

ESM 435/535 4cr

Natural Resource Policy and Management

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Class time: T/Th 8-9:50am
Office Hours: Tu, Th 10-11am, and by appointment
Classroom: SRTC B1-82
Course Website: See [D2L](#)

Learning Objectives

Students will learn about natural resource policy and its impact on natural resource management through the study of relevant policies, and the implementation of those policies at the local, regional, and federal levels. Students will also learn about the challenges of applying ideal policies to complex settings, difficult socioeconomic contexts, and charged political environments. By the end of the class, students will:

- Understand major policy issues and the natural resource management strategies used to address them.
- Understand diverse perspectives on natural resource policy (including perspectives you may not like!)
- Be able to analyze natural resource management problems and the implications of policies designed to fix them from the perspectives of diverse stakeholders
- Be able to effectively communicate plausible policy solutions to natural resource management problems along with the respective merits of those proposed solutions

Assessment

Undergraduate Students

Policy/Management Memos (3 x 15%)	45%
Midterm Exam	15%
Final Exam	20%
Participation	20%
TOTAL	100%

Graduate Students

Policy/Management Memos (3 x 15%)	45%
Midterm Exam	15%
Research paper	20%
Participation	20%
TOTAL	100%

Grading Scale

This course uses the following grading scale:

94-100	A
90-93	A-

88-89	B+
83-87	B
80-82	B-

78-79	C+
73-77	C
70-72	C-

68-69	D+
63-67	D
60-62	D-

<60	F

Student Responsibilities

Participation: Participation grading will be based on two aspects of your participation in class: 1) your preparation for and leadership of, at least one (possibly two) class discussion during the quarter, and 2) your contribution to class during discussions, lecture questions, and other activities.

Each student (when appropriate teamed up with another student) will **lead a 20-30 minute class discussion and submit typed discussion notes** on the readings for the day and distribute those notes to other students in class. Discussion notes should summarize the key messages, figures, or tables, or other discussion points relevant to the assigned course readings. Get creative in designing your discussion. Consider assigning roles; break the class into groups; consider other approaches to developing an engaging discussion.

Students not leading the discussion are expected to **submit 2-3 type-written questions (per article) before class each day** on that day's readings, and engage the discussion with questions, comments, and thoughts about the readings and how they relate to the course subject.

If you miss a class, please arrange to get the class reading notes from a classmate. If you know in advance that you will miss class, please send me an email to notify me. Missing more than two classes will negatively affect your grade.

Policy/Management Memos: A rubric detailing the grading procedures for each memo will be handed out prior to the due date. Generally, grades are based on the following writing aspects: 1) logical structure and clarity of writing, 2) use of evidence in the analysis of the problem, 3) tone and professionalism, 4) use of references.

A memo is meant to be a quick and effective means of synthesizing a large amount of information to the key points that are needed for a manager or decision maker to make a decision. As such, a memo should include a succinct description of the objective of the memo (what problem are you trying to provide an answer for), the background or context critical for the reader to understand your analysis, your analysis, solutions and/or implications (who, what, where, when, and why), and a succinct description of your conclusions and recommendations (if the reader takes away one message, what do you want it to be).

The best description I have seen of the memo writer's purpose and goal goes like this:

"In writing a memo, you are competing for the valuable time of ... influential people. At the Kennedy School, the faculty must read every student's memo. After you leave the Kennedy School, however, no one is required to read a single one of your memos.

An effective policy memo is convincing because of the coherence of its underlying logic — and because of the clarity of its presentation of that logic. The logic emerges, however, only from careful thinking — from thinking that is disciplined by the need to put down on paper words that unambiguously explain these ideas and that deal equally explicitly with, at least, the most obvious or relevant objections.

To increase your influence, you need to work at building a reputation for crafting memos that people believe they have to read. Then, work at developing a reputation for designing memos that people want to read.

