

ENVS 4100-570: Issues and Approaches to Collaborative Forest Restoration

May 2011 Continuing Education

Instructor: Tori Derr

Email: cranecollab@gmail.com

Office hours: By appointment

Lectures: M-F 9:00-12:00 Eaton Humanities 180

Field: As scheduled

Course Description:

This course will explore current problems and approaches to forest restoration, including the ecological, social, and political contexts in which restoration occurs. Topics will include restoration ecology in the southern Rocky Mountains; fire ecology; goals, prescriptions, and effects of restoration treatments; and restoration policies and practice. The course will include field trips to local forests, and collaborative forest restoration projects in Colorado and New Mexico.

Field Trips:

This course involves at least 3 half- to full-day field trips and a camping trip the final week of class. Meal planning and camping will be addressed in collaboration with students.

Course Requirements:

Rubrics for all assignments will be posted to CU Learn.

- 1) Attendance and respectful, active participation in class discussions, activities, and field trips (20%)
- 2) Group Presentation at 15% (see handout on CU Learn)
- 3) In-class assignments, 4 at 5% each (20%) (Dendrochronology; Smokey Bear critique; CFRP panel review; Rowe Mesa Prescription)
- 4) Reflection Papers, 3 at 15% each (45%) (Weekly written response to assigned questions), due Monday of the 2nd week, Sunday of the 3rd week, and Thursday midnight of the 3rd week).

Readings and Suggested Texts:

Readings are available through CU Learn. Due to inconsistencies with CU Learn, I will also email all readings for each week of the course. There are no required texts, but there are several that may be of interest (and some readings are excerpted from them):

- 1) Friederici, P. (ed.) 2003. *Ecological Restoration of Southwestern Ponderosa Pine Forests*. Society for Ecological Restoration International. Washington, D.C.: Island Press.
- 2) Kosek, J. 2006. *Understories: The Political Life of Forests in Northern New Mexico*. Duke University Press.
- 3) Baker, M. and J. Kusel. 2003. *Community Forestry in the United States: Learning from the Past, Crafting the Future*. Island Press.
- 4) Berger, J.J. 2008. *Forests Forever: Their Ecology, Restoration, and Protection*. The Center for American Places at Columbia College, Chicago.

Monday, 5/9: Course Logistics; Introduction to Forest Ecology & Restoration

Landforms, soils, and forest vegetation; forest succession; overview of forest types; historic range of variability; land use history and reasons for forest restoration

Readings:

Berger, J.J. 2008. Chapter 12: Restoration Forestry. Pp. 156-165 in: *Forests Forever: The Ecology, Restoration, and Protection*.

SER Primer

<http://www.ser.org/pdf/primer3.pdf>

Tuesday, 5/10: Ponderosa Pine Ecology and Restoration

Introduction to Ponderosa Pine Restoration, Fire Ecology, Land Use History and Perceived Needs for Restoration, Historic Range of Variability, Fire Modeling Exercise, Dendrochronology (with lab)

Readings:

Pyne et al. 1996. *Introduction to Wildland Fire*. Selected Fire Regimes: Ponderosa Pine: Southwest, P. 207; Historical Characteristics: Rocky Mountains, Pp. 289-99; and Southwest Pp. 300-305

Covington, W.W. 2003. The Evolutionary and Historical Context. Chapter 2 in Friederici, P. (ed.) 2003. *Ecological Restoration of Southwestern Ponderosa Pine Forests*. Society for Ecological Restoration International. Washington, D.C.: Island Press.

GUEST SPEAKER: Chad Julien, Boulder County

IN CLASS ACTIVITY: Dendrochronology

Wednesday, 5/11: Field trip to Heil Ranch with Chad Julien

Forest structure, reference conditions, restoration prescriptions, fire behavior

Kaufmann, M.R, T.T. Veblen, W.H. Romme. 2006. Historical Fire Regimes in Ponderosa Pine Forests of the Colorado Front Range, and Recommendations for Ecological Restoration and Fuels Management.

SKIM Veblen, T.T. and D.C. Lorenz. 1991. Forest Ecology of the Front Range. Pp. 21-28 in *The Colorado Front Range*. Salt Lake City.

