San José State University
College of Social Sciences/Environmental Studies Department
ENVS 110 Natural Resource Analysis, Course Number 22524, Spring 2016

Instructor: Rachel Lazzeri-Aerts
Office Location: WSQ 111B
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Email: rachel.sjsu@gmail.com
Office Hours: Mon 1:00-2:00pm, Thur 10:30-11:30am, and by appointment
Class Days/Time: Lecture: Mondays 3:00-5:45pm
Lab (sec 2): Tue/Thu 12:00-1:15pm
Lab (sec 3): Tue/Thu 1:30-2:45pm
Classroom: Lecture: DMH 164
Lab: WSQ 113
Prerequisites: ENVS 1, ENVS 10 and STAT 95

Catalog 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.

Course Overview
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 scarcer 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 Outcomes
This course has been designed to help students explore and analyze issues related to natural resource management. We will survey topics related to the management of traditional renewable resources such as timber, soils, and fisheries. We will also discuss the ramifications of global economic dependence on non-renewable resources such as petroleum, coal, and uranium. In order to be effective as environmental scientists we must understand the issues surrounding natural resource use, and the tools that are used to analyze natural systems. As a class we will be devoted to demystifying quantitative approaches to understanding the natural
world. We will work together to analyze current problems and present solutions, so that as a society we can move beyond reaction to pro-action in regard to natural resource management.

**Required Texts/Readings**

**Textbooks**


**Other Readings**
Additional readings will be provided on Canvas.

**Other Equipment / Materials**
You will need a flash drive at EVERY lab meeting. Additionally, you will need access to a computer with Microsoft Word, Excel, PowerPoint, and the internet. Be sure to bring pencil and/or pens with blue or black ink and paper to every class even if you take notes on a laptop.

**Course Requirements and Assignments**

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 [University Policy S12-3](http://www.sjsu.edu/senate/docs/S12-3.pdf).

**Canvas Instructions**
For this course, all take home assignments, papers, and lab reports must be turned in through the Canvas learning management system, unless otherwise noted. If you have trouble with this, please come see me during class or office hours. **All assignments are due by 12:00pm (noon) on the due date listed in the course calendar.**

**Exams**
A lecture final exam will include material from lectures, readings, films, activities, and student presentation. A practical (hands-on) exam will be conducted during the last laboratory session and will cover all subjects addressed in the labs including the scientific method, data entry and analysis, and presentation of data.

**Assignments**

**Weekly Quiz:** At the beginning of each class period a short quiz or activity will be given covering material from readings and lectures. The quiz will be followed by a discussion on the issues discussed in the readings. In order to prepare for the quizzes it is essential that readings be done before class. **No make-up quizzes will be given for any reason.**

**News Articles:** Each student will find a current news article (from a reputable news source) that relates to natural resources, natural resource use, or natural resource analysis. Each week 3-5 students will bring their article and present a summary to the class. You must email me the link to your article by 12pm on your presentation date for full credit.
Field Day Exercises: One lecture day will be spent outside learning and practicing various methods of data collection to prepare for the individual/group research project (see below). A packet with written directions, exercises, and homework questions will be completed and submitted along with all data collected and results.

Redwood Case Study: One lecture period will be spent on a forestry case study that focuses on the coast redwood. Each student will be responsible for researching an assigned subtopic and creating a poster with the information. We will have a mini “poster session” during class and students are responsible for the information presented. More details will be given in class.

Research Project: Each student will gather, analyze, and present a data set of their choosing. This data set will be from a primary source (i.e. collected in the field). Students may work in groups of 2-4 if they choose. The project will include three steps.

1) A proposal will be submitted and approved by the instructor before beginning data collection. The proposal will include a short introduction (with research questions and hypotheses), and a methods section (describing how data will be collected and analyzed).

2) The final project will include a written report. The report will be 8-12 double spaced pages and will include a short introduction (with research questions and hypotheses), a methods section (describing how you gathered and analyzed data), a results section (describing the data that was collected in the context of your hypotheses), and a conclusions section.

2) A presentation will be given by each student/group of researchers during class time. The presentation should be 15 minutes in length, professional in quality, and cover all of the sections described above for the written report. PowerPoint presentations are required.

