PH 203/EV 260
Ecological Restoration: Ecology, Philosophy, and Society
May 28-June 19, 2013 (Summer Block A)

INSTRUCTORS:

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COURSE DESCRIPTION:

This course focuses on the ecological, philosophical, and social dimensions of ecological restoration. Ecological restoration is a practice that aims to assist the recovery of damaged and degraded ecosystems, and it depends heavily on the science of ecology. However, ecological restoration is not only about understanding ecological systems, it is also about altering them. As such, it requires the establishment of restoration goals, which depend on the integration of science with social, political, economic, and ethical considerations. This course examines ecological restoration from an interdisciplinary perspective, providing an introduction to key concepts in restoration ecology, philosophy, and social science. We will also explore the practice of ecological restoration in Colorado, visiting restoration sites and participating in restoration projects as a class. A key goal of the course is to connect the conceptual background studied in class to issues and questions involved in restoration on the ground. Finally, we will discuss a number of emerging topics and controversies in restoration, including debates over native and exotic species, climate change and ecological restoration, and the role of art in the interpretation of restored sites.

LEARNING GOALS:

By the end of this course, students should:

- Understand key scientific, social, and philosophical dimensions of ecological restoration;
- Become familiar with a range of restoration activities and practices occurring in Colorado;
- Connect theoretical frameworks to specific case studies on the ground and be able to apply these concepts to additional contexts.

COURSE REQUIREMENTS:

Reading questions (daily) 15%
Journal (responding to guest speakers and field trips) 20%
Quiz 10%
Short paper 20%
Take-home final exam 25%
Attendance and participation 10%
**IMPORTANT NOTES:**

- **Please bring the readings to class with you each day** (with the exception of readings that we ask you to skim). Double-sided printing is available in Tutt Library.

- **Please turn off all electronic devices during class, unless otherwise advised.** If you have a documented disability that requires use of a laptop computer for notetaking, please speak to the instructors outside of class.

- **Please remain in the classroom until our regularly scheduled breaks.** Leaving in the middle of class is disruptive and discourteous, unless you have a serious reason to do so (e.g., a bloody nose, stomach illness, etc.).

- **Attendance:** Regular attendance is expected and important to your success in the class. Please send the instructors an email message if you are unable to attend class for any reason.

- We encourage you to **save paper by printing your papers double-sided, if possible.**

- **Citing sources:** It is crucial that you properly cite all sources from which you draw ideas or quotations. Failure to do so constitutes plagiarism and a violation of the CC Honor Code. Use a standard academic format for citations (e.g., parenthetical citations with a full bibliography at the end, or footnotes with full citations). We are happy to help you if you have questions about citations, but please contact us for assistance before the work is due.

- **We expect that you understand and will adhere to the Colorado College Honor Code.** In accordance with your commitment to the Honor Code, please write “Honor Code Upheld” and sign your name to the pledge on all formal written work.

- **Late written work:** Late written work will be penalized, unless excused due to serious illness or other emergency. We will deduct 3% for work turned in late on the due date; 5% for work we receive the following day; 10% for work received two days after the due date. Written work received more than 2 days late will not be given credit except under extreme circumstances (e.g., serious illness or family emergency). All written work must be turned in by the conclusion of the course in order to receive credit.

- **If you have a disability and require accommodations for this course, please speak to us privately as soon as possible so that your needs may be appropriately met.** If you have not already done so, you will need to register with Disability Services (Learning Commons at Tutt Library, Room 152, 227-8285), the office responsible for coordinating accommodations and services for students with disabilities.

- **This syllabus is subject to minor changes and adjustments, as needed, during the course.**
SCHEDULE OF READINGS & ASSIGNMENTS

WEEK 1: INTRODUCTION TO ECOLOGICAL RESTORATION: SCIENTIFIC, SOCIAL, & PHILOSOPHICAL DIMENSIONS

T 5/28. Introduction to the Course: General Background on Restoration & Case Studies
• Background on restoration ecology and levels of ecological organization

W 5/29. Restoration Ecology and Ecological Restoration
• Society for Ecological Restoration Primer on Ecological Restoration

TH 5/30. Restoration Choices
• Guest Speaker: Gary Rapp, Shooks Run Creek Restoration, 11 am

F 5/31. Restoration Choices
• Morning Project: Work with Gary Rapp, Shooks Run Creek Restoration, 9 am
• Afternoon Film: Green Fire, 1:30-2:45 pm.

WEEK 2: RESTORATION IN THE SAN LUIS VALLEY

SUN 6/2. Depart for Baca Campus
• Sunday afternoon 2 pm – Depart for Baca.
• Evening Film: Facing the Storm: Story of the American Bison

M 6/3. Restoration in the San Luis Valley: Zapata Ranch
• Morning Quiz
• Stream sampling with Darren Ceckanowicz, Environmental Science Technical Director
• Tour: Nature Conservancy Zapata Ranch, 12-2 pm

T 6/4. Restoration in the SLV: Kerber Creek
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WEEK 2: RESTORATION IN THE SAN LUIS VALLEY (CONT).

T 6/4 (continued)
• Review: Kerber Creek Watershed Management Plan; Kerber Creek progress report; Trout Unlimited RFP; pp. 5-11 in Rosgen article (on stream structures)
• Tour: Kerber Creek Restoration, 10 am, Jason Willis, Trout Unlimited (meet at Villa Grove Trade)

W 6/5. Restoration in the SLV: Beaver / Restoring the Restorer
• Journals due (Gary Rapp/Shooks Run Restoration; Zapata Ranch; Kerber Creek)
• Guest speaker: Peter May on beaver reintroduction in the San Luis Valley & arroyo and forest restoration near Crestone – 9:30 am, meet at CC condos
• Evening Film: Restoring Balance: Removing the Black Rat from Anacapa Island

TH 6/6. Native and Exotic Species
• Return to Colorado Springs by late afternoon/early evening.

F 6/7. Writing Day – Paper due by 5 pm.

WEEK 3: RESTORATION & FIRE/RESTORING COMPLEX LANDSCAPES

• Class meets at 11 am, and again after lunch at 1:30 pm.
• USFS, “People restoring America’s forests” (a report on the Collaborative Forest Landscape Restoration Program, 2012), read executive summary & info. on Colorado projects.
• Brett Paben, “The Collaborative Forest Landscape Restoration Program: A panacea for Forest Service gridlock or a new name for old saws?” (unpublished ms.)

T 6/11. Restoration after Fire / Restoration Economies
• Field Trip: Rocky Mountain Field Institute restoration work: Waldo Canyon Fire Restoration, approximately 8:30 am-3 pm (precise departure time & location TBA)
WEEK 3: RESTORATION & FIRE/RESTORING COMPLEX LANDSCAPES (CONT.)

W 6/12. Restoration in Complex Landscapes: Military & Industrial Sites


TH 6/13. Field Trip: Rocky Mountain Arsenal National Wildlife Refuge (approx. 9 am–4:30 pm)


- 11 am: Guest speaker, Jon Harmon (CC ’12), Narrative in conservation & restoration.
- Journals due (Peter May/beaver & watershed restoration, Sara Mayben/CFLRP, RMFI/Waldo Canyon fire, Rocky Mt. Arsenal National Wildlife Refuge)

WEEK 4: RESTORATION FOR THE FUTURE, SYNTHESIS, & CONCLUSION

M 6/17. Restoration, Meaning, and Interpretation


T 6/18. Restoration and Novel Ecosystems

- Elizabeth Kolbert, “Recall of the Wild,” from The New Yorker

W 6/19. Take-Home Final Exam Due.
ENJOY THE REST OF YOUR SUMMER!