that is inaccurate, biased, and/or a copyright violation. It is your responsibility—not the AI tool’s—to assure the quality, integrity, and accuracy of work you submit in any college course.

As a reminder, all written work for the course will be submitted through Canvas and will be submitted to Turnitin. Turnitin also includes detection tools for AI-generated text. If you use generative AI tools to complete assignments in this course, in ways that have not been explicitly approved, the SJSU Academic Integrity Policy and this course’s plagiarism and cheating policy will apply.

Portions of this policy were created using the non-AI [“Generative AI Syllabus Statement Tool \(Seaver College\)”](#).

Diversity, Inclusion, and Accessibility

In accordance with San José State University's Policies, the Student Code of Conduct, and applicable state and federal laws, discrimination based on gender, gender identity, gender expression, race, nationality, ethnicity, religion, sexual orientation, or disability is prohibited in any form. The [SJSU Diversity website](#) has information on campus policies and programs, the Office of Diversity, Equity, and Inclusion, and how to report instances of bias.

Students are expected to participate fully in all class activities. It is expected that students will be open-minded, participate fully in discussions in-class and online, and debate in a mature and respectful manner. Use of derogatory, condescending, or offensive language including profanity is prohibited. Expressing disagreement should always include an explanation of your reasoning and whenever possible, evidence to support your position.

The CSU and SJSU both mandate that all students, staff, faculty, and visitors have equal and inclusive access to information and educational materials and programs. Therefore, all instructional documents and materials, electronic materials and programs, and web based materials and programs must be created to be accessible by all. The [Accessibility at SJSU website](#) has information on the specific laws and policies regarding accessibility, as well as information on SJSU’s programs to ensure accessibility. In this course, my goal is to have all materials, readings, videos, etc. created in an accessible format. If you find a course component that is not accessible to you, please let me know, so that I can make corrections.

Additionally, the accessibility statements and resources (as available) for websites, software, and tools that we will be using in the course can be found at the links below.

- [Canvas](#): Learning Management System used by SJSU
- [Canvas Studio](#): audio/video recording tool within Canvas LMS
- [Google](#): SJSU email, calendar, and online tools
- [Turnitin](#): plagiarism check tool used in Canvas LMS
- [YouTube](#): video hosting/viewing
- [Zoom](#): synchronous web conferencing

Consent for Recording of Class and Public Sharing of Instructor Material

Common courtesy and professional behavior dictate that you notify someone when you are recording him/her. You must obtain the instructor's permission to make audio or video recordings in this class. See [University Policy S12-7](#), <http://www.sjsu.edu/senate/docs/S12-7.pdf>

Course material developed by the instructor is the intellectual property of the instructor and cannot be shared publicly without his/her approval. You may not publicly share or upload instructor generated material for this course such as exam questions, lecture notes, or homework solutions without instructor consent.

Resources for Students

There are many resources on campus available to you. Some examples include: SJSU Peer Connections Center, the College of Social Science Access Center, SJSU Writing Center, SJSU Counseling and Psychological Service, SJSU Student Health Center, the Academic Success Center, and many places to use or get help with technology. See the [Syllabus Information web page](#) for more info. If you are not sure where to get assistance, please email me/come see me. I can help you find the right campus resources and get you connected with them.

SJSU Cares

Students experiencing challenges meeting their basic needs including, but not limited to, access to food, shelter, and a safe space are encouraged to contact SJSU Cares. The SJSU Cares program can help connect students to both on and off campus resources. Contact information:

- [SJSU Cares Information website](#)
- sjsucares@sjsu.edu
- 408-924-1234
- Direct link to the [Request Assistance Form](#)

Accessible Education Center (AEC)

The Accessible Education Center is committed to redefining ability for students with disabilities by providing comprehensive services in support of the educational development and success of students with disabilities in a student-centered and professional environment. To receive appropriate accommodations for temporary or permanent disabilities, you must register with the AEC. Additionally, please make an appointment with me as soon as possible, so we can discuss the best ways to implement your accommodations to ensure your success in the course. AEC contact information:

- [AEC website](#)
- aec-info@sjsu.edu
- 408-924-6000

Counseling and Psychological Services (CAPS)

The SJSU Counseling and Psychological Services is located on the corner of 7th Street and San Carlos in the new Student Wellness Center, Room 300B. Professional psychologists, social workers, and counselors are available to provide confidential consultations on issues of student mental health, campus climate, or psychological and academic issues on an individual, couple, or group basis. Numerous workshops for students are offered every semester. Hours are Monday through Friday 8:30am to 5:30pm and Friday 8:30am to 4:30pm. For 24/7 crisis intervention help, call the number below and select "option 4". Contact information:

- [Counseling and Psychological Services website](#)
- counseling.services@sjsu.edu
- 408-924-5910

Course Schedule

Please note that this is a high-level course outline. A detailed schedule is available in Canvas.

Module and Dates	Weekly Topics	Major Assignments
M0: Aug 21-25	Introductions + Scientific Method	
M1: Aug 26-Sept 1	Excel Basics + Resources Intro	Excel Problem Set
M2: Sept 2-8	Lab 1 + Aquatic Systems 1	Lab 1 Problem Set
M3: Sept 9-15	Lab 2 + Popular Media and Current Events	Lab 2 Problem Set Current Events Summary
M4: Sept 16-22	Lab 3 + Aquatic Systems 2	Lab 3 Problem Set Salmon Activity
M5: Sept 23-29	Lab 4 + WASH	Lab 4 Problem Set
M6: Sept 30-Oct 6	Lab 5 + Forests 1	
M7: Oct 7-13	Writing Lab Reports + Field Day	Lab 5 report Thesis Defense Summary
M8: Oct 14-20	Avian Mini Project + Forests 2	Redwood Case Study
M9: Oct 21-27	Avian Mini Project + Forests 3	Mini Project Report Fire in CA Summary
M10: Oct 28-Nov 3	Research Project Introduction	
M11: Nov 4-10	Research Project Development + Soils	Project Proposal
M12: Nov 11-17	Research Project Work + Energy	
M13: Nov 18-24	Research Project Work + Global Commons	Project Progress Check
M14: Nov 25-Dec 1	Group Check-in Meetings + Thanksgiving	
M15: Dec 2-8	Research Project Work + Conservation/Preservation	Conservation/Preservation Paper
M16: Dec 9	Research Project Presentations	Presentation Slides
Finals Week		Final Project Written Report Final Exam