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**Instructor**

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<b>Term:</b>	Fall 2019
<b>Course Credits:</b>	4

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**Course Overview**

The field of Ecological Restoration is a complex interdisciplinary field that is becoming more important in a world that depends on increasingly degraded ecosystems to support growing human societies. Ongoing human disturbances associated with urbanization, energy development, climate change, poor land management, and pollution create the need for professionals that can restore services to degraded ecosystems. Restoration of degraded ecosystems benefits society by improving biodiversity conservation, improving human livelihoods, empowering local people, and improving ecosystem productivity. This course is intended to provide you with an understanding of the process of assisting in the recovery of damaged, degraded or destroyed ecosystems. The greatest amount of attention will be given to drastically disturbed lands, but the principles and concepts will have application to a wide variety of disturbance scenarios.

**Course Goals and Objectives**

The goal of this course is to provide you with the skills and knowledge that you would need to lead a multidisciplinary team in the restoration of any ecosystem that has been degraded, damaged or destroyed. The course will focus on the underlying principles and approaches used in ecological restoration.

Upon completing this course, you will be able to:

1. Articulate the historical development of restoration concepts and the role that restoration can serve in the future stewardship of natural resources.
2. Describe the major ecological principles underlying the successful restoration of ecosystems including concepts of disturbance and succession.

3. Implement ecological and management principles, and select appropriate methods and tools for designing and conducting restoration projects.
4. Discern elements of successful versus failed restoration projects.

### **Course Prerequisites**

- LAND 220/LIFE 220 Fundamentals of ecology or BZ450 Plant ecology or F311 Forest ecology, and
- SOCR 240 Introductory Soil Science
- Or, acceptance into the Online MNRS Program

### **Required Texts and Materials**

All course material, assignments, grades, and other important information will be posted on the course in Canvas; it is your responsibility to check Canvas regularly. Readings will be available through Canvas and/or the library E-Reserves.

### **Technical Support**

Need technical assistance with your online course? Try the following:

- Visit the [Canvas Student Resources](#) for guides and videos.
- Visit [Central I.T. Technical Support Helpdesk](#) for technical support.
- Call 970-491-7276.
- Email [Help Desk Support](#).

### **System, Multimedia, and Software Requirements**

You may need access to Microsoft Word, PowerPoint, and/or Excel to complete assignments. If you do not have access to the Microsoft Office applications, you may use one of the following free resources that allow you to save your files with Microsoft Office file extensions (.docx, .pptx, .xlsx):

- [Google Apps for CSU](#)—a free, outsourced communications suite endorsed by The University Technology Fee Advisory Board (UTFAB)
- [Office 365](#)—the full version of Microsoft Office free of charge for CSU students.

You must have speakers installed and working properly on your computer before beginning the course. Also, it is highly recommended that you access your course via a high-speed Internet connection. Having trouble with the multimedia in this course? See the solutions below.

- Problems with opening PDFs? Download [Adobe Reader](#).
- Canvas acting funny? Review Canvas guide for [Supported Browsers](#).
- YouTube videos not playing? Download [Flash Player](#).
- Videos not opening or playing on your Mac? Download [Windows Media Components for QuickTime](#).
- Still having issues: Call the CSU Help Desk at 970-491-7276 or [Email Help Desk Support](#)

### **Library & Research Help**

The CSU Libraries Help Desk provides basic research and technical assistance either in person at Morgan Library or by phone at 970-491-1841. Virtual assistance is also available via the Libraries' Ask Us chat and email services (<http://lib.colostate.edu/help/ask-us>). Jocelyn Boice is the librarian supporting the Forest and Rangeland Stewardship Department and this course. Contact her for in-depth assistance at: [jocelyn.boice@colostate.edu](mailto:jocelyn.boice@colostate.edu) / 970-491-3882.

### **Important Dates to Remember**

Last Day to Add/Drop Classes Without an Instructor Override: Mon, Sep 2nd 2019

Registration Closes: Wed, Sept 5th 2019

Withdrawal Deadline: Mon, Oct 21st 2019

Fall Recess: Sat, Nov 23 – Sun, Dec 1, 2019

Last Day to Process a University Withdrawal: Fri, Dec 13, 2019

Final Paper Due: Wed, Dec 18, 2019 by 11:59PM MST

### **Course Schedule and/or Schedule of Assignments**

See Pages 8 -13

### **Course Presentation**

Organization of content: 16 modules presented on a weekly basis comprised of module objectives, a brief mini-lecture, readings, discussion, and assignments will be posted on Canvas. Some reading materials will be posted on E-Reserves through the CSU Library; there will be a link to E-Reserves on Canvas. There will be 5-point quizzes over the material associated with most of the learning modules.

