

PROTECTED LANDS OF THE AMERICAN WEST

GEOG 380 / ENVR 300

Course Description and Syllabus

(Fall 2014)



INSTRUCTORS:

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Office hours: Mon 2:00-3:00; Thur 10:30-11:30

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The web site for the class can be found on Blackboard

<http://blackboard.richmond.edu/> and Google Drive (urssir2014@gmail.com; pswd: gospiders)

COURSE SCHEDULE: Class meets Mon/Wed, 4:30-5:45 in Lakeview 112. To be successful in this class, you should expect to devote a significant amount of time outside the classroom to complete the community based learning component of the course. Tasks will not be distributed evenly throughout the semester (for example, our exploration of public lands in Nevada and California will consume all of Fall Break), but an average of 10-14 hours per week should be dedicated to preparing for class, participating in class sessions, completing course assignments, and engaging in class activities and trips.

Important Trip Dates:

Sun, Sept 14, 10:00-1:00 Huguenot Flatwater Unit, James River Park System

Sat, Sept 27, 10:00-2:00 Rural Plains Unit, Richmond Battlefield Park

2:00-6:00 Challenge Discovery High Ropes (optional)

Thur, Oct 9 – Tues, Oct 14: Western Field Trip

(bus departs from Tyler Haynes Overhang at 2:15 pm on Thursday)

Class Book Club Dinners

Mon, Sept 8, 6:00-7:00 pm – Mono: A Novel

Wed, Sept 17, 6:00-7:00 pm – Badwater: Forensic Geology

Thurs, Oct 2, 6:00-7:00 pm – High Country

Mon, Oct 20, 6:00-7:00 pm Ukrop's Auditorium, Robins School of Business: Matt Coolidge, Founder and Director, Center for Land Use Interpretation

Mon, Nov 3, 5:30-7:00 pm Dinner with Greg Garman, Director, VCU Center for Environmental Studies and Research Director at VCU's Rice Center

COURSE DESCRIPTION: Many of our protected lands in the United States were set aside because of their natural beauty but also because they were viewed as lands of minimal value for development. Yet, there has always been a tension between goals of conservation for future generations and the current use of resources on these lands (e.g., timber, grazing, water). We will explore the spatial distribution of natural resources in the west and the potential conflict among different stakeholders to extract and conserve these resources. Course goals will be accomplished through a combination of five in-depth case studies and first-hand exposure to the people and environments that define the debate.

Case studies will consider issues of water demand, forestry, energy development, food production, and mining. We will consider these issues from different perspectives including government, business, conservation, and science. Local field trips to the James River Park System and Richmond National Battlefield will be used to form initial impressions of the challenges confronting responsible natural resource stewardship. These impressions will be discussed in class and augmented with readings and lecture material. A fall break trip will visit different types of public lands along a 10,000-foot elevation transect from Las Vegas, Nevada to Yosemite National Park, California (including Death Valley, Ash Meadows, Owens Valley, Mono Basin, and Red Rock Canyon). Students will compare, critique, judge, and discriminate between the many competing demands for natural resources while developing skills interviewing scientists, businesspeople, environmental stakeholders, and natural resource practitioners. Through course discussion we will instill a baseline knowledge about extractable natural resources (with emphasis on their spatial distribution) and the history of land use in the United States. Class exercises will build upon this knowledge to construct strategies for decision-making about our environment.

COURSE OBJECTIVES: Upon completion of the course, students will:

- Demonstrate new skills of critical observation of our environment
- Apply concepts of scale, space, and place to illustrate the problems facing public lands of the western United States
- Combine ecological and geologic theory learned in class with the practice of natural resource management in western landscapes by working with practitioners in the field
- Compare the strategic value of physical resources such as water, coal, oil or natural gas with the societal values of maintaining areas of unspoiled wilderness for future generations
- Justify informed opinions and conclusions on the basis of science, economics and the strategic interests of the nation

COURSE MATERIALS: There is no required textbook for the course, but reading assignments are required in advance of each class. These readings will be accessible through Blackboard and Google Drive. Lecture materials also will be available on Blackboard and Google Drive. Additional class material, including copies of the three novels that will be discussed as part of the book club, will be stored in Lakeview. Please be respectful of classmates by diligently signing out these materials with your RA when borrowing them.

