

Welcome to Rhetoric, Science, and Public Engagement!

This course focuses on theoretical and practical aspects of public engagement with scientific research, policy, and management, with an emphasis on science communication. During the semester, we'll explore University of Wisconsin's land grant mandate to share university research with the public and use university resources to explore public needs. We'll build from readings in science communication and public participation in scientific research, and reach out to experts in Wisconsin working on a variety of projects with public stakeholders. At the end of the class, you'll use what you've learned this semester about the theory and practice of science communication and public engagement to design, execute, and assess an activity that engages a segment of the public in scientific research (maybe even your own!). In short, this class is about learning and doing.

Learning Outcomes

- Understand the mission and vision of land grant institutions
- Recognize the various forms through which public stakeholders intersect with scientific research and decision-making and the complications and consequences of each
- Identify best practices for public engagement and science communication
- Become familiar with a variety of organizations throughout Wisconsin working to engage relevant publics in scientific research and decision-making
- Create, execute, and assess a plan of action for how to engage the public in scientific research

Course Texts

- Cox, R. and P. Pezzullo (2016). *Environmental Communication and the Public Sphere*. 4th edition.
- Additional readings are available on Dr. Druschke's Headwaters Lab web site: <http://headwaterslab.com>. Download, read, and annotate, then bring all readings to class either digitally or in print for discussion.

Grading, Policies, and Due Dates

Credit hours: Students should expect to spend ~2.5 hours in class and 6 hours out of class on our work each week.

Attendance and engagement: Students are expected to come to class having read and completed all assigned materials and work, and being prepared to speak and engage. Each student is expected to be an active contributor *in each course period*, sharing experiences, insights, and questions and responding respectfully to fellow students, the instructor, and guest speakers. Students are expected to attend all course meetings, but Dr. Druschke anticipates that students might miss up to two course meetings per semester for cases of illness, conference travel, family emergency, etc. Engagement will be graded on a S/U basis each course period. Dr. Druschke will begin requiring weekly reading response papers if students don't seem prepared for class.

Exams: Every few weeks, we will have an exam that covers the most recent course material and asks students to check in about key concepts and outstanding questions. These exams offer a chance for you to highlight what you've learned and serve as a foundation for reviewing the key terms and concepts from the course.

Engagement event analysis paper: Any time between February and April, you will select and attend a public engagement event and write a paper about it that summarizes and analyzes the event, incorporating concepts from the literature discussed in class. This paper is a chance to see how an engagement event works out in the world, in order to consider how to craft your own engagement event for the final project.

Final action and analysis paper: In lieu of a final exam, students will create and execute an action that engages some segment of the public with some aspect of scientific research, and then write a 10-pg. analysis and justification of the action based on course readings. (Students are encouraged to collaborate on these action projects, but each student should write up her own final paper.) Examples of projects might include a citizen science data collection, a public meeting about environmental legislation, a public lecture about current research, a short video, an article in a venue like Edge Effects, or an educational activity for a local school. This project offers you the chance to test your newfound skills in public engagement and science communication, engaging a real audience in research that interests you in some consequential way. Small projects throughout the semester build towards this final action.

Grading Scale: A 93 / AB 87 / B 83 / BC 77 / C 70 / D 60 / F

Grading breakdown:

Attendance and engagement	15%
Exams 1, 2, 3 (10% each)	30%
Engagement analysis paper	15%
Pitch presentation + student responses	5%
Final action and analysis paper	35%

Key dates

Exam 1 > Tuesday, Feb. 13

Exam 2 > Tuesday, Mar. 6

Exam 3 > Thursday, Apr. 19

Engagement analysis paper > Tuesday, Feb. 13 through Tuesday, April 3

Individual conferences: Tuesday, Feb. 20 and Thursday, Feb. 22

Pitch presentations > Tuesday, Mar. 13 and Thursday, Mar. 15

Student-led project workshops > Tuesday, Mar. 20, Thursday, Mar. 22

Final action analysis paper > Monday, May 7

Accommodations for Special Needs

Any student with a documented disability is welcome to contact Dr. Druschke as early in the semester as possible so that she can arrange reasonable accommodations. As part of this process, please be in touch with the McBurney Disability Resource Center at 702 W. Johnson St., 608-263-2741, mcburney@studentlife.wisc.edu. Please let Dr. Druschke know if there are particular resources you need to succeed in the class.