### **Course Assessments**

**Discussions.** Scientific articles related to each module topic will be discussed via Canvas during most modules. Students will be graded based on the quality and thoughtfulness of their contributions to discussion. You are responsible for material covered in discussion for exams. See Canvas for more information on expectations for discussions.

Each student will be responsible for leading discussion for one module during the semester. As leader, you will compose a brief summary of the article, prepare two-to-three thoughtful questions for whole group discussion, participate in and direct discussion so that it does not stray too far off topic, and prepare a brief synopsis of points discussed by your group.

**Restoration Plan and Prep Assignments.** Specific instructions and guidelines for the restoration plan will be posted on Canvas. You will prepare your own restoration plan for a site local to your home or work. The project will be partially prepared through a series of "prep" assignments prior to submission of a complete first submission of the restoration plan. Upon receiving instructor feedback on the first submission, you will have at least one week to revise the restoration plan and submit a final version. The completed restoration plan takes the place of a cumulative final exam.

**Case Study Assignments.** Assignments corresponding to case study modules (Modules 13–15) will guide you through various phases of the restoration process in different ecosystems. Each assignment is designed to build on the previous in terms of skills practiced: Module 13 focuses on proposing restoration activities, Module 14 on evaluating restoration success, and Module 15 on identifying next steps. These assignments should also serve as examples for preparation of the restoration plan project.

**Previous Module Review Quizzes.** Because each module builds off the previous, you will take a brief 5-point quiz at the beginning of most of the learning modules to refresh your mind on the content of the previous module. These quizzes will also highlight some important points you should have taken away from the previous module and aid in exam preparation.

**Exam Review Questions.** During the module prior to an exam you will compose potential exam questions and answers based on the material you felt was most important in each module. All student-submitted questions (not answers) will be compiled with little or no editing by the instructor and posted as an exam review. There is a high probability that some of these questions (either as submitted or modified) will be used on the exams. See Canvas for detailed instructions.

**Exams.** There will be two open-note exams. Exams will cover material from lectures, readings, and discussions. They may use multiple response, short answer, short essay questions and calculations. Exam questions will focus on material covered in each module, but they will be cumulative in so far as the material in the course builds upon previous material. There will not be a cumulative final exam. You will have a maximum of 90 minutes to complete each exam. A proctor will not be needed.

**Basis for Final Grade**

As a student in this course, one of your responsibilities is to submit course work by the due dates listed in the Course Schedule. With that said, I take my role as your instructor very seriously, and I care about how well you do in this course and that you have a satisfying, rewarding experience. If you experience a life event or crisis that impacts your academic performance in this class, please contact CSU Student Case Management (<http://www.studentcasemanagement.colostate.edu>) for assistance and to ensure the instructor is able to make appropriate accommodations for you.

It is my commitment to you to respond individually to the work you submit in this class and to return your work in a timely manner, generally within 1 week. However, because I strive to provide helpful and thoughtful feedback, there are times when I might need more time to return assignments. I will keep you informed if grading your work will take longer than 1 week. If you think there was a grading error or do not understand the feedback you receive on graded work, I am happy to discuss it with you. Please contact me as soon as possible and no more than 2 weeks after the graded work has been returned.

Assessment	Point Value	Percent of Final Grade
<b>Discussions:</b>		<b>30%</b>
• 1 Discussion leader @ 25 pts	25	4%
• 12 Discussion participation @ 15 pts ea.	165	24%
• 1 Debate @ 25 pts	15	2%
<b>Quizzes:</b>		<b>7%</b>
• 1 Pre-Course quiz @ 5 pts	5	1%
• 10 Mod Review quizzes @ 5 pts ea.	50	6%
<b>Restoration Plan Project:</b>		<b>25%</b>
• 4 Prep assignments @ 10 pts each	40	5%
• First Draft	50	7%
• Final Draft	100	13%
<b>Exams:</b>		<b>25%</b>
• 2 Exam Review assignment @ 25 pts ea.	50	7%
• 2 exams @ 70 pts each	140	18%
<b>Assignments:</b>		<b>13%</b>
• Definitions	10	1%
• 3 Case Study @ 25 pts ea.	75	10%
• Calculating Seeding Rates	10	1%
<b>Total:</b>	<b>760</b>	<b>100%</b>