COURSE STRUCTURE: The course will meet Mondays and Wednesdays from 4:30 to 5:45. Following a brief introduction, the rest of the semester is organized as approximately two-week micro-units covering six separate topic areas (color coded in the schedule below). Participating constructively in class discussions and lecture will require the critical review of all relevant background material *before* class. The course will involve a series of active exercises. Starting with the Water micro-unit, each two-week section will conclude with a case study group assignment. The semester will conclude with a final case study project of the students' choosing.

Student Evaluation:

25 pts Mid-term Exam

A mid-term exam will consist of short answer and essay questions focusing on the material from lecture, the readings, and class trips. Questions will be distributed in class on Monday, October 20, and answers will be collected in class on Wednesday, October 22. The exam is open book.

25 pts Case Study Assignments

At the conclusion of each micro-unit, small project teams will address a case study exploring topical challenges in public lands management (5 pts per case study). Case studies will be place-based (e.g., Grand Canyon National Park) and will consider more than one management objective (e.g., conservation of an endangered species and permitting of a proposed mining operation). Each member of the project team will represent a different stakeholder perspective and address the case study issue from that perspective (2-pages each). The entire project team will describe the issue succinctly in a 1-page Introduction and develop a consensus Final Recommendation for actions (1-page). Write-ups are due at the beginning of the next micro-unit.

5 pts Observation Notebooks

Observation notebooks will be maintained during class field trips, including the Fall Break Western Field Trip, and book club discussions. A total of ten original entries are required during the semester. Entries should demonstrate critical thinking and link observations from time spent in the field to topics discussed in class. Creativity in both content and presentation is encouraged. Final logs will be collected in class on Wednesday, October 15.

35 pts Final Project

For the final project, students will work in small groups to tackle a specific challenge of natural resource stewardship on protected land. These 20-page assessments will build on the tools developed during the smaller, case study assignments due at the end of each micro-unit. For the final project, students may evaluate relevant topics of their choosing. The instructors must approve final project topics by the end of October. Final papers (25 pts) are due in lieu of a final exam. Final presentations (10 pts) will be conducted during the final exam time slot.

10 pts Class Attendance and Participation

Class participation will be evaluated primarily on active, engaged participation in the classroom and field trips. Participation will be quantified using the following guidelines (adapted from JA Schatzel, Stonehill College):

<u>Points</u>	<u>Expectations</u>
9-10	Always well prepared for class including completion of all assigned readings; consistently facilitates productive peer discussions; offers reasoned responses of high quality; raises substantive questions about the readings and assignments on an ongoing basis; and engages thoughtfully with invited guest speakers and field trip hosts.
7-8	Contributes regularly; generally prepared; asks questions and provides occasional responses of moderate quality; handles direct questions satisfactorily.
5-6	Allows others to carry the ball; participates infrequently; needs to be prodded; weak preparation.
3-4	Often inadequately prepared; little involvement in class discussions; repeatedly late or leaves during class.
0-2	Unprepared; disruptive in class; unauthorized use of computers during class – e.g. e-mail or instant messaging; repeated talking with other students about topics not related to class.

One absence is permitted per semester. Three percentage points will be deducted for each additional absence. This includes absences from scheduled field trips.

GRADING: Grades will be assigned based on the following formula:

Point values

Midterm	25
Final Paper	25
Final Presentation	10
5 Assignments	5 each
Observation Notebooks	5
Class participation	<u>10</u>
	100

The grading scheme will follow standard University of Richmond guidelines

<http://registrar.richmond.edu/services/policies/grading.html>.

