

NRRT 431 – Protected Areas, Working Lands, and Livelihoods

“To save the land you have to save the people, to save either you have to save both.”
Wendell Berry.

"How do we cross the lines and labels of tree hugger and redneck? How do we find and hold the common ground? As long as the corporate wedge is driven between us we'll hide in the folds of those who think most like we do, missing all that's useful in the visions of the other side."

Gary Ferguson.

Instructors

Richard Knight

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OH: Tues: 9:30-10:30,

Thur: 9:30-10:30,

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Course Purpose

Our overarching goal in this course is to prepare you for careers that are not only **successful**, but also **fun**. Beginning a career in natural-resource management with the point of view of "business as usual" will be both discouraging and will not help protect the land and resources that brought you here in the first place. By acknowledging the richness and diversity of people and landscapes—protected areas and working lands, and the livelihoods that are dependent upon both, we take both the broad view, and the long view, one that will span your lifetime.

Course Description

NRRT 431 is the capstone experience for our new major “Human Dimensions of Natural Resources” and focuses on the contemporary natural-resource paradigm called "ecosystem management." *Ecosystem management occurs where rural and urban communities converge over land use, with the end point occurring where land health and sustainable economies occur.* Importantly, ecosystem management acknowledges the essential interaction of social, economic, and ecological sciences.

Course Objectives

The hope of this course is to place your technical expertise in a milieu of human and natural communities so you can be most effective in furthering the goals of your conservation discipline.

- Integrate the disciplinary expertise of your major into the much larger framework of social, economic, and ecological dimensions that occur where conservation works.
- Facilitate your transition from college into a career in natural resources management that is both successful and fulfilling.
- Provide you with an appreciation of collaborative conservation and the role that the social and natural sciences play in the development of effective conservation.
- Allow you to discriminate and appreciate the complexities of real-life landscapes and their complex administrative boundaries that define urban, rural, and wild lands.
- Be able to understand and comprehend the subtleties of livelihoods that occur on these different landscapes, both their interdependencies and their unique characteristics.

Course Textbook – none

Course Readings – available via course web page

Course Landscape

The frontiers have been explored and crossed. It is probably time we settled down. It is probably time we looked around us instead of looking ahead. We have no business, any longer, in being impatient with history. We need to know our history in much greater depth... Plunging into the future through a landscape that had no history, we did both the country and ourselves some harm along with some good. Neither the country nor the society we built out of it can be healthy until we stop the raiding and running, and learn to be quiet part of the time, and acquire the sense not of ownership but of belonging.

Wallace Stegner, *Where the Bluebird Sings to the Lemonade Springs: Living and Writing in the West*. 1992.

Your teachers for this course are bioregionalists; that is, we study and try to understand the human and natural histories in the region where we live, the American West. It is our belief that both your education at Colorado State University and your growth as citizens will be enhanced if you connect the concepts offered in this course to a real place. Accordingly, we will focus our attentions on the watershed where you live, work, play, and worship; the *North Fork of the Cache la Poudre River*.

The Cache la Poudre River begins in the snowfields of the Mummy Mountains of Rocky Mountain National Park and ends just east of Greeley where the Poudre joins the South Platte River on its way to the Missouri. It is a river that has federal Wild and Scenic River designation, that carries our pollution, that stands witness to a diminishing agricultural community while its waters help grow a burgeoning urban, suburban, and exurban population.

The river's natural history is lovingly described in Howard Evans and Mary Alice Evans' *Cache La Poudre: The Natural History of a Rocky Mountain River* (1991. University Press of Colorado, Niwot, Colorado). Further attention to the form and function of watersheds, including the Poudre, are covered in Ellen Wohl's delightful book, *Virtual Rivers: Lessons from the Mountain Rivers of the Colorado Front Range* (2001. Yale University Press, New Haven, Connecticut). The ecology of the Southern Rocky Mountains, within which the Poudre is embedded, are the subject of *Forest Fragmentation of the Southern Rocky Mountains*, edited by faculty from Colorado State University and the University of Wyoming (Knight, Smith, Buskirk, Romme, and Baker. 2000. University Press of Colorado, Niwot, Colorado). Finally, the human history of the Poudre is captured in Stanley Chase's delightful book, *The Poudre: A Photo History* (1995, Don-Art Printers, Fort Collins, Colorado), and in a book by the Livermore Women's Club, *Ranch Histories of Livermore and Vicinity: 1884-1956* (2003, Livermore Women's Club, Livermore, Colorado).

By integrating your education in the classroom with the watershed where you live, we deliberately run **against** the trend in higher education which compartmentalizes complex subjects and discourages interdisciplinary thinking. Aldo Leopold had it right when he wrote:

Perhaps the most important of these purposes [of higher education] is to teach the student how to put the sciences together in order to use them. All the sciences and arts are taught as if they were separate. They are separate only in the classroom. Step out on the campus and they are immediately fused. Land ecology is putting the sciences and arts together for the purpose of understanding our environment...

"The Role of Wildlife in a Liberal Education," 1942.

Grade Distribution

This course utilizes project-based learning and student-directed learning as the primary means of instruction and student evaluation.

