The Problem Orientation
Wednesdays 3:35 – 6:05 PM
Guggenheim conference room

Instructor: Max Boykoff contact email: boykoff@colorado.edu
Course Web Page: http://sciencepolicy.colorado.edu/students/envs_5720/ phone: 303-735-6316
Office Hours: Weds 1-3PM, and by appt (exceptions: Weeks 6, 7, 9, 10, 15, 16, Weds 10AM – noon)
CIRES Center for Science & Technology Policy
1333 Grandview Avenue
COURSE DESCRIPTION

This course focuses on problem-solving frameworks for policy analysis. The sessions emphasize applications that develop and enhance our understanding of the various ways of understanding and knowing that shape how environmental ‘problems’ are defined. Also, we explore how these perspectives are shaped by trends, conditioning factors, and projections, to then mobilize a range of policy responses and recommendations. Note that this course is ‘Problem Orientation’ rather than ‘Solution Orientation’. This term, we will focus many session discussions on the prominent issue of climate change.

Critical engagement in session discussions with these topics and themes will help us to distinguish patterns, appraise and assess values, and gain insights from a variety of perspectives and viewpoints in various environmental issues.

COURSE READING MATERIALS

We will use three main texts for the course:

These books are available at the CU Bookstore, reportedly priced (new) at about $30 each + tax. We will also be reading many academic journal articles as well as referring to gray literature (newspaper and magazine reports etc.) throughout the course.

COURSE REQUIREMENTS

Overview
The reading and writing schedule will be rigorous. It is important that everyone stay up to date with the readings and all other expectations. Please complete all readings before the session for which they are assigned, as noted.

Attendance & Participation 25 pts
Weekly Reading Summaries (10 weeks of the term @ 5 pts each) 50 pts
Book or Film Review 40 pts
Individual Project (proposal – 15 pts; proposal presentation – 15 pts, term paper – 40 pts, term paper presentation – 15 points) 85 pts
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Total: 200 points

The class structure will primarily be roundtable discussions. Because it will be difficult to cover all of the readings and discussion themes sufficiently in the session times allotted, I encourage you to arrange additional student-led discussion groups outside of class as needed/desired.
Attendance
Each person enrolled in the course is expected to engage critically with the issues that are discussed. This requires that everyone be consistently engaged and present in each class through discussion and questions about the class topics and materials. Consequently, I must note here that if you accumulate more than three unexcused absences during the quarter, you will not pass the course.

Participation
Session preparation and participation in the class discussions will be vital to the collective success of the course. An important requirement will be that everyone come to each session ready to contribute with notes and comments you have assembled based on the readings, from both the formal ‘weekly reading summaries’ prepared, and notes from the other readings. Clearly, consistent and constructive participation in class discussion helps in a number of ways. Of note, while challenging and enhancing your engagement with the material, it also provides a series of working notes from which you can draw for your individual project while it improves your grade as well as the general classroom atmosphere.

Weekly Reading Summaries
In the ten noted weeks below (week #s 2, 3, 4, 6, 7, 9, 10, 13, 14, & 15), each course participant will provide a one-page summary, including 3-4 discussion questions for one of the articles or chapters noted. I will bring a sign-up sheet for these readings and summaries selections in the preceding week. Please circulate these one-page summaries to the group by attachment (in Word or PDF) via email at envs5720@sciencepolicy.colorado.edu by 5PM Tuesdays (the evening before our session).

Approach the chosen reading with a critical eye, possibly drawing on aspects of these general prompts:
- What is/are the main point(s) or theme(s)?
- What is/are the author’s/authors’ central thesis?
- How are goals articulated, (past or present) trends described, conditioning factors analyzed, future trends projected and alternatives designed/evaluated?
- How (well) does the reading address important facets of the course theme(s)?
- Where are possible weaknesses in the author’s arguments?
- Do you agree with the author’s central assertions, theories, ideas, problem orientation? If so, why? If not, why not?

Book or Film Review
Employing problem orientation considerations, choose from these 6 films & 2 course books for 1 review:
This review (up to 1000 words) will be due in class on March 31 (week 12). The films are scheduled to be available at the Norlin University Library, and you can get many of them at various video stores.

For this review, please adhere to the *Science Magazine* ‘information for contributors’, described here: http://www.sciencemag.org/about/authors/prep/gen_info.dtl#categories

For a useful example of a *Science* book review (of Pielke Jr.’s *The Honest Broker*), go here:

You will not be required to submit your review to *Science* as part of this exercise, but nonetheless, I encourage you all to consider doing so. It can be an instructive experience to go through the submission process. Also, by completing this review the hard work may arguably already be done.

