PH 203/EV 260  
Ecological Restoration: Ecology, Philosophy, and Society  
Summer 2013

* Please note: This is a provisional syllabus, subject to revision. *

INSTRUCTORS:

Professor David Havlick, Dept. of Geography, University of Colorado-Colorado Springs  
Professor Havlick is a human geographer specializing in public lands, conservation, restoration, and militarized spaces. Professor Havlick works on the historical, political, and environmental implications of changing land uses. As a geographer, he is particularly interested in how militarism and environmental protection are increasingly being linked, and the social, ecological, and political consequences of this blending.

Professor Marion Hourdequin, Dept. of Philosophy, Colorado College  
Professor Hourdequin is a philosopher specializing in ethics, environmental philosophy, and comparative philosophy. With David Havlick, she is engaged in a multi-year project on the social and philosophical dimensions of restoration on former military lands. Professor Hourdequin’s research interests include the precautionary principle, the ethics of global climate change and climate geoengineering, and the role of empathy in ethics.

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:

Quizzes (2 quizzes, 10% each) 20%
Journal (responding to guest speakers and field trips) 20%
Short papers (2 four-page papers, 15% each) 30%
Participation 10%
Final project 20%

SCHEDULE OF READINGS & ASSIGNMENTS

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

T. Introduction to the Course: General Background on Restoration & Case Studies

W. Introduction to Ecological Restoration
• Society for Ecological Restoration Primer on Ecological Restoration
• Stuart Allison, “What do we mean when we talk of ecological restoration?”

TH. Introduction to Ecological Restoration
• Background lecture on restoration ecology and levels of ecological organization
• Stuart Allison, “You can’t not choose: embracing the role of choice in ecological restoration”
• Selections from Ecological Restoration: Principles, Values, and Structure of an Emerging Profession
• Film: Green Fire (shown in class)

F. Social Dimensions of Ecological Restoration
• Sally Eden, “Faking it? The multiple meanings of environmental restoration near Twyford Down”
• Eric Higgs, “The two-culture problem: ecological restoration & the integration of knowledge”
• Project: Work with Gary Rapp, Shooks Run Creek Restoration

WEEK 2: RESTORATION IN THE SAN LUIS VALLEY / PHILOSOPHY OF ECOLOGICAL RESTORATION

SUN. Depart for Baca Campus

M. Restoration in the San Luis Valley: Kerber Creek
• Quiz
• Lucy Emerson-Bell, “Restoring rivers in the West: environmental benefit, economic opportunity,” 2008 Colorado College State of the Rockies Report
• Kerber Creek Watershed Management Plan
WEEK 2 (CONT.)

T. Restoration in the SLV: Kerber Creek / Bison & Prairie Restoration at Zapata Ranch
- Joan Ehrenfeld, “Defining the limits of restoration”
- Josh Donlan et al., “Re-wilding North America”
- Deborah E. Popper and Frank J. Popper, “Great Plains: from dust to dust”
- Deborah E. Popper and Frank J. Popper, “Looking forward: adding the Buffalo Commons to the grasslands mix”
- Film: Facing the Storm: Story of the American Bison

W. Restoration in the SLV: Bison and Prairie at Zapata Ranch / Native & Exotic Species
- William O’Brien, “Exotic invasions, nativism, and ecological restoration: on the persistence of a contentious debate”
- Stuart Allison, “The paradox of invasive species: do restorationists worry about them too much or too little?”
- Film: Restoring Balance: Removing the Black Rat from Anacapa Island
- Guest speaker: Peter May on beaver reintroduction in the San Luis Valley
- Return to Colorado Springs

TH. Philosophy of Ecological Restoration: Authenticity & Faking Nature
- Afternoon class
- Robert Elliot, “Faking nature”
- Isis Brook, “Restoring landscapes: the authenticity problem”
- Paper #1 due.

F. Philosophy of Ecological Restoration: Restoration, Community Engagement, & Meaning
- Andrew Light, “Ecological citizenship: the democratic promise of restoration”
- Eric Higgs, “Focal restoration”

WEEK 3: SOCIAL & ECONOMIC DIMENSIONS OF RESTORATION/ COMPLEX LANDSCAPES

M. Restoration, Fire Management, and Collaboration
- William Baker, Fire Ecology in Rocky Mountain Landscapes (selections)
- USFS, “People restoring America’s forests”
- Brett Paben, “The Collaborative Forest Landscape Restoration Program: A panacea for Forest Service gridlock or a new name for old saws?”
• **Guest speaker**: US Forest Service: Discussion of CFLRP, Waldo Canyon, Hayman, and fire prevention efforts

**WEEK 3 (CONT.)**

**T. Restoration Economies**
- **Project**: Rocky Mountain Field Institute restoration work, Pikes Peak or Garden of the Gods.

**W. Restoration in Complex Landscapes: Military & Industrial Sites**
- **Paper #2 due at 9 am**
- Richard White, “From wilderness to hybrid landscapes: the cultural turn in environmental history”
- Jeffrey Sasha Davis, “The scales of Eden: conservation and pristine devastation on Bikini Atoll”
- Marion Hourdequin & David Havlick, “Ecological restoration in context: the case of former military lands”
- **Case Study**: Gold Hill Mesa

**TH. Field Trip: Rocky Mountain Arsenal National Wildlife Refuge**
- Lynne Westphal, Paul H. Gobster, and Matthias Gross, “Models for renaturing brownfield areas”
- David Tomblin, “The ecological restoration movement: diverse cultures of practice and place”
- **Optional**: Karvonen A, Yocom K, 2011, "The civics of urban nature: enacting hybrid landscapes"

**F. Field Trip: Ecocultural Restoration: Woodbine Ecology Center**
- Paul Gobster, “Urban park restoration and the ‘museumification’ of nature”
- Lillian Ball, Tim Collins, Reiko Goto, and Betsy Damon, “Environmental art as eco-cultural restoration” in *Human Dimensions of Ecological Restoration*
- Jonathan Long, Aregai Tecle, and Benrita Burnette, “Cultural foundations for restoration on the White Mountain Apache Reservation”

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

**M. Work Day: Final Projects**
- Morning meetings with instructors to discuss group project and progress
- Work on individual papers
T. Restoration and Novel Ecosystems / Final Project Planning
- Individual papers due by noon
- Afternoon class (1-2:30 pm)

WEEK 4: RESTORATION FOR THE FUTURE, SYNTHESIS, & CONCLUSION (CONT.)

T. Restoration and Novel Ecosystems (cont.)
- Katharine Suding, “Toward an era of restoration in ecology: successes, failures, and opportunities ahead”
- Young D. Choi, “Restoration ecology to the future: a call for new paradigm”
- Eric Higgs, “Changing nature: novel ecosystems, intervention, and knowing when to step back”
- Project proposals due by 5 pm, including written and oral components

W. Final Presentations & Conclusion