



	<u>Instructor</u>	<u>Co-Instructor</u>	<u>Graduate Teaching Assistant</u>
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Office Hours:	M/W/F 8-8:50am or 10-10:50am and by appointment. Email is the best way to reach me.	T/R 11am-12pm or by appointment.	By appointment.

Term: Fall 2018
Class Meeting Days: M/W/F
Class Meeting Hours: 9-9:50am
Class Location: Michael Smith Natural Resources Building (MSNR) 140
Lab Location: No Lab
Course Credits: 3.0

Course Overview

Ecologically-based management to restore and manage forests. Lectures, assignments, exams, and discussions will be based upon traditional definitions, scientifically-based concepts, emerging research, management strategies, and real-world examples from guest lectures.

Course Goals and Objectives

Students enrolled in NR 326 will participate in lectures, discussions, and individual and group assignments throughout the semester. Some important skills students will acquire include the ability to:

- Demonstrate a clear understanding of key ecological concepts related to forest management
- Demonstrate knowledge of forest stand development and the response of forest vegetation to natural disturbances and silvicultural practices
- Demonstrate knowledge and appropriate use of silvicultural terminology, including regeneration techniques, intermediate stand treatments, silvicultural systems, and the prescription process
- Be able to adapt silvicultural systems to apply to different forest ecosystems, landscapes, and management objectives
- Demonstrate the influence of forest vegetation management on riparian areas, agricultural systems, dead down wood, timber production, wildlife habitat, wildland fire, urban forest, and forest health
- Understand the concepts of sustainability, diversity, and restoration as related to forest vegetation management
- Have an appreciation and understanding for the social and cultural dimensions of forest vegetation management and the need to adapt practices to meet landowner objectives

Students will demonstrate their proficiency via participation, attendance, quizzes, exams, assigned readings,

group work, and interacting with guest lectures.

Course Prerequisites

Course NR 220: Natural Resource Ecology and Measurements (CSU Mountain Campus). Ecology of Rocky Mountains Ecosystems. Basic measurements and integrated management of natural resources.

Students should be familiar with forest ecology, dendrology, silvicultural concepts, biometrics and how to integrate this prior course work with NR 326 Forest Vegetation Management.

Required Texts and Materials

There is no required textbook; however, required readings will be posted on Canvas throughout the semester.

i-clickers may be need for some quizzes and for in-class participation. Students should have these prior to the end of the second week of class.

Supplementary (Optional) Texts and Materials

This course will follow the concepts discussed in McComb, B. 2016. *Wildlife habitat management: Concepts and applications in forestry*. 2nd edition. Oregon State University, Corvallis, OR.

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 / 970-491-3882.

Important Dates to Remember

Classes Begin:	Monday, Aug 20, 2018
Last Day to Add/Drop Classes Without an Instructor Override:	Sunday, Aug 26th 2018
Registration Closes:	Wednesday, Sept 5th 2018
Withdrawal Deadline:	Monday, Oct 15th 2018
SAF Convention in Portland, OR:	Wednesday, Oct 3 – Sunday, Oct 7, 2018
Fall Recess:	Saturday, Nov 17 th – Sunday, Nov 25 th , 2018
Case Study Poster Displayed:	M/W/F December 3rd/5th/7th
Final Examination:	Thursday, December 13th - 4:10 – 6:10pm

Assignments, exams, and quizzes will be announced in class and/or on your course schedule. These due dates are tentative, and can be changed at the discretion of the Instructor.

Course Schedule and/or Schedule of Assignments

Separate handout that is subject to change at the discretion of the Instructor.

Reading Summaries, Assignments, Quizzes, Final Project, Final Exam, and Participation

Handouts with details of each reading summary and assignment will be given out in class and also posted on Canvas. If you have any questions regarding the assignments or due dates, please talk to the Instructor or Graduate Teaching Assistant.

