

ENVIRONMENTAL SCIENCE AND POLICY PROGRAM

ESP 800: Introduction to Environmental Science and Policy

Spring 2018

Tuesdays, 1:00 – 3:50 pm

Room 273 Giltner Hall

Instructors

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Course Description

This team-taught course will provide a broad overview of core scholarship areas and key research questions in the intersection of environmental science and policy. It will explore the core concepts and research methods of multiple disciplines involved in policy-relevant environmental research with readings and presentations from scholars from MSU and visiting institutions. Students will learn basic concepts of interdisciplinary research, and develop a basic understanding of typical research methods and analytical techniques that will facilitate effective communication with members of different disciplines. Students will learn enough of the basics to know how to seek out expertise and communicate effectively with these experts to collaborate on policy-relevant environmental research questions that cross disciplinary boundaries. This course will introduce students to the reality of interdisciplinary scholarship via having a series of interdisciplinary MSU research teams visit the course over the semester to discuss their research and address topics related to facilitating interdisciplinary teamwork and translation of science into policy.

Course Objectives

There is no one ‘right’ way to do interdisciplinary research at the interface of science and policy, so we are not prescribing a set of steps or a blueprint for successful research. Rather, our objectives for this course are to equip students with the tools to embark on interdisciplinary research with the confidence to do sound science that is policy-relevant, and to create a positive ‘space’ for collaboration with scholars from other disciplines.

Readings

All manuscripts, book chapters etc. will be provided in advance on MSU Desire2Learn.

Books

The Honest Broker (Selection)

Roger Pielke, Cambridge University Press, ISBN-10: 0521694817 / ISBN-13: 978-0521694810

Don't Be Such a Scientist: Talking substance in an age of style (All)

Randy Olson, Island Press, ISBN-10: 1597265632 / ISBN-13: 978-1597265638

Available at the MSU Main Library Reserve West-2. Other readings will be made available through the course D2Lwebsite (<https://d2l.msu.edu/>).

Evaluation and Assessment

1. Participation/Facilitation	20%
2. Journal Assignments	20%
3. Midterm White Paper Assignment	30%
4. Final Proposal Assignment	30%
	<hr/>
	100%

1. Participation/Facilitation

Students will be expected to participate in each class and to facilitate at least one class discussion. This discussion will focus on the student's discipline/research interest and the related policy implications and potential for interdisciplinary team science. In order to facilitate discussion for this session the student will assign **one reading** from their discipline/research interest the week before they facilitate class discussion. Preferred papers include readings for lay audience and/or articles that examine the interdisciplinary aspects of the field and/or potential policy implications.

2. Journal Assignments

Three journal prompts will be given through the course of the semester. Student teams are expected to respond to the prompt with a 500-800 word essay. It is important to not only respond to the prompt in a concise and interesting manner, but also develop the ability to write with others.

3. Midterm White Paper Assignment

For the midterm students will be expected to write a white paper on their current research or research interest and to develop a short presentation to present this work to a non-science audience. This presentation will occur on **March 13th**, and the paper will be due on **March 20th**.

4. Final Proposal Assignment

Groups of about three students will be expected to write a NSF research proposal and to develop a short presentation of their proposed research. Students will have most of the semester to work on this project with periodic updates.

Class Attendance and Participation

We will be learning together in this class. All ESP 800 students are expected to assume part of the responsibility for the learning process by taking turns in facilitating discussions, coordinating interaction with visiting speakers, and suggesting readings for the class. This constitutes a significant part of the grade for the course. We therefore expect you to behave as mature scholars and colleagues, by being prepared for the class meetings, turning in written work on time, and coming to class on time (unless there are legitimate extenuating circumstances about which you have informed us ahead of time).

Apart from weekly class participation, we will provide detailed **evaluation rubrics** for all grade items. Check *D2L – Content tab – Evaluation Rubrics (2018)*.