Thursday, 5/12: Stand Measurement/Monitoring Techniques

Savage et al. Prescription Guidelines

Review monitoring short guide and wildlife monitoring handbook at (also on CU Learn):

http://www.nmfwri.org/images/stories/pdfs/Collaborative_Forest_Restoration/cfrp_monitoring_short_guide_final_2009.pdf and

http://www.nmfwri.org/images/stories/pdfs/forestry_Restoration_Papers/WildlifeProtocol.pdf

Friday, 5/13: Field Trip to Swayback/Jenny Gulch Timber Sale, early departure, late return.

✓ **Reflection Questions Issued (Due Monday 5/16 at beginning of class)**

Readings:

Read the Swayback/Jenny Gulch Timber Sale Brochure:

http://www.frftp.org/docs/swayback_timber_sale_112906.pdf

Browse the Front Range Roundtable brochure and website:

<http://www.frftp.org/roundtable.htm>

http://www.frftp.org/docs/roundtable_report_brochure.pdf

Monday, 5/16: Piñon-Juniper Woodlands, Climate Change in Restoration, and Introduction to Community Forestry

Introduction to Ecology and Restoration of PJ Woodlands, climate change and management

View first half of *Milagro Beanfield Wars*

✓ **Reflection Papers Due at Beginning of Class**

GUEST SPEAKER, Jeff Morton, EBIO Department: PJ Ecology and Restoration

Readings:

Romme, W.H. et al. Historical and Modern Disturbance Regimes, Stand Structures, and Landscape Dynamics in Piñon-Juniper Vegetation of the Western U.S.

<http://warnercnr.colostate.edu/images/docs/cfri/PJSynthesis.pdf>

For Discussion:

Managing Forests in the Face of Climate Change

http://www.forestguild.org/climate_change/NMFCC_summary.pdf

Tuesday, 5/17: Intro to Community Forestry, Forest Restoration Policies and Programs

Context of Community Forestry and Forest Restoration, Case Studies of Community Forestry in Restoration

GUEST SPEAKER: Tony Cheng, Colorado Forest Restoration Institute

Readings:

Browse Colorado Forest Restoration Institute website:

<http://warnercnr.colostate.edu/cfri-home/>

Case Study Presentations:

- ✓ Burns, S. 2003. "Catron County, New Mexico: Mirroring the West, Healing the Land, Rebuilding Community." Pp. 89-116 in J. Kusel and E. Adler (eds.): *Forest Communities, Community Forests*. Rowman & Littlefield Publishers, Inc.
- ✓ Richard, T. and E. Stein. 2003. "Kicking Dirt Together" in Colorado: Community-Ecosystem Stewardship and the Ponderosa Pine Forest Partnership. Pp. 191-206 in: J. Kusel and E. Adler (eds.): *Forest Communities, Community Forests*. Rowman & Littlefield Publishers, Inc.
- ✓ Abrams, J. and S. Burns. 2007. Case Study of the White Mountain Stewardship Success: The White Mountain Stewardship Contract. Ecological Restoration Institute, Northern Arizona University.
- ✓ Morton, J. 2003. An Evaluation of Fuel Reduction Projects in the Eastern Cibola National Forest. National Community Forestry Center, Working Paper 8.

Wednesday, 5/18: Forest Restoration Policies and Programs Continued

Forest restoration and fire risk mitigation, WUIs, Western Governors' Association, Community Forest Restoration Act, National Fire Plan, Healthy Forest Initiative, Colorado Forest Restoration Act, proposed expansion of CFRP nationwide, Stewardship Contracting; American Forest Congress, National Environmental Policy Act, Timber Industry and Spotted Owl Controversy, Wildfire Risk, Social Justice Issues in Forestry,

Readings:

Read the 2009 Lessons Learned Report

<http://www.fs.fed.us/r3/publications/documents/2009-lessons-learned.pdf>

Browse Collaborative Forest Restoration Program website: www.fs.fed.us/r3/spf/cfrp

CLASS ACTIVITY: TECHNICAL ADVISORY PANEL – REVIEW PROPOSALS FOR STRENGTHS AND WEAKNESSES & RECOMMEND FUNDING

Thursday, 5/19: Community Protection from Wildfire

Wildland Urban Interface goals and policies, defensible space, CWPPs, stimulus money, political and community issues

- ✓ **Reflection Questions Issued (due Sunday at start of field trip)**

Read:

Aplet, G.H. 2006. Evolution of Wilderness Fire Policy. *International Journal of Wilderness* 12(1):8-13.