Class Participation
Students will be expected to actively participate in their learning. As much of this course is based on activities, presentations, and discussions, each student’s participation is necessary for the class to function successfully. University policy F69-24 at http://www.sjsu.edu/senate/docs/F69-24.pdf states, “Students should attend all meetings of their classes, not only because they are responsible for material discussed therein, but because active participation is frequently essential to insure maximum benefit for all members of the class. Attendance per se shall not be used as a criterion for grading.” Students should arrive on time, prepared, be creative when they are presenting, and attentive and supportive when others are sharing their work. Group activities, debates and discussions, short in-class writings, and peer feedback all may be used as participation points toward final course grade. Be sure to complete assigned readings before class. Readings may also include articles distributed by instructor.

Labs
Lab exercises will be conducted during the lab section and lab reports will be due the following Tuesday by 12:00pm (noon) via Canvas. Lab reports will follow the standard scientific format including: Introduction; Research Questions and Hypotheses; Methods (data collection and data analysis); Results (figures, tables, and narrative); Conclusions (hypotheses assessment and discussion of findings).

Formatting
Please note that all assignments need to be formatted as follows: 12 point font, Times New Roman, 1 inch margins, doubled spaced, and include a header with name and date. A 10% deduction will occur for not following these guidelines.
Grading Policy

Your grade will be based on your exams, assignments and class participation. All assignments are to be turned in through Canvas before the specified due date and time or at the beginning of the due date class unless otherwise indicated. All students have the right, within a reasonable time, to know their academic scores, to review their grade-dependent work, and to be provided with explanations for the determination of their course grades. See University Policy F13-1 at http://www.sjsu.edu/senate/docs/F13-1.pdf for more details.

Grade scale

<table>
<thead>
<tr>
<th>Percentage Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>97% - 100% = A+</td>
<td></td>
</tr>
<tr>
<td>93% - 96% = A</td>
<td></td>
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<tr>
<td>90% - 92% = A-</td>
<td></td>
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<tr>
<td>87% - 89% = B+</td>
<td></td>
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<tr>
<td>83% - 86% = B</td>
<td></td>
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<tr>
<td>80% - 82% = B-</td>
<td></td>
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<tr>
<td>77% - 79% = C+</td>
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<tr>
<td>73% - 76% = C</td>
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<tr>
<td>70% - 72% = C-</td>
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<tr>
<td>60% - 69% = D</td>
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<td>less than 60% = F</td>
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Late Work

All assignments are due by 12:00pm (noon) on the due date listed in the course calendar. Late work is NOT accepted. Exceptions may be considered for legitimate and documented circumstances (medical emergency, death in the family) with proper documentation.

Extra Credit

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

Grading Overview

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Point Value</th>
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<tbody>
<tr>
<td>Weekly Quizzes</td>
<td>160 (20 each)</td>
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<tr>
<td>News Article</td>
<td>20</td>
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<tr>
<td>Redwood Case</td>
<td>30</td>
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<tr>
<td>Study Poster</td>
<td></td>
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<tr>
<td>Field Day Packet</td>
<td>30</td>
</tr>
<tr>
<td>Project Proposal</td>
<td>100</td>
</tr>
<tr>
<td>Final Project Report</td>
<td>100</td>
</tr>
<tr>
<td>Project Presentation</td>
<td>100</td>
</tr>
<tr>
<td>Final Exam</td>
<td>100</td>
</tr>
<tr>
<td>Lab Exercises</td>
<td>210 (30 each)</td>
</tr>
<tr>
<td>Lab Practical Exam</td>
<td>100</td>
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<tr>
<td>Participation</td>
<td>50</td>
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</tbody>
</table>

1,000 total

Classroom Protocol

The use of laptops during class time will be restricted to in-class activities and note taking. Students who use their computers for other activities or who abuse the equipment in any way, at a minimum, will be asked to leave the class and will lose participation points for the day. Cell phones, music players, and any other electronic devices must be turned off and stored in your backpack/purse. Any use of electronic devices during quizzes and exams is considered cheating, and will result in a failing grade.
University Policies

General Expectations, Rights and Responsibilities of the Student

As members of the academic community, students accept both the rights and responsibilities incumbent upon all members of the institution. Students are encouraged to familiarize themselves with SJSU’s policies and practices pertaining to the procedures to follow if and when questions or concerns about a class arises. To learn important campus information, view University Policy S90–5 at http://www.sjsu.edu/senate/docs/S90-5.pdf and SJSU current semester’s Policies and Procedures, at http://info.sjsu.edu/static/catalog/policies.html. It is recommended that students begin by seeking clarification or discussing concerns with their instructor. If such conversation is not possible, or if it does not address the issue, it is recommended that the student contact the Department Chair as the next step.