Good writing requires good thinking. No writer can save poor thinking. You cannot rescue poor ideas with clever words. But bad writing can — and too often does — sabotage good thinking

– Bob Behn, Harvard Kennedy School of Government

I will provide more information on memo writing in class. But, check out Bob Behn's website on memo writing: https://shorensteincenter.org/wp-content/uploads/2012/07/Behn-Craft-of-Memo-Writing-2013-3rev8_26_13.pdf

Exams: One midterm exam and one final exam will be administered during the quarter. Both the midterm exam and the final exam will cover readings, lectures, and guest lectures. Exams will consist of a mix of closed ended questions, short

answers, and essays. Study the lecture notes, principles and concepts, management and policy cases, and reasoning. Written answers will be graded much the same as written memo assignments. Use of evidence and examples to illustrate principles from class and readings is critical to demonstrating comprehension in exams. Graduates will take only the midterm exam.

Research Paper (Graduate Students): Graduate students are expected to complete a research paper as a team (approximately 15- 20 pages long double-spaced) that analyzes an existing state, federal or local policy and its implications for management. Completing the research paper will include developing a title and abstract for your topic, writing an annotated bibliography, completing a draft paper, conducting peer review, and completing revisions.

The purpose of the research paper assignment is to identify a natural resources policy or management topic that you want to investigate in more detail. Although you can choose a policy or management case study that is very localized, highly localized topics may have less research and published material to draw upon and support your paper. You will be expected to search the current literature on this topic and utilize peer review sources in addition to any relevant grey literature and government reports. You may also analyze a policy/management relevant dataset.

Paper Topic Approval: By Tuesday, October 19th (4A)
Annotated bibliography: Due Tuesday, November 02(6A)
Rough Draft Paper: Due Tuesday, November 16th (8A)
Peer Reviews: Due Tuesday, November 30th (10A)
Final Paper Due: Tuesday, December 07th (FINALS)

The draft research paper for this class should be approximately 10-15 pages long (double spaced) and should be an analysis of an existing state, federal or local policy and its implications for management. You may expand to up to 20 pages upon revisions following your peer reviews. Below are a number of example approaches you might use to complete this assignment:

- Review the effectiveness of a policy in solving natural resource management problems.
Example Research Question: What is the impact of the Oregon Plan for Salmon and Watersheds on aquatic habitat management in Oregon?
- For a given natural resource management issue, review the policies (or classes of policies) and their implications for the given issue.
Example Research Question: What policies affect oak habitat restoration in the Willamette Valley and how do these policies help or hinder efforts to increase the amount of oak habitat in the Valley?
- Compare potential policy solutions to a given natural resource management issue.
Example Research Question: What are the benefits and consequences of a cap-and-trade policy versus a carbon tax in regulating the emissions and/or sequestration of greenhouse gasses?
- Analyze an existing dataset for policy or management implications (or use your own data!).
Example Research Question: How do local and statewide conservation initiatives and referenda vary in their voter support between those measures in which endangered species management is an explicit goal and those with broader goals like open space conservation?

The paper should provide evidence-based information to help guide decision makers. It should not be an advocacy piece, a position paper, or an opinion piece.

If you miss a class, please arrange to get the class reading notes from a classmate. If you know in advance that you will miss class, please send me an email to notify me. Missing more than two classes will negatively affect your grade.

Assignments: Due on the date listed below
Readings: Assigned readings are posted on course website (please remember to bring 2-3 typed questions on daily readings to each class that you are not leading discussion on.