From their webpage, I extract the following excerpts:

- “*Science* is a weekly, peer-reviewed journal that publishes significant original scientific research, plus reviews and analyses of current research and science policy. Our main offices are in Washington, D.C., and Cambridge, U.K. We welcome submissions from all fields of science and from any source. Competition for space in *Science* is keen, and many papers are returned without in-depth review. Priority is given to papers that reveal novel concepts of broad interest. We are committed to the prompt evaluation and publication of submitted papers.”

- “CATEGORIES OF SIGNED PAPERS: The following *Science* sections offer broadly accessible commentary by scientists and other experts on issues of interest to *Science* readers. With the exception of Letters, most items in these sections are commissioned by the editors, but unsolicited contributions are welcome…[among the list] *books et al.* (up to 1000 words) presents reviews of current *books*, multimedia, exhibitions, and *films* of interest to *Science* readers.”

Term Project: proposal (and presentation), paper (and presentation)
This term project is designed so that all course participants can creatively and uniquely apply theoretical and academic tools of problem orientation to a contemporary environmental policy challenge. Throughout the course, draw on the readings and discussions to develop your term project. As such, the project is best considered as a term-long effort, rather than an end-of-April task. There is no shortage of possibilities for policy topics that draw from economics, politics, society, culture and the environment.

**Project proposal**
By February 10 (week 5), you will need to select an environmental policy problem or issue on which to base your term project, and submit a project proposal in class. I encourage you to be very specific with your problem definition. The proposal will outline the environmental policy problem/challenge, and focus on the groups/actors involved, along with connected challenges, power struggles and oppositions therein. These proposals will be limited to two concise pages where you focus on the problem, rather than policy recommendations and solutions (that will be taken up in your final term paper). You will also need to include an annotated bibliography of at least 10 relevant readings that you plan to draw on for the term paper. **Note your word count on the proposal you hand in.**
Project proposal presentation
The proposal presentations will take place on March 3 (week 8), laying out the environmental policy challenge/problem, articulating the points from the project proposal (outlining the environmental policy problem/challenge, and focusing on the groups/actors involved, along with connected challenges, power struggles and oppositions). This proposal and presentation are distinct from the final project presentation and term paper in that I am asking you to focus mainly on 1) what the problem is, and 2) how various actors have struggled over the problem definition and focus. Presentations will be limited to 10 minutes each, with 5 minutes to follow for questions/discussion.

Individual project term paper
The term paper will be due on the date and time of the final exam, May 7 at 10:30AM. These term papers must be emailed to me (as a PDF or Word document) and passed to me in hard-copy form by this date/time. They should be approximately 15 to 20 pages, double-spaced (including references). In the paper, incorporate the outline of the environmental policy problem/challenge, the groups/actors involved, and connected challenges, power struggles and oppositions as you did in the proposal. However, then focus on trends, conditioning factors and projections that shape what will become your informed policy recommendation on the particular environmental policy challenge. In total, the structure and flow of your paper will derive from the Lasswell problem orientation tasks described below. Note your word count on the term paper you hand in. At least twenty in-text/end-of-text citations will be needed to make this paper a success (only five of these may be web-based).

Individual project term paper presentation
Term project presentations will be delivered in our final session on April 28 (week 16). These will be limited to 15 minutes each, with 5 minutes to follow for questions/discussion.

The overall term project should work through the five distinct but interrelated tasks involved in analysis of any policy problem, developed by Harold Lasswell:

Clarify GOALS. What are our/their values and objectives? What do we /they want to achieve? Why should these values be given priority over other values in dealing with this issue? What do those general values or principles mean in this particular context?

Describe past and present TRENDS with respect to those goals. Where are we/they in relation to where we/they want to be? What is the magnitude of the problem? Is the problem getting worse or getting better? Is it a problem or a crisis?

Analyze CONDITIONING FACTORS affecting those trends. What are the causes of the problem? Why is the problem getting better or worse? What human/other actions make those trends move in desirable or undesirable directions?

Consider PROJECTIONS of probable future trends. What are the probable future outcomes under current policies? Is the problem likely to get better/worse? What are the best case/worst case scenarios?

Interrogate the DESIGN and EVALUATION of ALTERNATIVES. How are statements regarding ‘what should be done’ formulated? What action(s) will lead most effectively to the desired/sought after outcomes? What policies will be best for whom (and sub-optimal for others) over the long run? Why is a given policy option considered as ‘better’ or ‘worse’ than alternative policies?
The combined steps (proposal, proposal presentation, paper, paper presentation) for the term project are designed for you to think systematically and creatively about the environmental policy problem/challenge and ultimately produce a policy recommendation for dealing with the selected issue, and group/actors with whom you primarily identify (also addressing alternative perspectives). The objective is to articulate your original, creative, independent considerations of the problem you have chosen. I recognize that the time limits constrain your ability to collect substantive data, and to conduct comprehensive and detailed analyses of every different perspective/aspect of the problem by late April.