A > 93 pts	B 87-83	C 77-73	D 67-63
A- 93-90	B- 83-80	C- 73-70	D- 63-60
B+ 90-87	C+ 80-77	D+ 70-67	F < 60 pts

ACADEMIC HONESTY: The strength of the university depends on academic and personal integrity. In this course, you must be honest and truthful. Ethical violations include cheating on exams, plagiarism, reuse of assignments, improper use of the Internet and electronic devices, unauthorized collaboration, alteration of graded assignments, forgery and falsification, lying, facilitating academic dishonesty, and unfair competition. Report any violations you witness to the instructor.

If you experience difficulties in this course, do not hesitate to consult with me. There are also other resources that can support you in your efforts to meet course requirements.

Academic Skills Center (<http://asc.richmond.edu> or 289-8626) helps students assess their academic strengths and weaknesses; hone their academic skills through teaching effective test preparation, critical reading and thinking, information processing, concentration, and related techniques; work on specific subject areas (e.g., calculus, chemistry, accounting, etc.); and encourage campus and community involvement.

Career Development Center (<http://cdc.richmond.edu/> or 289-8547) can assist you in exploring your interests and abilities, choosing a major, connecting with internships and learning experiences, investigating graduate and professional school options, and landing your first job. We encourage you to schedule an appointment with a career advisor during your first year.

Counseling and Psychological Services (<http://caps.richmond.edu> or 289-8119) assists students in meeting academic, personal, or emotional challenges. Services include assessment, short-term counseling and psychotherapy, crisis intervention and related services.

Speech Center (<http://speech.richmond.edu> or 289-6409): Assists with preparation and practice in the pursuit of excellence in public expression. Recording, playback, coaching and critique sessions offered by teams of student consultants trained to assist in developing ideas, arranging key points for more effective organization, improving style and delivery, and handling multimedia aids for individual and group presentations.

Writing Center assists writers at all levels of experience, across all majors. Students can schedule appointments with trained writing consultants who offer friendly critiques of written work: <http://writing.richmond.edu>

Boatwright Library Research Librarians assist students with identifying and locating the best resources for class assignments, research papers and other course projects. Librarians also assist students with questions about citing sources correctly. Students can schedule a personal research appointment, meet with librarians at the library's main service desk, email, text or IM. Link to <http://library.richmond.edu/help/ask.html> or call 289-8669.

Note: Students having special needs that require an accommodation or an academic adjustment, please arrange a meeting with me within the first two weeks of the semester.

Fall 2014 Schedule

This schedule will be followed approximately. *Some changes may be made as the class proceeds* but the exam date, assignment due dates, and fall break field trip dates will not change. Additional information on the observation logs, case study assignments, and final project will be provided in class. All reading assignments should be completed before class on the day that they are listed in the schedule below.

Date	Topic	Assignments
Aug 25	Course Introduction <i>SSIR Overview (Living and Learning together, book club, scheduled field trips...)</i> <i>In the Beginning... Introduction and history of public lands in the U.S.</i>	<i>Tuesday night watch party:</i> Ken Burns' The National Parks: America's Best Idea (Episode 1) <i>Hmwk Exercise:</i> Each student researches one Federal Agency or Federal Policy Act to describe for the class (due Wed)
Aug 27	Western Lands Introduction <i>Class discussion of Federal Agencies and Acts (e.g., Federal Land Policy Act, Wilderness Act, NEPA, NPS, ESA)</i> <i>Exercise: mapping of public lands in U.S.; what, where, how much, who, why?</i>	<i>Readings:</i> Americas Public Lands, Randall K Wilson The Nation's Largest Landlord, James R Skillen Wilderness and the Changing American West Gundars Rudzitis The Governance of Western Pubic Lands Martin Nie
Sept 1	Tourism: Introduction <i>People and Parks</i> <i>What is wilderness? What is the value of wild public spaces to a nation's citizenry?</i> <i>Discussion of the Healthy Parks, Healthy People initiative.</i>	<i>Readings:</i> The Trouble with Wilderness; or, Getting Back to the Wrong Nature http://www.williamcronon.net/writing/Cronon_Trouble_with_Wilderness_1995.pdf <i>Park health resources:</i> Benefits, values, and implications www.nature.nps.gov/parkscience/index.cfm?ArticleID=642
Sept 3	Tourism: Excursion <i>Visit to Pony Pasture</i> <i>First entry in observation notebook</i> <i>Exercise: Reflection sites for 10 minutes. Return to parking area for discussion. How do people visiting parks influence park natural resources? How would go about mapping noise and light impacts to a park?</i>	<i>Readings:</i> How annoying is noise in national parks? http://conservationmagazine.org/2014/01/annoying-noise-national-parks/ <i>Hmwk Exercise:</i> Campus lightscape and soundscape mapping
Sept 3	Class Book Club Dinner to Discuss <i>Mono: A Novel</i>	
Sept 8	Tourism: Exercise <i>Geographers in the Field: Experiential Learning in Action</i> <i>(5:00 pm Jepson Faculty Lounge)</i> <i>Discussion of light/noise mapping assignment</i>	<i>Readings:</i> Framework for assessing impacts of pile-driving noise from offshore wind farm construction on a harbour seal population www.sciencedirect.com/science/article/pii/S0195925513000735 <i>What is that fracking noise...?</i> http://www.mindthesciencegap.org/2013/04/08/what-the-frack-is-that-noise/