The Writing Center

Students should make use of free writing assistance at The Writing Center, 6171 Helen C. White Hall, during any phase of a writing project. Call 608-263-1992 for an appointment.

Academic Honesty

All submitted work must be your own. If you consult other sources (class readings, articles or books from the library, articles available through internet databases, or websites, etc.) these MUST be properly documented, or you will be

charged with plagiarism and will receive an F for the assignment. In some cases, this may result in a failure of the course. If you need any help understanding when to cite something or how to indicate your references, please ask.

Respect and Inclusion

If you must come in late, please do not disrupt the class. Please turn off all electronic devices not being used for the class. I am committed to fostering a shared community that views the various forms of diversity we bring to the classroom as our greatest resources: differences of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, culture, political affiliation, and religion, among others. I expect students to be relentlessly kind in their criticisms and open to learning from the perspectives of others. I am committed to using your preferred name and pronouns. Rather than calling roll on the first day, I invite students to introduce themselves with their preferred names, and you should feel free to include your preferred pronouns then or to speak with me after class or contact me via email. If your preferred name or pronouns change during the semester, please let me know and we can develop a plan to share this information with others in a way that feels safe for you.

PAPER DETAILS

Engagement Event Analysis Paper | 15% of course grade | Due February 13 - April 3 | 4-5 pgs. plus references

You will select and attend a public engagement event during the semester and write a summary and analysis paper about it, incorporating concepts from the literature discussed in class. Consider attending a public lecture, a public meeting of an organization's Board of Directors, a local town council meeting, etc. The event you choose is up to you, but it should be related to public engagement with science in some way. This paper should briefly describe the event and its context and mostly analyze the event, using concepts and terminology from course readings.

The paper will be scored as follows:

- Description of the event (25%)
- Analysis of the event as an opportunity for public engagement with science, utilizing concepts and terminology from the readings to place it into context with regard to models/mechanisms of public understanding, public engagement, public participation, etc. (50%)
- Quality of writing (25%)

Final Action and Analysis | 35% of final grade | Due May 7 | 10 pgs. plus references

Process:

Individual conferences: Tuesday, February 20 and Thursday, February 22

Pitch presentations: Tuesday, March 13 and Thursday, March 15

Student-led project workshops: Tuesday, March 20 and Thursday, March 22

Do something: Sunday, April 1 – Monday, April 30

Final paper due: Thursday, May 3

Project description:

In lieu of a final exam, students will create and execute an action that engages some segment of the public with some aspect of scientific research or management, and then write a 10-pg. analysis and justification of the action based extensively on the course readings. (Students may work in groups on these action projects, but each student should write up her own final paper.) Examples of projects might include a citizen science data collection, a public

meeting about environmental legislation, a public lecture about current research, a short video, an article in a venue like Edge Effects, or an educational activity for a local school. This project offers you the chance to test your newfound skills in public engagement and science communication, engaging a real audience in research that interests you in some consequential way. A number of smaller assignments throughout the semester will build towards this final action, including a graded proposal/pitch presentation.