- **Reading Summaries:** Four (4) summaries will be collected throughout the semester. All readings, summary instructions, and scoring rubric will be made available on Canvas.
- **Assignments:** Seven (7) assignments will be given in class with instructions. All assignments will have instructions and expectations on Canvas. These assignments will be a mix of individual and group work.
- **Quizzes:** Seven (7) quizzes will be given intermittently throughout the semester. Quizzes will be announced beforehand and cannot be made up without prior approval. If students are caught sharing an i-clicker for a quiz, both students (i.e., user and owner) will receive a zero for that quiz. Quizzes will be a mixture of multiple choice, short answer, and/or diagrams and may occur in class, on Canvas, or a combination of the two.
- **Final Project:** Students will be required to prepare a poster for a poster symposium the final week of class. Details of this project will be made available mid-semester.
- **Final Exam:** Will occur during University-required time slot and will be cumulative.
- **Participation:** Students will be required to participate during in-class assignments and discussions. The use of i-clickers and verbal responses will be used to facilitate the grading for participation. If students do not attend class, participation is impossible and it could be reflected in the student's grade.

Basis for Final Grade

Assessment	Points	Percent of Final Grade
Participation	20	5.9%
Reading Summaries (4)	60	17.6%
Quizzes (7)	70	20.6%
Assignments (7)	70	20.6%
Final Project- Poster	60	17.6%
Final Exam	60	17.6%
	340	100%

Grading Scale

A+	>98
A	94-97
A-	90-93

B+	87-89
B	84-86
B-	80-83

C+	77-79
C	74-76

D	64-73
F	<63

Course Policies

Late Work Policy

Late work and make-up quizzes will only be accepted in exceptional circumstance and if arranged in advance (see Attendance Policy below). Please advise the Instructor and/or Graduate Teaching Assistant as soon as you are aware of a potential problem.

Extra Credit Policy

Extra credit opportunities will not be offered.

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. Students with disabilities who need accommodations must first contact Resources for Disabled Students before requesting accommodations from the professor. Resources for Disabled Students (RDS; <http://rds.colostate.edu/home>) is located in room 100 of the General Services Building. Their phone is (970) 491-6385 (V/TDD). Students who need accommodations in this course must contact the professor at the beginning of the semester to discuss needed accommodations.

Attendance Policy

Students are expected to behave in a courteous and professional manner, and disrespectful or abusive behavior towards students, staff, or faculty will not be tolerated (see Professional Policy below). Please arrive on time and silence phones, tablets, laptops, and any other electronic devices.

Students are expected to attend all classes unless they are unwell, cannot attend due to exceptional circumstances, documented family emergencies, or will be attending university-sanctioned extracurricular/cocurricular activities. It is important that students attend class to learn material, complete in-class work, and engage in group discussions. If a student is unable to attend class, it is her/his responsibility to consult with fellow student(s) and Canvas for material and homework assignments that may have been missed (see Lake Work Policy above).

Students must inform the Instructor prior to the anticipated absence and take the initiative to make up missed work in a timely fashion. The Instructor must make reasonable efforts to enable students to make up work which must be accomplished under the Instructor's supervision.

In the event of a conflict in regard to this policy, individuals may appeal using established University procedures. For the purposes of this regulation, University-sanctioned activities include competitions, events and professional meetings in which students are officially representing the institution. Appropriate sanctioned activities include:

- a. Intercollegiate athletics;
- b. Collegiate club sports and competitions;
- c. Conferences and workshops recognized by the University not related to academics;
- d. Commitments on behalf of the University (ASCSU, band, etc.); and
- e. Professional activities recognized by the University related to academics.

Department heads or their designated representatives must approve sanctioned professional and departmental

activities. Other sanctioned activities must be approved by the appropriate program director on record with the Division of Student Affairs offices or the Department of Athletics.

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

Per university policy and classroom etiquette; mobile phones, iPods, *etc.* **must be silenced** during all classroom and lab lectures. Those not heeding this rule will be asked to leave the classroom/lab immediately so as to not disrupt the learning environment. Please arrive on time for all class meetings. Students who habitually disturb the class by talking, arriving late, *etc.*, and have been warned may suffer a reduction in their final class grade. When emailing the instructor or TA, 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. 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>)

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>.