Sept 10	Water: Introduction <i>Introduction to water resources and water management</i> <i>Guest: Matt Rouch, 15 minutes on mapping water rights for Grand Teton National Park</i>	<i>Readings: Water in the West Presentation</i> <i>Water Level in Lake Powell and Lake Meade Presentation</i> <i>Colorado River Basin Presentation</i>
Sept 14	Excursion <i>James River Regional Cleanup Day launch from Huguenot Flatwater</i>	
Sept 15	Water: Primer <i>Watershed Hydrology 101</i> <i>Water stressors to the American West. Interactions of mining, fisheries, forestry, and energy development on water.</i>	<i>Readings: Trends in Western Snowpack Presentation</i>
Sept 17	Water: Exercise <i>Systems analysis; How does water flow through a watershed (review)? How have humans influenced this flow?</i> <i>Exercise: Generate a systems diagram of human and nonhuman inputs, outputs, and contamination for Death Valley</i>	<i>Readings: Threats to U.S. public lands from hydrologic alterations outside of their boundaries</i> www.jstor.org/stable/2641012 <i>Interbasin flow in the Great Basin with special reference to the southern Funeral Mountains and the source of Furnace Creek springs, Death Valley, California, U.S.</i> http://pubs.er.usgs.gov/publication/70034912 <i>Hmwk Exercise: Conceptual model of water budget for a managed public land</i>
Sept 17	<i>Class Book Club Dinner to Discuss Badwater: Forensic Geology</i>	
Sept 22	Water: Case Study 1	<i>Readings: Water allocation and management in the Western United States by Douglas S. Kenney</i>
Sept 24	Forestry: Introduction <i>Introduction to old growth forests of the western United States.</i>	<i>Readings: Excerpts from the Northwest Forest Plan (NWFP)</i>
Sept 27	Excursion <i>National Public Lands Day trip to Richmond National Battlefield</i>	
Sept 29	Forestry: Primer <i>Ecological role of disturbance. How have humans influenced the “natural” disturbance regime? Can eastern and western U.S. forests be managed the same?</i>	Case Study 1 Due <i>Tuesday night watch party: NOVA Fire Wars</i>
Oct 1	Forestry: Exercise <i>History of fire and fire suppression in the western U.S.</i> <i>Exercise: Debate on the effectiveness of fire surrogates (prescribed burning,</i>	<i>Readings: Ecological effects of alternative fuel-reduction treatments: highlights of the National Fire and Fire Surrogate study (FFS)</i> http://www.fs.fed.us/psw/publications/knapp/psw_2013_knapp003_mciver.pdf