Thus, the ideal way forward through the project is to select an environmental policy problem/challenge you care about, and also one that has been the subject of many published studies and public discussions. In most cases, this will likely be policy challenges of national and/or international scale, where existing approaches to grappling with the challenge has been contentious and controversial for some time. This means that while it may be tempting to take up a new or local policy issue for this project, it may be too difficult to confront it satisfactorily by the semester’s end. However, the term project also must be approached with an open perspective, rather than an exercise in simply repackaging what you already know, or merely rationalizing your already existing preferences.

**University Recommended Syllabus Statements: Additional Logistics**

If you qualify for accommodations because of a disability, please submit to me a letter from Disability Services in a timely manner so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities. Contact: 303-492-8671, Willard 322, and [http://www.Colorado.EDU/disabilityservices](http://www.Colorado.EDU/disabilityservices) If you have a temporary medical condition or injury, see guidelines at [http://www.colorado.edu/disabilityservices/go.cgi?select=temporary.html](http://www.colorado.edu/disabilityservices/go.cgi?select=temporary.html) Disability Services' letters for students with disabilities indicate legally mandated reasonable accommodations. The syllabus statements and answers to FAQs can be found at [http://www.colorado.edu/disabilityservices](http://www.colorado.edu/disabilityservices)

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Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender, gender variance, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. See policies at [http://www.colorado.edu/policies/classbehavior.html](http://www.colorado.edu/policies/classbehavior.html) and at [http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student_code](http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student_code)

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Affairs at 303-492-5550. Information about the ODH, the above referenced policies and the campus resources available to assist individuals regarding discrimination or harassment can be obtained at [http://www.colorado.edu/odh](http://www.colorado.edu/odh)

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**SCHEDULE, READINGS, ASSIGNMENTS**
(I may add/remove readings as discussions unfold)

**PREFACE: Introduction**

**Wednesday, January 13 (week 1)**
- introductions, overview of the course, schedule, logistics

**Wednesday, January 20 (week 2)**
- reading summary #1 due by 5PM Tuesday January 19 via email


  Preface, Chapters 1 &2 (pp. xxv - 71)


PART I: VALUES and GOALS

Wednesday, January 27 (week 3)
- reading summary #2 due by 5PM Tuesday January 26 via email

   Chapters 3, 4 & 5 (pp. 72-177)


Wednesday, February 3 (week 4)
- reading summary #3 due by 5PM Tuesday February 2 via email

   Chapters 6, 7 & 8 (pp. 178-283)


Lakoff, G. (2008) The Political Mind Penguin, New York, Chapters 2, 4 & 7 (pp. 43-74, 93-109, 133-144)
**Wednesday, February 10 (week 5)**
- *individual project proposal due in class*

  Chapters 9 & 10 (pp. 284-366)

**& CASE #1: Conceptions of nature and wilderness**


**PART II: TRENDS**

**Wednesday, February 17 (week 6)**
- *reading summary #4 due by 5PM Tuesday February 16 via email*


**Wednesday, February 24 (week 7)**

- **reading summary #5** due by 5PM Tuesday February 23 via email

**CASE #2: Interactions between population, poverty, consumption & the environment**


**Wednesday, March 3 (week 8)**

- **individual project proposal presentations**

**PART III: CONDITIONING FACTORS**

**Wednesday, March 10 (week 9)**

- **reading summary #6** due by 5PM Tuesday March 9 via email


Wednesday, March 17 (week 10)
- reading summary #7 due by 5PM Tuesday March 16 via email


& CASE #3: Science, industry, public health and safety

Michaels, D. (2008) Doubt is Their Product: How Industry’s Assault on Science Threatens Your Health Oxford University Press, Oxford, UK Introduction (pp. ix-xii), Chapters 1, 5, 6, 14, 15 (pp. 3-11, 45-78, and 176-211)


Wednesday, March 24 – NO CLASS, SPRING BREAK 2010

PART IV: PROJECTIONS

Wednesday, March 31 (week 12)
- Film or Book Review due in class
- Class session with Prof Roger A. Pielke, Jr.


& CASE #4: Decarbonization and climate change


Wednesday, April 7 (week 13)
- reading summary #8 due by 5PM Tuesday April 6 via email


Pilkey, O. and L. Jarvis-Pilkey (2007) *Useless Arithmetic: Why Environmental Scientists Can’t Predict the Future* Columbia University Press, Chapters 1, 2 and 9 (pp. 1-44, and 182-204)


PART V: DESIGN and EVALUATION of ALTERNATIVES

Wednesday, April 14 (week 14)
- reading summary #9 due by 5PM Tuesday April 13 via email


Wednesday, April 21 (week 15)
- reading summary #10 due by 5PM Tuesday April 20 via email


& CASE #5: Constructing (& deconstructing) global warming & a COP15 retrospective


Wednesday, April 28 (week 16) term paper presentations

FINAL EXAM: Thursday, May 6 ~ 1030AM term papers due