Dropping and Adding

Students are responsible for understanding the policies and procedures about add/drop, grade forgiveness, etc. Add/drop deadlines can be found on the current academic year calendars document on the Academic Calendars webpage at http://www.sjsu.edu/provost/services/academic_calendars/. The Late Drop Policy is available at http://www.sjsu.edu/aars/policies/latedrops/policy/. Students should be aware of the current deadlines and penalties for dropping classes. Information about the latest changes and news is available at the Advising Hub at http://www.sjsu.edu/advising/.

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. Such permission allows the recordings to be used for your private, study purposes only. The recordings are the intellectual property of the instructor; you have not been given any rights to reproduce or distribute the material. 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.

Academic integrity

Your commitment, as a student, to learning is evidenced by your enrollment at San Jose State University. The University Academic Integrity Policy S07-2 at http://www.sjsu.edu/senate/docs/S07-2.pdf 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.sjsu.edu/studentconduct/. Instances of academic dishonesty will not be tolerated. Cheating on exams 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 submitted, or plan to submit for another class, please note that SJSU’s Academic Policy F06-1 requires approval of both instructors.

Campus Policy in Compliance with the American Disabilities Act

If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 at http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf 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.

**Accommodation to Students’ Religious Holidays**

San José State University shall provide accommodation on any graded class work or activities for students wishing to observe religious holidays when such observances require students to be absent from class. It is the responsibility of the student to inform the instructor, in writing, about such holidays **before the add deadline at the start of each semester**. If such holidays occur before the add deadline, the student must notify the instructor, in writing, at least three days before the date that he/she will be absent. It is the responsibility of the instructor to make every reasonable effort to honor the student request without penalty, and of the student to make up the work missed. See University Policy S14-7 at http://www.sjsu.edu/senate/docs/S14-7.pdf.

**Student Technology Resources**

Computer labs for student use are available in the Academic Success Center at http://www.sjsu.edu/at/asc/ located on the 1st floor of Clark Hall and in the Associated Students Lab on the 2nd floor of the Student Union. Additional computer labs may be available in your department/college. Computers are also available in the Martin Luther King Library. A wide variety of audio-visual equipment is available for student checkout from Media Services located in IRC 112. These items include DV and HD digital camcorders; digital still cameras; video, slide and overhead projectors; DVD, CD, and audiotape players; sound systems, wireless microphones, projection screens and monitors.

**SJSU Peer Connections Center**

Peer Connections’ free tutoring and mentoring is designed to assist students in the development of their full academic potential and to inspire them to become independent learners. Peer Connections tutors are trained to provide content-based tutoring in many lower division courses (some upper division) as well as writing and study skills assistance. Small group and individual tutoring are available. Peer Connections mentors are trained to provide support and resources in navigating the college experience. This support includes assistance in learning strategies and techniques on how to be a successful student. Peer Connections has a learning commons, desktop computers, and success workshops on a wide variety of topics. For more information on services, hours, locations, or a list of current workshops, please visit Peer Connections website at http://peerconnections.sjsu.edu for more information.

**SJSU Writing Center**

The SJSU Writing Center is located in Clark Hall, Suite 126. All Writing Specialists have gone through a rigorous hiring process, and they are well trained to assist all students at all levels within all disciplines to become better writers. In addition to one-on-one tutoring services, the Writing Center also offers workshops every semester on a variety of writing topics. To make an appointment or to refer to the numerous online resources offered through the Writing Center, visit the Writing Center website at http://www.sjsu.edu/writingcenter. For additional resources and updated information, follow the Writing Center on Twitter and become a fan of the SJSU Writing Center on Facebook.

**SJSU Counseling and Psychological Services**

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. To schedule an appointment or learn more information, visit Counseling and Psychological Services website at http://www.sjsu.edu/counseling.