

San José State University
College of Social Sciences/Department of Environmental Studies
EnvS 191, Advanced Environmental Restoration, Section 1, Spring 2020

Course and Contact Information

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| Instructor: | Metha Klock |
| Office Location: | Washington Square Hall 115C |
| Telephone: | (408) 924-5427 |
| Email: | metha.klock@sjsu.edu |
| Office Hours: | Tuesdays 12:00pm – 2:00pm, or by appointment |
| Class Days/Time: | Mon./Weds. 10:30am–11:45am, Wednesday Field Trips 3:00pm–5:45pm |
| Classroom: | Lecture in Clark 303A, Activity in WQS 115 |
| Prerequisites: | EnvS 187 with a C+ or greater |
| Finals Day: | Friday, May 15, 2020, 9:45am – 12:00pm |

Course Format

This course has classroom lectures, fieldwork, and online assignments, quizzes, and exams. This course requires the daily use of a computer with Internet connectivity. Course materials such as the syllabus, assignment instructions, and exams are on the [Canvas Learning Management System \(Canvas\)](http://sjsu.instructure.com) course website at <http://sjsu.instructure.com>. You are responsible for regularly checking Canvas for announcements and emails from your instructor.

Course Description

Advanced restoration research and applications. Emphasis on independent literature research and field data collection. Participation in on-going restoration project. Fieldwork and grasp of restoration principles required.

In the course Introduction to Environmental Restoration (EnvS 187) you learned the basics of successful restoration projects, including restoration planning, implementation and monitoring, and the theoretical ecological principles that support restoration science. This advanced course (EnvS 191) puts into practice the knowledge and theory you have learned. As advanced restoration students, you will work on a current restoration project for a local client that requires restoration expertise. Project work will depend on the needs of the client. Students will apply appropriate field techniques, learn data analysis methods, and develop report-writing and professional presentation skills.

Course Learning Outcomes (CLO):

Upon successful completion of this course, students will be able to:

- Understand and apply the ecological principles that are central to the field of restoration
- Understand restoration theory and apply restoration practices to a range of habitats and restoration projects
- Understand the stages of successful restoration projects and evaluate the quality of projects from the perspective of planning and design, implementation, monitoring and adaptive management
- Learn and implement methods and techniques for baseline assessment and monitoring project progress toward restoration goals

Program Learning Outcomes:

Upon successful completion of this course, students will be able to:

- PLO 1 (Qualitative Environmental Literacy): Write a logical analytical paper using good writing style and construction supported by appropriate research
- PLO 2 (Quantitative Environmental Literacy): Determine, apply and interpret appropriate basic statistical or other quantitative analyses to environmental data
- PLO 3 (Content Environmental Literacy): Develop proficiency in the interdisciplinary sustainability principles that are the foundation of environmental studies; they will know the key environmental challenges facing the planet, know relevant interdisciplinary information about these challenges, and be able to develop/identify feasible solutions
- PLO 4 (Professional Skills: 4A): Productively conduct group/team work to deliver professional quality presentations and reports
- PLO 5 (BS Competency): Demonstrate in-depth knowledge and skills in a science or technical field

Required Texts/Readings

Textbook

None.

Other Readings

Additional readings available on Canvas and as assigned from the literature.

Other technology requirements / equipment / material

This course requires daily access to a computer with Internet connectivity, word processing (Microsoft Word is required for assignments), presentation, and spreadsheet software.

Library Liaison

Peggy Cabrera is our liaison for Environmental Studies. Reach her at: peggy.cabrera@sjsu.edu.

Course Requirements and Assignments

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. More details about student workload can be found in [University Policy S12-3](http://www.sjsu.edu/senate/docs/S12-3.pdf) at <http://www.sjsu.edu/senate/docs/S12-3.pdf>.

This is a lecture and field course that requires extensive writing, reading, and research outside of the classroom. **This is a four-unit course, which means you are expected to devote 12 hours of work per week to this class through participation in the classroom, field trips, homework, and independent study.** You must prepare for each class session by completing the appropriate readings or work before lecture. You will be working within the body of knowledge of the fields of ecology and restoration and will conduct and present independent research as well as work in a group to develop a report for a local restoration project. A final report is the culmination of this work.