A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%, F = < 60%

## Course Policies

### **Late Work Policy**

Assignments will be penalized one letter grade (10% of points possible on assignment) for each day late. Assignments will not be accepted if five (5) or more days late, and a grade of zero (0) will be recorded for that assignment. There will be no makeup exams unless prior arrangements have been made or if there are documented extenuating circumstances (e.g., family emergency, attendance of professional conference, etc.). Contact the instructor as early as possible if there is a conflict with a scheduled assignment, discussion, or exam. If you experience a life event or crisis that impacts your academic performance in this class, please contact CSU Student Case Management (<http://www.studentcasemanagement.colostate.edu>) for assistance and to ensure the instructor is able to make appropriate accommodations for you.

### **Extra Credit Policy**

Extra credit opportunities may be provided at the discretion of the instructor.

### **Copyrighted Course Materials**

Please do not share material from this course in online, print, or other media. Course material is the property of the instructor who developed the course. Materials authored by third parties and used in the course are also subject to copyright protections. Posting course materials on external sites (commercial or not) violates both copyright law and the CSU Student Conduct Code. Students who share course content without the instructor's express permission, including with online sites that post materials to sell to other students, could face appropriate disciplinary or legal action.

### **Grades of "Incomplete"**

Per university policy, an instructor may assign temporary grade of Incomplete to a student who demonstrates that he or she could not complete the requirements of the course due to circumstances beyond the student's control and not reasonably foreseeable. A student must be passing a course at the time that an Incomplete is requested unless the instructor determines that there are extenuating circumstances to assign an Incomplete to a student who is not passing the course. When an instructor assigns an Incomplete, he or she shall specify in writing using the Department Incomplete Grade Form the requirements the student shall fulfill to complete the course as well as the reasons for granting an Incomplete when the student is not passing the course. The instructor shall retain a copy of this statement in his or her grade records and provide copies to the student and the department head or his or her designee. [Section I.6 of the *Academic Faculty and Administrative Professional Manual*]

### **Disability Access**

Colorado State University is committed to providing reasonable accommodations for all persons with disabilities. If you need accommodations in this class due to a disability or chronic health condition, an accommodation letter from the Student Disability Center (SDC) must be provided to the instructor by hard copy or email before implementation of any accommodations. If you do not already have an accommodation letter, please contact SDC immediately to initiate the process. Please contact the instructor to further discuss your needs. Contact information for SDC: TILT Building, Room 121, phone (970)491-6385 (V/TDD), online at [www.diabilitycenter.colostate.edu](http://www.diabilitycenter.colostate.edu).

### **Participation Policy**

This is a four-credit course, so it is expected that you will spend **approximately twelve (12) hours per week** working on course-related activities (reading, viewing content, contributing to discussion, preparing assignments, etc.). I encourage you to spend at least a little time each day on this course though I recognize it is not always possible. You will be required to make at least two (2) postings to

each discussion (one by Thursday and one by Sunday of each week), but please jump in as much as you can – the more students are involved in discussion, the more they tend to get out of it.

### **Religious Accommodation**

Participation in official University activities, e.g., an out-of-town athletic event, or special religious observances may provide a legitimate reason for an excused absence. The student is responsible for discussing this with the instructor at the beginning of the semester.

### **Final Exam Policy**

Final examination week is part of the regular semester. Student attendance shall be consistent with University policy.

If a student has three or more final examinations (not classes) scheduled for the same day or if conflicts of examination times occur, the student may negotiate a time change with the instructors involved. If the parties involved cannot find a mutually agreeable time, the Registrar's Office indicates which courses must be changed. **Note:** The Registrar's Office must be notified at least one week prior to Final Examination Week to allow instructors time to make appropriate accommodations. It is the student's responsibility to initiate negotiations.

Any student who has a conflict with the examination schedule must inform the instructor as soon as possible before the examination. If an agreement cannot be reached between the instructor and student as to the appropriateness of a make-up examination the student should appeal to the department head. <http://www.registrar.colostate.edu/final-exams>

### **Professionalism Policy**

You are expected to conduct yourself in a manner conducive to learning so the experience of fellow students is not disrupted. Questions and discussion in a respectful manner are strongly encouraged. Students who habitually disturb the class and have been warned may suffer a reduction in their final class grade. When emailing the instructor directly (not through Canvas), please include your full name, CSU ID, and the course number in your email.

