

	Rachel LazzerAerts
Class Days/Time/Location:	Lab: Mon/Wed 10:30-11:45am in WSQ 113 Le
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 superabundance 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 a post-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 or 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 internet connection. You should be using the latest version of Chrome, Firefox, Edge, Respondus Lockdown Browser. n BT1527(s)9,si7(a)7(l)-1(e)7( )-2) tSelf(a

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](#)

- o [itservicedesk@sjsu.edu](mailto:itservicedesk@sjsu.edu)
- o 408-924-1530

-side menu for several options.

#### Library Liaison

Peggy Cabrera ([peggy.cabrera@sjsu.edu](mailto:peggy.cabrera@sjsu.edu) 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.



## Rubrics

Most assignments may be graded using a rubric. For assignments and discussions that utilize a rubric, you 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, universitywide policy information relevant to all courses, such as academic [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](#) 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) is strictly prohibited. [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 used in a previous class, you must get approval from 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

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 a



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

[University](#)

[Policy S127](#), <http://www.sjsu.edu/senate/docs/S127.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 with both on and off campus resources. Contact information:

[SJSU Cares Information website](#)

[sjsucares@sjsu.edu](mailto: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](#)

[aecinfo@sjsu.edu](mailto:aecinfo@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 408-924-5910. Contact information:

[Counseling and Psychological Services website](#)

[counseling.services@sjsu.edu](mailto: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		