Attendance

YOU MUST ATTEND CLASS to get a good grade in the class. Important information about assignments and field trips will be given during lecture. **If YOU MISS an in-class assignment, such as a presentation or assignment that is worth points toward your grade and do not have a University sanctioned excused absence, you will receive a 0 on that assignment.**

Canvas Instructions

For this class, all assignments are to be completed by the individual student unless otherwise specified. All written take home assignments are to be submitted in electronic form through Canvas unless otherwise noted. If you have trouble with this, please come see me before the due date and time. **All assignments are due at 11:59pm on the due date listed in the course calendar.**

Lecture Materials

PowerPoint slides and other materials provided during lecture will not always be posted on Canvas. You are expected to work outside of class, attend class, and take notes.

Assignments

The table below is a list of assignments for the class. This class is fast-paced, time consuming, and difficult because it covers significant material in preparation for your professional career. Your effort in this course and understanding of the material will be evaluated by weekly discussions, fieldwork participation, data collection, and assignments.

| Assignment | Point Value | | Learning Objectives |
|--------------------------------------|-------------|------------|---------------------|
| <i>Individual Assignments:</i> | | | |
| Restoration Topic Idea | 20 | | PLO 5 |
| Restoration Topic Source List | 50 | | PLO 4, PLO 5 |
| Restoration Topic Reading PDF | 10 | | PLO 5 |
| Restoration Topic Presentation | 100 | | PLO 3, PLO 4, PLO 5 |
| Reading Responses (15 pts each x 13) | 195 | | PLO 1 |
| R Commander Analysis | 20 | | PLO 2 |
| Restoration Volunteer Connection | 50 | | PLO 3, PLO 4 |
| Performance Review | 25 | | |
| Participation | 100 | | PLO 5 |
| <i>Group Assignments:</i> | | | |
| | Group | Individual | |
| Group Plant Guide | 30 | 70 | PLO 1, PLO 4, PLO 5 |
| Draft Group Report | 15 | 35 | PLO 1, PLO 2, PLO 4 |
| Final Group Report | 30 | 70 | PLO 1, PLO 2, PLO 4 |
| Estimated Total | 820 | | points |

Final Examination or Evaluation

Students are expected to demonstrate their knowledge of material presented in class and during fieldwork. The final report will reflect your skills of plant identification, ecological processes, and knowledge of the site. More details can be found in [University policy S17-1](http://www.sjsu.edu/senate/docs/S17-1.pdf) (<http://www.sjsu.edu/senate/docs/S17-1.pdf>) which states that “Faculty members are required to have a culminating activity for their courses, which can include a final examination, a final research paper or project, a final creative work or performance, a final portfolio of work, or other appropriate assignment.”

Grading Information

Individual grades are assigned based on the student’s ability to demonstrate their knowledge of the material, provide evidence to support their work, and follow assignment instructions. Group grades are assigned based on the overall assessment of the group work. Final grades take into account assignment scores and class participation.

Grading Criteria

All writing assignments will be graded according to the following standards for assessing the quality of the content and the clarity of expressing concepts.

| Grade | Criteria |
|-----------------|---|
| A | Extremely effective organization of paragraphs and paper; interesting, varied sentences; good grammar (usage, punctuation); no spelling mistakes; excellent response with superior supporting evidence; logical analysis, reasoning, and explanation; clear mastery of concept; excellent citation form and use. |
| A minus, B plus | Very effective organization of paragraphs and paper; interesting, good sentence structure and variation; good grammar (usage, punctuation, etc.); few spelling mistakes; does not read like a first draft; good, solid response that uses strong supporting evidence; very good reasoning and explanations; great citation form and use. |
| B | Reasonably effective organization of paragraphs and paper; serviceable prose; numerous errors of grammar or spelling; reads like a first draft; solid response that meets minimum required by assignment; reasoning and explanations are adequate; okay citation form and use. |
| C | Structurally disorganized; paragraphs lack topic sentences or are not developed effectively; awkward sentence structure; poor grammar; poor spelling; response is accurate but cursory, and does not meet the minimum required for completeness; some inaccuracies or reasoning flaws; response is too general, lacks specific evidence; all sources cited but form is incorrect. |
| D | Structurally disorganized; paragraphs lack topic sentences or are not developed effectively; awkward sentence structure; poor grammar; poor spelling; response does not effectively address the question; response fails to support assertions evidence; major flaws in reasoning; explanations are unclear; displays inadequate understanding of content; lack of citation. |
| F | Response is missing or not submitted or does not address the question. |