### **Academic Integrity**

The Department of Forest and Rangeland Stewardship takes academic integrity seriously. If you are unsure of what is or is not plagiarism, ask. Ignorance is not an acceptable excuse. At minimum, academic integrity means that no one will use another's work as their own. The CSU writing center defines plagiarism this way:

Plagiarism is the unauthorized or unacknowledged use of another person's academic or scholarly work. Done on purpose, it is cheating. Done accidentally, it is no less serious. Regardless of how it occurs, plagiarism is a theft of intellectual property and a violation of an ironclad rule demanding "credit be given where credit is due."

Source: (Writing Guides: Understanding Plagiarism.

<http://writing.colostate.edu/guides/guide.cfm?guideid=17>)

Additional resources and a self-test are available through [CSU's The Institute for Teaching and Learning \[TILT\] Academic Integrity page](#).

If you plagiarize in your work you could lose credit for the plagiarized work, fail the assignment, or fail the course. Each instance of plagiarism, classroom cheating, and other types of academic dishonesty will be addressed according to the principles published in the CSU General Catalog (under "Academic

Integrity/Misconduct: <http://catalog.colostate.edu/general-catalog/policies/students-responsibilities/> .]

Of course, academic integrity means more than just avoiding plagiarism. It also involves doing your own reading and studying. It includes regular class attendance, careful consideration of all class materials, and engagement with the class and your fellow students. Academic integrity lies at the core of our common goal: to create an intellectually honest and rigorous community. Because academic integrity, and the personal and social integrity of which academic integrity is an integral part, is so central to our mission as students, teachers, scholars, and citizens, we will ask to you sign the CSU Honor Pledge as part of completing all of our major assignments. While you will not be required to sign the honor pledge, we will ask each of you to write and sign the following statement on your papers and exams: "I have not given, received, or used any unauthorized assistance."

### **Title IX Information**

CSU's Student Sexual Harassment and Violence policy, following national guidance from the Office of Civil Rights, requires that faculty follow CSU policy as a "mandatory reporter" of any personal disclosure of sexual harassment, abuse, and/or violence related experiences or incidents shared with the faculty member in person, via email, and/or in classroom papers or homework exercises. These disclosures include but are not limited to reports of personal relational abuse, relational/domestic violence, and stalking. While faculty are often able to help students locate appropriate channels of assistance on campus (e.g., see the CSU Health Network link below), disclosure by the student to the faculty member requires that the faculty member inform appropriate CSU channels to help ensure that the student's safety and welfare is being addressed, even if the student requests that the disclosure not be shared.

For counseling support and assistance, please see the CSU Health Network, which includes a variety of counseling services that can be accessed at: <http://www.health.colostate.edu/>. And, the Sexual Assault Victim Assistance Team is a confidential resource for students that does not have a reporting requirement and that can be of great help to students who have experienced sexual assault. The web address is <http://www.wgac.colostate.edu/need-help-support>.

Source: <http://oeo.colostate.edu/title-ix-sexual-assault>

### **Non-Discrimination Statement**

Colorado State University does not discriminate on the basis of race, age, creed, color, religion, national origin or ancestry, sex, gender, disability, veteran status, genetic information, sexual orientation, gender identity or expression, or pregnancy. The University complies with the Civil Rights Act of 1964, as amended, related Executive Orders 11246 and 11375, Title IX of the Education Amendments Act of 1972, Sections 503 and 504 of the Rehabilitation Act of 1973, Section 402 of the Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended, the Age Discrimination in Employment Act of 1967, as amended, The Pregnancy Discrimination Act of 1978, Americans with Disabilities Act of 1990, the Civil Rights Act of 1991, the ADA Amendments Act of 2008, the Genetic Information Nondiscrimination Act of 2008, and all civil rights laws of the State of Colorado. Accordingly, equal opportunity of employment and admission shall be extended to all persons. The University shall promote equal opportunity and treatment in employment through a positive and continuing affirmative action program for ethnic minorities, women, persons with disabilities, and veterans. The Office of Equal Opportunity is located in 101 Student Services. Source: <http://oeo.colostate.edu/non-discrimination-statement>