- a) Three-day field trip to the San Luis Valley, Colorado (15%)
- b) One-day field trip on protected areas & livelihoods (5%)
- c) Five ArcGIS based group lab reports (4% each, therefore 20%)
- d) Exam 1 (15%)
- e) Exam 2 (15%)
- f) Group panel preparation (2.5%)
- g) Group presentation (2.5%)
- h) Final group presentation (10%)
- i) Class attendance (10%)
- j) Individual performance in your group – (5%)

Each member of your inter-disciplinary team will evaluate each team member in terms of their contributions to the oral presentations and the written reports. These evaluations will be considered when determining your grade for the group report. Good natural resource management is more than getting the facts right, it is also about relationships and the ability to work constructively with those different from you.

GIS Labs

It is required that you have a USB/Flash Drive 2GB or larger for the GIS component of the course. You must read the introductory readings on GIS and the GIS labs prior to lab commencing. GIS lab reports need to be in PDF format submitted via RamCT and will be due at the beginning of the class period. You will have one week to finish the labs 1-4 and two weeks to complete Lab5. See Lab Handout for more information on the GIS component of the course.

Student Matters

Lectures **begin** at 12:30; if you cannot be seated and ready to participate by then, do not attend. We expect you to be attentive, polite, and not a source of distraction to any other student. Distracting behaviors such as talking to your neighbor, reading newspapers, coming to class late or leaving early are not acceptable behavior. Questions and comments, of course, are always encouraged. Every effort will be made to make the classroom experience both profitable and enjoyable for your fellow students.

In a nutshell, this class is dedicated to those students who take their education seriously; I make no promises to those who don't.

Student Responsibilities:

Students are responsible for attending lectures and laboratory sessions and for understanding the information presented in this syllabus and the course materials. It is your responsibility to bring your questions to the instructors' attention. This requires seeing us during class as well as during our office hours. You are expected to actively participate in your working groups and to complete all assignments according to the instructions and deadlines provided with those assignments. Your work must be your own, unless you are specifically asked to work in groups (as in the group project). Though we encourage you to collaborate on the ArcGIS labs, the actual lab reports must be your own work (maps, writing, comprehension).

Academic Dishonesty Policy:

Academic dishonesty, such as plagiarism, cheating, or fabrication of information is a violation of the regulations of the University and will not be tolerated. In fairness to other students who put in an honest effort, academic dishonesty will result in failure (grade of F) of the course. In addition, we will also pass your name on to the Vice President of Student Affairs' Office. The requirements for academic integrity are discussed at <http://www.catalog.colostate.edu/front/policies.aspx>.

How to get Help:

The instructor and graduate teaching assistant are available to help you on all aspects of the course. In the spirit of interdisciplinary teamwork, you are encouraged first to seek information and assistance from your teammates and classmates on assignments and lab projects. Then contact Aubrey or me during our regularly scheduled office hours, or let's make an appointment that works for your schedule. In addition, Aubrey will serve as the webmaster for this course.

Field Trips

Two field trips will be scheduled during the semester. **Field trips are mandatory to pass this course.**

Field Trip 1 – Protected Areas and Livelihoods – 7 March (Saturday)

8am – Morgan Timber Products (Mark and Karen Morgan)

10am – Soldias Farm (George Wallace)

12:30am - The Nature Conservancy – Phantom Canyon (Heather Knight)

2:30pm – Colorado Division of Parks & Wildlife (Justin Foster)

Field Trip 2 – San Luis Valley-Protected Areas & Livelihoods – 24-26 April (staying at the Trinchera Ranch)

Amish (Ben Coblantz) – Saturday – 8:30-10:30 am

Town of San Luis and Ditch #1 (Diana Cortez) - Saturday – 11:30 am -1:30 pm

U. S. National Park Service (Fred Bunch) – Saturday – 2:30 – 4:00 pm

Trinchera Ranch (Ty Ryland) – Saturday – 4:30 on

San Luis Valley Water Conservancy District (Mike Gibson) – Sunday – 8-10 am

USFWS (Scott Miler) – Sunday – 1-2:30 pm

Blue Range Ranch (Julie Sullivan & George Whitten) – Sunday – 3:30 pm

Lectures – Room 217, Forestry Building

Date	Topic
Jan 20	Course Overview
22	Protected areas, working lands & livelihoods
27	Land – conserved & working
29	GIS Lab 1 – getting started
Feb 3	Land—conserved & working
5	Land-conservation easements, land trusts, and open space programs
10	GIS Lab2 –lands, conserved and not (Lab1 due)
12	Land – conservation easements, land trusts, and open space programs
17	GIS Lab3 – private versus public lands (Lab2 due)

	19	A practitioner's perspective on land trusts and open space (Kerri Rollins)
	24	GIS Lab4 – roadless areas and wolf reintroduction (Lab3 due and Lab5 topic proposal due)
	26	No class
Mar	3	The future of protected areas: the roles of GOs and NGOs (panel organized by groups)(Lab4 due)
	5	A practitioner's perspective of the World Parks Congress (Jim Barborak)
	10	Exam 1
	12	The “new conservation debate—parks versus people” (student groups)
	17	Spring Break
	19	Spring Break
	24	TBA
	26	Marine protected areas, livelihoods, and development in Palau – (Rebecca Gruby)
	31	GIS Lab5 work day
Apr	2	No class
	7	No class
	9	San Luis Valley – people and water (Aubrey Miller)
	14	Group presentations – San Luis Valley field trip (GIS Lab5 report due)
	16	Group presentations – San Luis Valley field trip
	21	Lines across the land
	23	Preparation for group presentations and out of class reflection essays due
	28	Group presentations (GIS Lab 5)
	30	Group presentations (GIS Lab 5)
May	5	Course evaluation
	7	Exam 2