Wk	Date	Lecture Topic	Readings	Assignments Due / Guests
1A	09/28	Principles of Natural Resources Policy		
1B	09/30	Management of Natural Resources	1, 2	Class Discussion
2A	10/05	National Environmental Policy Act (NEPA) I: Intro	3, 4	Student Led Discussion
2B	10/07	NEPA II: Critiques	5	Student Led Discussion
3A	10/12	Ecosystem Management: Northwest Forest Plan	6, 7	Guest: USFS (invited) Student Led Discussion
3B	10/14	Endangered Species Act (ESA) I: Intro	8, 9	Memo 1 Due Student Led Discussion
4A	10/19	ESA II: Habitat Conservation Planning	10, 11	Grads: Paper topic Student Led Discussion
4B	10/21	Growth and Open Space Policy: Examples	12, 13	Guest: Metro (invited) Student Led Discussion
5A	10/26	MIDTERM EXAM	14	Exam
5B	10/28	Conservation Easements and Protection		Student Led Discussion
6A	11/02	Water Resources & Water Rights	15, 16	Grads: Annotated bibliography Student Led Discussion
6B	11/04	Managing Columbia Basin Habitat & Power	17, 18	Memo 2 Due Guest: NOAA (invited) Student Led Discussion
7A	11/09	Clean Water Quality (CWA): Overview	19, 20	Student Led Discussion
7B	11/11	Total Maximum Daily Load: Willamette TMDL	21, 22	Guest: DEQ (invited) Student Led Discussion
8A	11/16	Oregon Plan for Salmon & Watersheds	23	Grads: Rough draft Student Led Discussion
8B	11/18	Source Water Protection: EWEB VIP	24, 25	Student Led Discussion
9A	11/23	Stormwater Policy & Management	26, 27	Memo 3 Due Student Led Discussion
9B	11/25	NO CLASS – THANKSGIVING		
10A	11/30	Green buildings and urban environments	28	Grads: Peer reviews
10B	12/02	Exam Review		
11	12/07	FINAL EXAM @ 8AM		Grads: Final Paper Due

- Kraft 2011 (Chapter 3)
- Rosenbaum 2014 (Chapter 2)
- Singh et al 2020
- Squillance and Hood 2011 – Read sections I - III
- CEQ 2021
- Staudt et al 2013
- Spies et al. (2010)
- Randolf 2004
- Daniels & Daniels 2003 (Chapter 9)
- Beatley (1995)
- Alagona and Pincetl (2008)
- Bengston et al 2004
- Daniels & Daniels 2003: Chapter 13
- Bray 2010
- Sabatier et al. 2005 (Chapter 2)
- Cech 2005
- WWF 2012
- Summary of CWA
- Rosenbaum 2014 (Ch 6, pp 197-203, 219-236)
- Daniels and Daniels 2003 (Chapter 4)
- DEQ 2006 (Chapter 1)
- Cochran and Logue 2010
- Coe-Juell 2005
- Grolleau and McCann 2012
- INR 2013
- Keeley et al 2013
- Carlson 2015
- PSU 2013

Other Class Policies

Classroom Requirements for All Students and Faculty Due to Covid-19

The University has established rules and policies to make the return to the classroom as safe as possible. It is required for everyone to follow all the Return to Campus rules and policies. To participate in this class, PSU requires students to comply with the following.

Masks Required at all Times in Classroom

- Wear a mask or face covering indoors at all times. Your mask or face covering must be properly worn (fully covering nose and mouth and tight fitting). Mesh masks, face shields, or face covering that incorporates a valve designed to facilitate easy exhalation are not acceptable. Because a mask must be worn in the classroom, there should be no eating or drinking in the classroom. If you have a medical condition or a disability that prevents you from wearing a mask or cloth face covering, you must obtain an accommodation from the Disability Resource Center (DRC) to be exempt from this requirement.
- CDC, State, and County guidance does not limit class size for in-person instruction or require physical distancing.

Vaccination

- Be vaccinated against COVID-19 and complete the COVID-19 vaccination attestation form. Those students with medical or nonmedical exemptions or who will not be on campus at all must complete the process described on “COVID-19 Vaccine Exemption Request Form” to establish those exemptions.

Health Check, Illness, Exposure or Positive Test for COVID-19

- Complete the required self-check for COVID-19 symptoms before coming to campus each day.
- If you are feeling sick or have been exposed to COVID-19, do not come to campus. Call SHAC to discuss your symptoms and situation (503.725.2800). They will advise you on testing, quarantine, and when you can return to campus.
- If you test positive for COVID-19, report your result to SHAC and do not come to campus. SHAC will advise you on quarantine, notification of close contacts and when you can return to campus.
- Please notify me, (i.e. your instructor), should you need to miss a class period for any of these reasons so that we can discuss strategies to support your learning during this time.
- If I become ill or need to quarantine during the term, either I or the department chair will notify you via PSU email about my absence and how course instruction will continue.

Failure to Comply with Any of these Rules

As the instructor of this course, the University has given me the authority to require your compliance with these policies. If you do not comply with these requirements, I may ask you to leave the classroom or I may need to cancel the class session entirely.