All presentations, discussions, and field trips will be graded according to the following standards for assessing the level of participation and ability to conduct good science.

| Grade | Criteria |
|-----------------|--|
| A | <p>Presentation is of appropriate length; content is of excellent quality and goes beyond the basics; facts are accurate and well explained; flow of presentation is logical and well planned with clear practice and rehearsal between group members; pictures and text are well displayed and easy to read; presenter has a good speaking voice (volume and speed) and makes frequent eye contact with audience; does not use note cards; presenter is dressed in appropriate attire.</p> <p>Contributes freely to discussion; speaks clearly; ideas are presented in a thoughtful and logical manner; uses strong evidence to support reasoning; clear mastery of content and material being discussed; scientific language is used when speaking; asks questions and proposes reasonable solutions.</p> <p>Fieldwork is technically accurate; attire is appropriate for weather and terrain conditions; demonstrates enthusiasm for field experience and working collaboratively; asks questions and is helpful to others; clear mastery of scientific method and collection techniques.</p> |
| A minus, B plus | <p>Presentation is of appropriate length and good content; facts are accurate and very well explained; flow of presentation is logical and well planned with clear practice and rehearsal between group members; pictures and text are well displayed and easy to read; presenter has a good speaking voice (volume and speed) and makes eye contact with audience; does not use note cards; presenter is dressed in appropriate attire.</p> <p>Contributes often to discussion; ideas are presented in a thoughtful and logical manner; uses evidence to support reasoning; scientific language is used when speaking; asks questions and proposes reasonable solutions.</p> <p>Fieldwork is technically accurate; attire is appropriate for weather and terrain conditions; displays real interest in field experience and working collaboratively; asks questions and is helpful to others.</p> |
| B | <p>Presentation is of appropriate length and content; facts are accurate; flow of presentation is logical; pictures and text are easy to read; presenter has a good speaking voice (volume and speed) and makes eye contact with audience; presenter is dressed in appropriate attire.</p> <p>Contributes to discussion with good ideas; supports reasoning with evidence; some scientific vocabulary is used; asks some questions.</p> |

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| | Fieldwork is technically accurate; attire is appropriate for weather and terrain conditions; shows interest in field experience and working collaboratively; asks questions. |
| C | <p>Presentation is of minimal length; content is adequate; facts are somewhat accurate; presentation is organized; pictures and text are readable; presenter uses notes and is challenging to hear; presenter is dressed in appropriate attire.</p> <p>Needs to be prompted to contribute to discussion; supports reasoning with evidence; some scientific vocabulary is used.</p> <p>Approaches field experience with adequate interest; some collaboration; depends on some direction and instruction from others; does not take initiative in a group setting; demonstrates an adequate understanding of the field methods.</p> |
| D | <p>Presentation is too short; content is lacking basic information; facts are not all accurate; presentation requires organization; pictures and text are challenging to read; presenter uses notes; presenter is not dressed in appropriate attire.</p> <p>Needs to be prompted to contribute to discussion; does not supply evidence or more than a basic answer.</p> <p>Demonstrates little enthusiasm as if “just going through the motions”; little interest in collaboration; dependent on instruction; does not understand the field techniques or methods.</p> |
| F | <p>Clear lack of group participation in presentation.</p> <p>Missing or lack of any participation in discussions.</p> <p>Missing or unable to complete field methods.</p> |