Detailed grade scheme

	Grade Item	Type	Association	Max. Points	Weight
<input type="checkbox"/>	Participation ▾				22
<input type="checkbox"/>	Class Participation Module 1 (2 weeks) ▾	Numeric	-	1	5
<input type="checkbox"/>	Class Participation Module 2 (4 weeks) ▾	Numeric	-	2	10
<input type="checkbox"/>	Class Participation Module 3 (2 weeks) ▾	Numeric	-	1	5
<input type="checkbox"/>	Class Participation Module 4 (2 weeks) ▾	Numeric	-	6	20
<input type="checkbox"/>	Class Participation Module 5 (4 weeks) ▾	Numeric	-	2	10
<input type="checkbox"/>	Discussion Facilitator ▾	Numeric	-	10	50
<input type="checkbox"/>	Journal Assignments ▾				18
<input type="checkbox"/>	Journal 1 ▾	Numeric	-	6	33.3
<input type="checkbox"/>	Journal 2 ▾	Numeric	-	6	33.3
<input type="checkbox"/>	Journal 3 ▾	Numeric	-	6	33.4
<input type="checkbox"/>	Midterm White Paper Assignment ▾				30
<input type="checkbox"/>	Presentation ▾	Numeric	-	6	20
<input type="checkbox"/>	Paper ▾	Numeric	-	24	80
<input type="checkbox"/>	Final Proposal Assignment ▾				30
<input type="checkbox"/>	Proposal Presentation ▾	Numeric	-	10	33.3
<input type="checkbox"/>	Mock NSF Proposal ▾	Numeric	-	20	66.7

* Grades for weekly class participation will be posted after the completed module.

Communication

Students and Instructors will communicate via D2L (<https://d2l.msu.edu/>). Course website is called "*ESP800 Intro to Environ Sci & Policy Spring 2018*". Students are responsible to check the website periodically for news and updates. Unless otherwise stated, each assignment should be posted on D2L, and assignments should be submitted to instructors via email.

Grading Scale

We will compute your final grade for the course as follows:

<u>MSU grade points</u>	<u>Composite class points</u>
4.0	90.0 - 100.0
3.5	85.0 - 89.9
3.0	80.0 - 84.9
2.5	75.0 - 79.9
2.0	65.0 - 74.9
1.0	60.0 – 64.9

Disability Accommodations

Any student who feels that she or he may need accommodations based on a disability should make an appointment to see Prof. Zhang or Prof. Zwickle. Resources and information for students with disabilities are available at <http://www.rcpd.msu.edu/> or at the resource center in 120 Bessey Hall.

Academic Integrity

Academic integrity is a fundamental value of higher education at any institution of higher education; therefore, we cannot tolerate acts of cheating, plagiarism, falsification or attempts to cheat, plagiarize or falsify. Should we determine that an academic integrity violation has taken place, we reserve the right either to assign a grade sanction or to refer the case to appropriate campus authority. **Ignorance (not knowing the rules) is NOT an excuse for an academic integrity violation.** Therefore, if you have any questions about what constitutes academic dishonesty, please do not hesitate to speak with us before you turn in a test or assignment.

Drops and Adds

The last day to add this course is the end of the first week of classes (1/12/2018). The last day to drop this course with a 100 percent refund and no grade reported is 2/02/2018. The last day to drop this course with no refund and no grade reported is 02/28/2018. You should immediately make a copy of your amended schedule to verify you have added or dropped this course.

ESP 800 Class Modules for Spring 2018

1. Introduction: Social Science, Natural Science, Engineering, Interdisciplinary Research, and Policy – 2 weeks

- Difference and similarity among natural and social sciences, and engineering
Interdisciplinary research in environmental science and policy

2. Environmental Policy – 4 weeks

This section focuses on factual information related to environmental policy. Argumentation, values, opinions, and reflections will be introduced in subsequent section. Relevant reading will be assigned by the speakers.

- Overview of environmental policy
 - Book: *Public Policies for Environmental Protection* (on library reserve)
- Environmental policies in the US, and comparisons with European and other nations
- Public participation in environmental policy
- The role of science advisory boards
- Conflict resolution and negotiation

3. Communicating Science – 2 weeks

This module covers discussions on communicating science to the public.

- Book: *Don't Be Such a Scientist: Talking substance in an age of style* by Randy Olson (on library reserve)

4. Environmental Ethics – 2 weeks

This module focuses on ethics, arguments, opinions, values etc. among scientists from various disciplines.