	<i>logging) at recreating historic role of wildfire?</i>	<i>Hmwk Exercise:</i> Prep for fire/fire surrogate debate
Oct 2	<i>Class Book Club Dinner to Discuss High Country</i>	
Oct 6	Forestry: Case Study 2	<i>Readings:</i> Citizen's Guide to the Endangered Species Act http://earthjustice.org/sites/default/files/library/reports/Citizens_Guide_ESA.pdf
Oct 8	<i>Preparation for field excursion</i>	
Oct 9 - 14	Excursion <i>Western Field Trip</i>	
Oct 15	<i>Field trip debriefing. What did we learn?</i>	Presentation by visiting faculty from the University of Ulster
Oct 20	Energy: Introduction	Case Study 2 Due Midterm questions distributed
Oct 20	6:00 pm Ukrop's Auditorium, Robins School of Business: Matt Coolidge, Founder and Director, Center for Land Use Interpretation	<i>Readings:</i> Geography of Energy Development in Western North America: Potential Impacts on Terrestrial Ecosystems Holly E. Copeland, Amy Pocewicz, and Joseph M. Kiesecker Natural gas resources and federal lands
Oct 22	Energy: Primer <i>Fracking and petroleum resources</i>	Midterm answers collected
Oct 27	Energy: Exercise <i>Coal mining</i>	<i>Readings:</i> Pipelines and parks: Evaluating External Risks to Protected Areas from the Proposed Northern Gateway Oil Transport Project Fact Sheet: Federal Coal Royalties and their Impact on Western States Economic Effects of Western Federal Land-Use Restrictions on U.S. Coal Markets USGS
Oct 29	Energy: Case Study 3	FINAL PROJECT PROPOSALS DUE
Nov 3	Fisheries and Farming: Introduction <i>400 Years of Chesapeake Bay Fish and Fisheries: A Study in Environmental Change</i> <i>Guest: Greg Garman, Gottwald Auditorium</i>	<i>Readings:</i> Federal Listing of the Atlantic Sturgeon http://www.nmfs.noaa.gov/pr/pdfs/fr/fr77-5880.pdf Case Study 3 Due
Nov 3	<i>Dinner with Greg Garman 5:30-7:00</i>	
Nov 5	Fisheries and Farming: Primer	<i>Readings:</i> National parks as protected areas for U.S.

	<i>Biological invasions; sustainable yield; terrestrial-aquatic linkages; Grazing is good for conservation?</i>	freshwater fish diversity Deforestation is bad news for fish. But why? http://conservationmagazine.org/2014/06/deforestation-is-bad-news-for-fish-but-why/
Nov 10	<i>Fisheries and Farming: Case Study 4</i>	<i>Readings:</i> Exploited reefs protected from fishing transform over decades into conservation features otherwise absent from seascapes http://www.esajournals.org/doi/abs/10.1890/09-0610.1 Australia's new marine protected areas: why they won't work http://theconversation.com/australias-new-marine-protected-areas-why-they-wont-work-11469
Nov 12	<i>Mining: Introduction</i>	<i>Readings:</i> Mining claims and sites on Federal Land, BLM Reclaiming Abandoned Hard Rock Mines, BLM Abandoned Mine Lands: A New Legacy, BLM
Nov 17	<i>Philosophy of Conservation</i> <i>"Thinking Like a Planet: The Land of Ethic and the Earth of Ethic"</i> <i>Guest: Baird Callicott, Brown Alley Room</i>	<i>Case Study 4 Due</i>
Nov 19	<i>Mining: Primer and exercise</i> <i>There's gold in them there hills!</i>	<i>Readings:</i> Cleaning up abandoned mines in the West. Prospecting for a Better Future. Patricia Nelson Limerick, Joseph N. Ryan, Timothy R. Brown, T. Allan Comp
Nov 24	<i>Mining: Case Study 5</i>	
Nov 26	<i>Thanksgiving</i>	
Dec 1	Wrap-up	
Dec 3	Wrap-up	<i>Case Study 5 Due</i>
Dec 12	2:00-5:00 pm Final Project Presentations	<i>Final Project Papers Due</i>