Determination of Grades

| <i>Grade</i> | <i>Points</i> | <i>Percentage</i> |
|----------------|----------------|-------------------|
| <i>A plus</i> | <i>820-795</i> | <i>97 to 100%</i> |
| <i>A</i> | <i>794-762</i> | <i>93 to 96%</i> |
| <i>A minus</i> | <i>761-738</i> | <i>90 to 92%</i> |
| <i>B plus</i> | <i>737-713</i> | <i>87 to 89 %</i> |
| <i>B</i> | <i>712-680</i> | <i>83 to 86%</i> |
| <i>B minus</i> | <i>679-656</i> | <i>80 to 82%</i> |
| <i>C plus</i> | <i>655-631</i> | <i>77 to 79%</i> |
| <i>C</i> | <i>630-598</i> | <i>73 to 76%</i> |
| <i>C minus</i> | <i>588-574</i> | <i>70 to 72%</i> |
| <i>D plus</i> | <i>573-549</i> | <i>67 to 69%</i> |
| <i>D</i> | <i>548-516</i> | <i>63 to 66%</i> |
| <i>D minus</i> | <i>515-492</i> | <i>60 to 62%</i> |

Extra Credit

If appropriate, there may be an extra credit assignment for this course.

Assignment Weights

Individual Assignments = 70%

Group Assignments = 30%

Penalty for Late or Missed Work

Assignments are due on the date given as a due date on Canvas. Assignments turned-in later than the due date/time will have 10% subtracted from the overall score for each day late (starting immediately after the time the assignment is due), and assignments three or more days late will not be accepted or graded. If four or more assignments are turned in late you will not pass this class. There are no late allowances or extensions unless you have a University sanctioned excused absence. If you are going to miss class, a presentation, or a field trip due to an excused absence, you must let the instructor know in advance of your absence (ideally a week in advance).

Classroom Protocol

Participation

I expect all students to come prepared and actively participate in ALL scheduled meeting times. Preparation for the lecture involves reading the assigned material before coming to class. This will help you understand and remember the material that I go through in class, allow you to ask any questions over topics you are not clear on, be able to effectively participate in class activities, and do well on assignments and in discussion. It is extremely important for you to be prompt. I will cover announcements and other important information at the beginning of class. You are responsible for all announcements, information, and material that you miss. If a student is sick or knows they will be late to class or needs to leave early, email the instructor prior to class as a courtesy. It is the responsibility of the student to check with classmates about material covered during class.

Participation is an important element to learning. Questions and comments about the lecture are welcome and encouraged during the presentation. Please use office hours for questions about grades or personal concerns. Please use only your SJSU issued email address or Canvas to contact the instructor via email.

Acceptable Classroom Behavior

Any behaviors that disrupt the classroom or show disrespect to the lecturer or other students will not be tolerated and will be reported to the University. I will ask you to leave the classroom if you cannot act with respect and discipline.

RESPECT STATEMENT: A goal of this course is to create and maintain a learning environment that is respectful and open. All students are expected to value and respect the views, beliefs, and opinions of their fellow class members and to contribute to creating a positive learning atmosphere that is open to inquiry and communication. Strongly held views should be expressed in assertive terms rather than with accusation, blame, or judgment. Students should also be mindful of using inclusive language to create a classroom in which people with different gender, racial, sexual, ethnic, ability, and age identities are treated with equal value and respect.

Technology

TURN-OFF CELL PHONES when you enter the classroom. **If I notice you are otherwise engaged in texting or surfing the internet, you will lose 5 participation points for each incident.** Laptops may not be used for personal use but may be used to take notes or be used during class discussions and group work. Cell phones and cameras can be used on field trips to assist in learning.

Formatting of Assignments

- Single-spaced with 1" margins
- Times New Roman, 12pt font
- Page numbers in lower right-hand corner of page
- Name, date, and course number in upper right-hand corner of page
- Microsoft Word document

Field Trips and Activities

Fieldwork is mandatory for this class and is on Wednesdays from 3:00 – 5:45pm (travel time not included). Carpooling is critical for restricted parking at the field site.

Field trips pose potential risks, including but not limited to:

- Driving to and from field site
- Uneven terrain, unpaved surfaces
- Extreme weather (wind, rain, temperature fluctuations)
- Insects, animals, plants

Field Gear List:

- Hiking shoes or sturdy closed-toe shoes
- Rain/Muck boots (if there is rain)
- Long pants

- Light jacket or windbreaker
- Hat
- Gloves (such as for gardening)
- Water bottle
- Snacks
- Sunscreen
- Pencil
- Clipboard

Proper clothing and closed-toe shoes for walking and hiking must be worn for all field trips. It is also important to stay hydrated, bring snacks, and wear sun protection.