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Date	Day	Topic	Comments	Due Dates
8/20	Monday	Course Overview with BINGO!	Quiz 1 of Understanding DUE (8/24) Readings 1 & 2 posted on Canvas with Rubric	
8/22	Wednesday	The History of US Forest Management	Discuss Assignment 2 and 3: Walk in the Woods	
8/24	Friday	Wildlife, Habitat, Forest, and Selection		QUIZ #1: Canvas 11:59pm
8/27	Monday	Silvics, structure, composition, and site	Handout Assignment 1: Silvics due (8/31)	<i>Review Quiz #1</i>
8/29	Wednesday	Disturbance Ecology and Vegetation Dynamics		
8/31	Friday	Physical and Cultural Influences on Habitat- Courtney Peterson Invasive Species- Guest Speaker: Nancy Klasky (CSFS)		ASSIGNMENT #1 Silvics: Canvas 11:59pm
9/3	Monday	LABOR DAY – NO CLASS		
9/5	Wednesday	Plant Responses to Herbivory	Handout Reading 2 on Fire	READING #1 YNP: Canvas 11:59pm
9/7	Friday	Stand Dynamics		QUIZ #2: Canvas 11:59pm
9/10	Monday	Silvics- regeneration and site prep		
9/12	Wednesday	Silviculture: Even-aged		
9/14	Friday	Silviculture: Thinning, intermediate, and pruning treatments		
9/17	Monday	Silviculture: Uneven-aged Part I		
9/19	Wednesday	Silviculture: Uneven-aged Part II		QUIZ #3: Canvas 11:59pm
9/21	Friday	Private Lands Management – Guest Speaker: Mike Hughes (CSFS)		
9/24	Monday	Dead Wood Management	Handout Reading 3 on Climate Change	READING #2: Canvas 11:59pm
9/26	Wednesday	MPB and Forest Health Management – Guest Speaker: Brad Lalande (CSU)		

9/28	Friday	Desired Future Conditions		QUIZ #4: Canvas 11:59pm
10/1	Monday	Fire as an Ecological Tool- Guest Speaker: Boyd Lebeda (CSFS)		
10/3	Wednesday	Juniper Management Speaker: Noah Amme		
10/5	Friday	NO CLASS – SAF in Portland		
10/8	Monday	Climate Change: Courtney Peterson	Handout Reading #4 on silvi-pastoral systems	READING #3: Canvas by 11:59pm
10/10	Wednesday	Adaptive Management – Guest Speaker: Jacob Muller (CSU)		
10/12	Friday	NO CLASS – CSFS Annual Meeting		
10/15	Monday	Riparian Area Management	Handout out Assignment #4 i-Tree	QUIZ #5: Canvas 11:59pm
10/17	Wednesday	Vernal Pools and Refugia		
10/19	Friday	Best Management Practices – Guest Speaker: Richard Edwards (CSFS)		
10/22	Monday	FIA, Urban FIA, and i-Tree	In-class example of i-Tree	
10/24	Wednesday	Urban Forests – Guest Speaker: Keith Wood (CSFS)		
10/26	Friday	Poster Overview and Topic Discussion	Discussion on poster content, layout, templates, and draft	ASSIGNMENT #4 i-Tree: Canvas by 11:59pm
10/29	Monday	Landscape structure, connections, restoration, and approaches to biodiversity		QUIZ #6: Canvas 11:59pm
10/31	Wednesday	Recreation and Management – Courtney Peterson		
11/2	Friday	Tribal Lands		
11/5	Monday	Tribal Lands: Inventory, Management, DFCS- Guest Speaker: Stacie Holmes (BIA)		
11/7	Wednesday	Silvi-pasture and agro-forestry	Handout Elk and Lynx content; create groups	READING #4: Canvas by 11:59pm
11/9	Friday	Social Dimension- Courtney Peterson		ASSIGNMENT #5 Poster Draft: Canvas by 11:59pm
11/12	Monday	Lynx in Colorado		
11/13	Wednesday	Elk in RMNP		
11/15	Friday	In-class assignment		ASSIGNMENT #6 and #7: Canvas by 11:59pm
11/19-23		THANKSGIVING (NO CLASSES)		
11/26	Monday	Ecological and legal assessments and prioritizations		QUIZ #7: Canvas 11:59pm
11/28	Wednesday	<i>FLEX DAY -Housekeeping- Final Exam Discussion-Bonus topic</i>	Review quizzes and discuss class themes. Post silviculture summary	
11/30	Friday	Poster Preparation	Print posters; final edits	ASSIGNMENT #2 and #3: Canvas 11:59pm
12/3	Monday	Poster symposium	Location TBD: 1/3 of class	
12/5	Wednesday	Poster Symposium	1/3 of class	
12/7	Friday	Poster Symposium	1/3 of class	
12/13	Thursday	Final Exam 4:10-6:10pm	Location TBD	Grades due 12/18