For Discussion:

Kosek, J. 2006. Pp. 1-20 and Chapter 2 (skim) in *Understories*. Durham, NC: Duke University Press.

Kosek, J. 2006. "Smokey Bear is a White Racist Pig." Pp. 183-227 *Understories*. Durham, NC: Duke University Press.

CLASS ACTIVITY: SMOKEY BEAR CRITIQUE: "Get Your Smokey On!"

Friday, 5/20: Landscape Scale Restoration, Wildlife Considerations, and Conservation Biology

Noss, R.F. et al. 2006. Recommendations for Integrating Restoration Ecology and Conservation Biology in Ponderosa Pine Forests of the Southwestern United States

For Discussion:

Gosnell, H. 2009. Healing with Howls: Rewilding the Southern Rockies. Chapter 6 in P.N. Limerick, A. Cowell, and S.K. Collinge (Eds.), *Remedies for a New West: Healing Landscapes, Histories, and Cultures*. Tucson, AZ: University of Arizona Press.

Sunday, 5/22-Wednesday, 5/25: Field Trip Collaborative Forest Restoration Program projects at Black Lake and Rowe Mesa (New Mexico). Return Wednesday night.

Sunday, 5/22: Camp at Sugarite Canyon State Park and look at the mixed conifer work

Monday, 5/23: Black Lake CFRP

Tuesday, 5/24: Rowe Mesa CFRP; CLASS ACTIVITY: Develop Prescriptions

Tuesday night or Wednesday a.m.: Return to Boulder

✓ **Reflection questions due at start of field trip**

Read for Week 3:

CFRP Proposals and Monitoring Reports for Black Lake and Rowe Mesa;
Review Chapter 2 of *Understories* (assigned on Tuesday, Week 2)

Thursday, 5/26: No Class. Reflection Papers Due Electronically by 11:59 p.m.

Policies, Rules & Regulations

Statement on Disabilities

If you qualify for accommodations because of a disability, please submit to me a letter from Disability Services in a timely manner so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities. Contact: 303-492-8671, Willard 322, and <http://www.Colorado.EDU/disabilityservices>

Religious Obligations: Conflicts with Scheduled Exams, Assignments or Class Attendance

Campus policy regarding religious observances requires that faculty make every effort to reasonably and fairly deal with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. If the conflict is legitimate, I will provide the opportunity for alternative time to write the exam or submit an assignment. See full details at http://www.colorado.edu/policies/fac_relig.html

Student Classroom and Course-Related Behavior

Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender, gender variance, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the course so that I may make appropriate changes to my records. See policies at <http://www.colorado.edu/policies/classbehavior.html> and at http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student_code

The University of Colorado at Boulder policy on Discrimination and Harassment, the University of Colorado policy on Sexual Harassment and the University of Colorado policy on Amorous Relationships apply to all students, staff and faculty. Any student, staff or faculty member who believes s/he has been the subject of discrimination or harassment based upon race, color, national origin, sex, age, disability, religion, sexual orientation, or veteran status should contact the Office of Discrimination and Harassment (ODH) at 303-492-2127 or the Office of Judicial Affairs at 303-492-5550. Information about the ODH, the above referenced policies and the campus resources available to assist individuals regarding discrimination or harassment can be obtained at <http://www.colorado.edu/odh>

Academic Honesty: Honor Code

All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All suspected incidents of academic misconduct shall be reported to the Honor Code Council (honor@colorado.edu; 303-725-2273). Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member (final course grade of "F") and non-academic sanctions (including but not limited to university probation, suspension, or expulsion). More information on the Honor Code can be found at <http://www.colorado.edu/policies/honor.html> and at <http://www.colorado.edu/academics/honorcode/>

All grading rubrics will be posted on CU Learn. The numerical-to-letter grade conversion is as follows:

A	95-100	C	73-75
A-	90-94	C-	70-72
B+	86-89	D+	66-69
B	83-85	D	63-65
B-	80-82	D-	60-62
C+	76-79	F	59 or below