University Policies

Per [University Policy S16-9](http://www.sjsu.edu/senate/docs/S16-9.pdf) (<http://www.sjsu.edu/senate/docs/S16-9.pdf>), relevant information to all courses, such as academic integrity, accommodations, dropping and adding, consent for recording of class, etc. is available on Office of Graduate and Undergraduate Programs' [Syllabus Information web page](http://www.sjsu.edu/gup/syllabusinfo/) at <http://www.sjsu.edu/gup/syllabusinfo/>. Make sure to visit this page, review and be familiar with these university policies and resources.

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), <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](http://www.sjsu.edu/senate/docs/S07-2.pdf) 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](http://www.sjsu.edu/studentconduct/) 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 on the assignment 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.

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](http://www.sjsu.edu/gup/syllabusinfo/) at <http://www.sjsu.edu/gup/syllabusinfo/> for more info or come see me.

EnvS 191 / Advanced Environmental Restoration, Spring 2020, Course Schedule

This is a tentative schedule for the class and is subject to change. **It is the student's responsibility to keep up to date with changes in the class schedule. Assignments are due to Canvas by 11:59pm on the assigned date unless otherwise posted.** Additional readings will be assigned throughout the semester and will be posted on Canvas.

*Indicates assignments to be completed in groups.

| | Date | Topics, Readings, Assignments, Deadlines | Readings | Assignments (due by 11:59pm) |
|-----------|---------------|--|------------------------------|--|
| 1 | M 1/27 | Introduction to class/syllabus | | |
| 1 | W 1/29 | Bear Creek Redwoods background/Discuss research topics | BCR Restoration Plan - Intro | |
| 2 | M 2/3 | Research methods introduction | BCR IPM Plan | Restoration Topic Idea due |
| 2 | W 2/5 | Field Trip: Bear Creek Redwoods | | <i>Last Day to Drop Class (2/4)</i> |
| 3 | M 2/10 | Making a plant guide | Assigned Reading | |
| 3 | W 2/12 | Field Trip: Plant identification | | Restoration Source List due <i>Last Day to Add Class (2/11)</i> |
| 4 | M 2/17 | Plant ID recap/work on plant guides | | Restoration Reading PDF due |
| 4 | W 2/19 | Ecological data analysis/creating a data sheet Activity: Working with R Studio | R Handout | |
| 5 | M 2/24 | Practice monitoring protocol | | R Commander Analysis due |
| 5 | W 2/26 | Field Work: Practice monitoring protocol/Data Collection | | |
| 6 | M 3/2 | Group work | | |
| 6 | W 3/4 | Group work | | |
| 7 | M 3/9 | Group work | | *Group Plant Guide due |
| 7 | W 3/11 | Group work | | |
| 8 | M 3/16 | Group work | | |
| 8 | W 3/18 | Group work | | *Draft of Group Report due |
| 9 | M 3/23 | Student Presentation | Student Assigned | Reading responses due In Class |
| 9 | W 3/25 | Student Presentation | Student Assigned | Reading responses due In Class |
| 10 | M 3/30 | SPRING BREAK | | |
| 10 | W 4/1 | SPRING BREAK | | |
| 11 | M 4/6 | Student Presentation | Student Assigned | Reading responses due In Class |
| 11 | W 4/8 | Group work | | |
| 12 | M 4/13 | Student Presentation | Student Assigned | Reading responses due In Class |
| 12 | W 4/15 | Group work | | |
| 13 | M 4/20 | Student Presentation | Student Assigned | Reading responses due In Class |
| 13 | W 4/22 | Group work | | <i>50th Anniversary of Earth Day!</i> |
| 14 | M 4/27 | Student Presentation | Student Assigned | Reading responses due In Class |
| 14 | W 4/29 | Group work (Independent) | | Restoration Volunteer Connection due |
| 15 | M 5/4 | Student Presentation | Student Assigned | Reading response due In Class Performance Review due |
| 15 | W 5/6 | Group work | | *Final Group Report Document due |
| 16 | M 5/11 | Wrap-up and course evaluations | | |
| | F 5/15 | Final Exam, Fri., May 15, 9:45am-12:00pm | | |