5. Science-Policy Nexus – 4weeks

Sciences for policy presented from different scientific fields will be focused. Interactions between science and policy, and translation mechanisms of science to policy will be covered.

Book: *The Honest Broker* by Roger Pielke – *select chapters* (on library reserve)

- Examples from various disciplines
- EPA's science advisory boards
- IPCC and other climate advisory boards
- Funding interdisciplinary and policy-oriented research teams (NSF)

Schedule Spring 2018

DATE, TOPIC AND SPEAKER (S)	READINGS AND ASSIGNMENTS
<p><u>January 9: Introduction</u></p> <p>Course Overview; Introductions; Discussion on link between science and policy, D2L Zwickle and Zhang</p>	<p>Syllabus</p>
<p><u>January 16: Introduction</u></p> <p>Topic: TBA Michael O'Rourke, Philosophy</p>	<p>- Readings TBA</p>
<p><u>January 23: Environmental Policy Module</u></p> <p>Topic: TBA Pat Soranno, Fisheries and Wildlife</p>	<p>-Readings TBA</p> <p>Writing prompt for the journal 1</p>
<p><u>January 30: Environmental Policy Module</u></p> <p>Topic: Overview of environmental policy Jinhua Zhao, Economics and ESPP</p>	<p>-<i>The Honest Broker</i> by Roger Pielke Chapters 1 through 5 (Uncertainty)</p> <p>-Other Readings TBA</p>
<p><u>February 06: Environmental Policy Module</u></p> <p>Topic: TBA Steve Chester, Miller Canfield</p>	<p>-<i>The Honest Broker</i> by Roger Pielke Chapters 6 (<i>How science policy shapes ...</i>) through 9</p> <p>- Other Readings TBA</p> <p>Journal 1 due Midterm Assignment Assigned</p>
<p><u>February 13: Environmental Policy Module</u></p> <p>Topic: TBA Robby Richardson, Community Sustainability</p>	<p>Readings TBA</p> <p>Writing prompt for Journal 2</p>
<p><u>February 20: Communicating Science Module</u></p> <p>Topic: Perspective of environmental journalists Layne Cameron, Communications and Brand Strategy</p>	<p>Readings TBA</p>
<p><u>February 27: Communicating Science Module</u></p> <p>Topic: Bruno Takahashi, Communication</p>	<p>Readings TBA -<i>Don't Be Such a Scientist: Talking substance in an age of style</i> by Randy Olson</p> <p>Journal 2 due</p>
<p><u>March 6</u></p>	<p>SPRING BREAK March 5-9</p>

DATE, TOPIC AND SPEAKER (S)	READINGS AND ASSIGNMENTS
<p><u>March 13</u></p> <p>Midterm white paper presentation</p>	<p>-Other Readings TBA</p>
<p><u>March 20: Environmental Ethics Module</u></p> <p>Topic: Environmental Ethics Module Zhang and Zwickle</p>	<p>Midterm white paper due Proposal assigned (Groups formed)</p> <p>-Other Readings TBA</p>
<p><u>March 27: Environmental Ethics Module</u></p> <p>Topic: Environmental Ethics Module Zwickle and Zhang</p>	<p>Readings TBA</p>
<p><u>April 3: Science-Policy Nexus Module</u></p> <p>Topic: TBA Laura Schmitt Olabsi, Community Sustainability</p>	<p>Readings TBA</p> <p>Journal 3 prompt (Fate of the Earth Symposium)</p>
<p><u>April 10: Science-Policy Nexus Module</u></p> <p>Topic: TBA Dan Costa, US EPA</p>	<p>Readings TBA</p>
<p><u>April 17: Science-Policy Nexus Module</u></p> <p>Topic: TBA Joseph Messina, Geography</p>	<p>Readings TBA</p> <p>Journal 3 due</p>
<p><u>April 24</u></p> <p>Topic: TBA Joe Hamm, Criminal Justice and ESPP</p> <p>Course Wrap-Up and Final Discussion Zwickle and Zhang</p>	<p>Readings TBA</p>
<p><u>Finals: May 2</u></p> <p>Proposal Presentation 10:00 am - 12:00 pm</p>	<p>FINAL PRESENTATIONS</p> <p>Proposal Due</p>