Learning outcomes:

- Apply relevant academic theory to analyze real-world cases
- Write extended summaries and analyses
- Plan and present a polished collaborative oral presentation
- Create and execute an audience-aware public intervention in a science-related topic

Details:

Each student will submit a ten-page (double-spaced) analysis to Dr. Druschke that:

- describes—IN DETAIL!—the preparation for, execution of, and consequences of your action, including your employment of backwards design, the BIFF framework, a logic model, or something similar.
- analyzes the action taken including a consideration of:
 - why this was the best possible action to take given the situation and any constraints (what other alternatives did you weigh? why did you choose this one?)
 - a description of the situation you were hoping to intervene in
 - the specific audience that you targeted and why this was the appropriate audience – what do they know about the issue? what do you know about them? how did you work to connect to them specifically?
 - the potential intended and unintended consequences of the action
 - the particular content, design, and delivery choices and their connections to desired consequences
 - how this action exemplified the learning you did in this class (this should be the majority of your paper!)
 - what the specific exigence was that you were reacting to and why you addressed this exigence in this particular way
 - how you assessed or evaluated the success of your action and how satisfied you are with the outcome
- attaches documentation of the action (photos, outreach materials, lesson plans, etc.)

The “A” project will:

- Explain precisely why you chose the action, including an explanation of what was gained or lost through this choice. Why was this action appropriate to the issue, the exigence, the course, and the student? How did you prepare for potential intended or unintended consequences?
- Describe in specific detail the action taken and include (as an appendix) documentation of that action.
- Include a detailed formal assessment of the project, relying on an assessment model from course readings.
- Use that assessment to consider why or why not this action achieved the desired outcome.
- Draw heavily from multiple course readings, including specific concepts, ideas, quotes, and theories. Students will use the course readings to complicate, clarify, or analyze their action, and vice versa.
- Be grammatically and syntactically flawless.
- Be imaginative, lively, informative, and consequential.

Daily plans | Subject to change as the semester progresses – check <http://headwaterslab.com> for updated assignments and downloadable readings

WEEK ONE (1/22-1/26)			
Tu 1/23	Introductions and syllabus review <u>Homework for Thursday, January 25:</u> <ul style="list-style-type: none"> Review syllabus Write down three questions Write down your goals for the course Buy course text! 	Th 1/25	Introduction to Dr. Druschke and rhetoric <u>Homework for Tuesday, January 29:</u> <ul style="list-style-type: none"> Druschke & McGreavy, "Why rhetoric matters for ecology" Cox & Pezzullo, ch. 1 "Studying/Practicing Environmental Communication" Cox & Pezzullo, ch. 3 "Symbolic Constructions of Environment"
WEEK TWO (1/29-2/2)			
Tu 1/30	No class meeting <u>Homework for Thursday, February 1:</u> <ul style="list-style-type: none"> "The Land-Grant Tradition," Association of Public and Land Grant Institutions 	Th 2/1	Introduction to outreach, extension, and land grants <u>Homework for Tuesday, February 6:</u> <ul style="list-style-type: none"> Skrip, "Crafting and Evaluating Broader Impact Activities" Kellogg, "Logic Model Development Guide" Hendrickson, "A Backwards Approach to Inquiry"
WEEK THREE (2/5-2/9)			
Tu 2/6	Introduction to project assessment <u>Homework for Thursday, February 8:</u> <ul style="list-style-type: none"> Begin prepping for Exam #1 	Th 2/8	Review for Exam #1 <u>Homework for Tuesday, February 13:</u> <ul style="list-style-type: none"> Review readings on science communication, Cooperative Extension, and assessment for Tuesday's exam
WEEK FOUR (2/12-2/16)			
Tu 2/13	Exam #1: Environmental communication, land-grant mission, assessment <u>Homework for Thursday, February 15:</u> <ul style="list-style-type: none"> Gather examples of public engagement Gross, "The roles of rhetoric in the public understanding of science" Rowe and Frewer, "A typology of public engagement mechanisms" 	Th 2/15	Intro to writing projects, review of scicomm models and engagement examples, review Gross, Rowe & Frewer <u>Homework for Tuesday, February 20:</u> <ul style="list-style-type: none"> Prepare a short, written statement of interest for the final project (to review during conferences)
WEEK FIVE (2/19-2/23)			
Tu 2/20	INDIVIDUAL CONFERENCES!! No full class period. <u>Homework for Thursday, February 22:</u> <ul style="list-style-type: none"> Collins and Evans, "The Third Wave of Science Studies: Studies of Expertise and Experience" 	Th 2/22	INDIVIDUAL CONFERENCES!! No full class period. <u>Homework for Tuesday, February 27:</u> <ul style="list-style-type: none"> Finish reading
WEEK SIX (2/26-3/2)			
Tu 2/27	Follow-up about group projects, discussion of Collins and Evans (return to Gross, Rowe & Frewer) <u>Homework for Thursday, March 1:</u> <ul style="list-style-type: none"> Begin preparing for Exam #2 	Th 3/1	Review for Exam #2