In addition, failure to comply with these requirements may result in a referral to the Office of the Dean of Student Life to consider charges under PSU's Code of Conduct. A student found to have violated a university rule (or rules) through the due process of student conduct might face disciplinary and educational sanctions (or consequences). For a complete list of sanctions, see Section 14 of the Student Code of Conduct & Responsibility

Guidance May Change

Please note that the University rules, policies, and guidance may change at any time at the direction of the CDC, State, or

County requirements. Please review the University's main COVID-19 Response webpage and look for emails from the University on these topics.

Contacting Me

The best time to contact me is during office hours, or immediately before or after class. If these times do not work for you, please schedule an appointment. If you email me, please keep in mind that I get many email messages per day. I will do my best to respond to your email within 48 hours on weekdays. Most importantly, don't wait until the night before an assignment or exam to ask questions.

Web Site

The D2L website for this course will contain helpful supporting information, including (1) syllabus and course documents, (2) PDFs of readings for class, (3) reports, documents, and weblinks that you can download for more information on examples discussed in class, and (4) lecture slides with room for notetaking.

Professional Conduct

Students are expected to behave in a professional manner at all times.

- Students should treat each other and the instructor with the professional courtesy and respect expected in a workplace.
- The classroom is a place for learning. This requires that students arrive on time, stay until the end of the class, not disrupt the class by leaving the room temporarily, and refrain from non-learning activities.
- Please silence all cell phones, pagers, beepers, etc. and do not take or make calls during class. Use of laptop computers in class to take notes, organize comments, or do research related to class discussions is welcome. However, abuse of this privilege by checking personal e-mail, instant messaging, playing games, doing homework in class, excessively using computers during discussion time, or "surfing" the Internet will not be tolerated.
- Students who fail to adhere to these guidelines will be asked to leave for the remainder of the class.

The Writing Center

This course involves a moderate amount of writing. If you struggle with writing, I strongly encourage you to use the services of the Writing Center. The Writing Center is open weekdays and its services are free. The Writing Center is staffed by upper-division and graduate students who are available on a drop-in basis or by appoint. See the website at: <http://www.writingcenter.pdx.edu/index.php>, call 503-725-3570, or stop by at 188 Cramer Hall.

Documented Disabilities

Students who have a documented disability and anticipate needing accommodations in this course should make arrangements to see the instructor as soon as possible. Students with disabilities should also request that the Disabilities Resource Center (<http://www.pdx.edu/drc/>) send a letter verifying the disability.

Other Resources

Don't forget to check out the ESM webpage for all sorts of info on what the department is doing: www.pdx.edu/esm, as well as the AESS seminar webpage: <https://sites.google.com/a/pdx.edu/esm-science-seminar/>

Department scholarships and other awards: <http://www.pdx.edu/esm/awards-and-scholarships>

Undergraduate students interested in the Paul Croy or Barry Commoner awards should check out their descriptions on the ESM website. Graduate students interested in research scholarships should check out the Bushby and Dunnette awards on the ESM website.

University Programs Undergraduate Students

LSAMP (Louise Stokes Alliance for Minority Participation) is dedicated to enhancing the undergraduate experience for underrepresented students in Science, Technology, Engineering, and Mathematics. Funded by the National Science Foundation, our LSAMP program focuses on: Creating a community among LSAMP scholars that values excellence, diversity, and persistence; and Expanding opportunities for LSAMP scholars through participation in undergraduate research experiences and leadership initiatives. If you're interested in finding out more, visit our LSAMP center [in 103 Epler Hall](#), talk to ESM-LSAMP faculty advisory member Cat de Rivera <derivera@pdx.edu>, SRTC 238e, or check out: <http://www.pdx.edu/lsamp/home>.

McNair Fellows Program - for first-generation to college students as well as students from backgrounds underrepresented in the sciences: <http://www.pdx.edu/mcnair-program/>.

Advising & Career Services: <https://www.pdx.edu/careers/> and <https://www.pdx.edu/careers/what-can-i-do-degree-environmental-studiesenvironmental-sciences>

Library Research Tutorials: <http://guides.library.pdx.edu/home/howto> and <http://guides.library.pdx.edu/esm>