WEEK SEVEN (3/5-3/9)			
Tu 3/6	Exam #2: Gross, Rowe & Frewer, Collins & Evans <u>Homework for Thursday, March 8:</u> <ul style="list-style-type: none"> Shirk et al., "Public participation in scientific research: a framework for deliberate design" Druschke and Seltzer, "Failures of engagement: lessons learned from a citizen science pilot study" Bonney, et al., "Can citizen science enhance public understanding of science?" 	Th 3/8	Review of citizen science readings <u>Homework for Tuesday, March 13:</u> <ul style="list-style-type: none"> Prepare for pitch presentations
WEEK EIGHT (3/12-3/16)			
Tu 3/13	PITCH PRESENTATIONS <u>Homework for Thursday, March 15:</u> <ul style="list-style-type: none"> Continue prepping for pitch presentations 	Th 3/15	PITCH PRESENTATIONS <u>Homework for Tuesday, March 20:</u> <ul style="list-style-type: none"> Type up responses to three classmates re. presentations
WEEK NINE (3/19-3/23) Dr. Druschke in France			
Tu 3/20	STUDENT-LED PROJECT WORKSHOP <u>Homework for Thursday, March 22:</u> <ul style="list-style-type: none"> Refine project based on classmate feedback 	Th 3/22	STUDENT-LED PROJECT WORKSHOP <u>Homework for Tuesday, April 3 (after spring break):</u> <ul style="list-style-type: none"> Refine project based on feedback Cox and Pezzullo, ch. 12 "Public participation in environmental decisions"
WEEK TEN (3/26-3/30)			
Tu 3/27	SPRING BREAK! No classes.	Th 3/29	SPRING BREAK! No classes.
WEEK ELEVEN (4/2-4/6)			
Tu 4/3	Public participation discussion; last day to submit engagement analysis papers <u>Homework for Thursday, April 5:</u> <ul style="list-style-type: none"> Cox & Pezzullo, ch. 10, "Environmental Justice and Climate Justice Movements" 	Th 4/5	Environmental justice discussion <u>Homework for Tuesday, April 10:</u> <ul style="list-style-type: none"> Read about guest speaker Prepare three discussion questions
WEEK TWELVE (4/9-4/13)			
Tu 4/10	Guest speaker on environmental justice: TBD <u>Homework for Thursday, April 12:</u> <ul style="list-style-type: none"> Cox and Pezzullo, ch. 13 "Managing conflict: collaboration and environmental disputes" 	Th 4/12	Conflict and collaboration discussion <u>Homework for Tuesday, April 17:</u> <ul style="list-style-type: none"> Prepare for review for Exam #3
WEEK THIRTEEN (4/16-4/20)			
Tu 4/17	Review for Exam #3 <u>Homework for Thursday, April 19:</u> <ul style="list-style-type: none"> Review for Exam #3 	Th 4/19	Exam #3: Citizen science, public engagement, and environmental justice <u>Homework for Tuesday, April 24:</u> <ul style="list-style-type: none"> Prepare a short presentation about your final project. How did it go? What worked?
WEEK FOURTEEN (4/23-4/27)			
Tu 4/24	STUDENT PRESENTATIONS	Th 4/26	STUDENT PRESENTATIONS
WEEK FIFTEEN (4/30-5/4)			
Tu 5/1	STUDENT PRESENTATIONS	Th 5/3	Presentation wrap-up and course evaluations
EXAM WEEK			
M 5/7	FINAL PAPER DUE via email by 5pm		