ENGL 305 / ENVIR ST 305 / Spring 2020
Rhetoric, Science, and Public Engagement (3 cr.)
Dr. Caroline Gottschalk Druschke <cdruschke@wisc.edu> (she/they)
Tuesday/Thursday 1-2:15pm / Education L155

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. 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 science to consider the challenges to and opportunities for public engagement with science. At the end of the class, you'll use what you've learned about the theory and practice of public engagement and science communication to design, execute, and assess an activity that engages a segment of the public in scientific research (ideally your own!). In short, this class is about learning and doing.

Learning Outcomes

- Understand, critique, and enact the mission and vision of land grant institutions
- Recognize the various forms through which public stakeholders intersect with scientific research and decision-making, including the complications and consequences of each
- Identify best practices for public engagement and inclusive science communication
- Create, execute, and assess a plan of action to engage the public in scientific research

Course Texts

- Readings are available on Dr. Druschke's web site: http://headwaterslab.com and on Canvas. Download, read, annotate, and bring all readings to class 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 each week.

Attendance and engagement: Students are expected to come to class having read and completed all assigned materials and work, 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 others. 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, 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 discussion.

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, serve as a foundation for reviewing key terms and concepts from the course, and prepare you for your final course project. Exams are **not** comprehensive.

Engagement event analysis paper: In February/March, you will select and attend a public engagement with science event and write a paper about it that summarizes and analyzes the event, incorporating concepts from class literature. This paper is a chance to see how an engagement event works in practice, including what goes well and what doesn't, to consider how to craft your own event for the final project. (Details below.)

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 their own final paper.) Examples might include a citizen science data collection, a public meeting about environmental legislation, an interactive art exhibit, a public lecture, a short video, an article in a venue like the online journal *Edge Effects* of the Center for Limnology blog, 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. Students are welcome to extend projects they're already involved in, join existing efforts, work with lab mates or advisors, or connect this activity with a project in another class. While this project may seem overwhelming, this supportive class context is a great time to practice this work, and we have a number of smaller projects and activities scaffolded throughout the semester that build towards this final action. (Details below.)

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

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

Key dates
Exam 1 > Tuesday, Feb. 11
Exam 2 > Thursday, Feb. 27
Exam 3 > Tuesday, Apr. 9
Engagement analysis paper > Thursday, Feb. 13 through Tuesday, Mar. 31
Individual conferences > Tuesday, Mar. 3 and Thursday, Mar. 5
Pitch presentations > Tuesday, Mar. 10 and Thursday, Mar. 12
Final action analysis workshops > Tuesday, Apr. 14 and Tuesday, Apr. 28
Project presentations > Thursday, Apr. 16, Tuesday, Apr. 21, and Thursday, Apr. 23
Final action analysis paper > Tuesday, May 5

Accommodations for Special Needs

If you have a disability that could impact your work in this class, please contact Dr. Druschke at the beginning of the semester so that reasonable accommodations may be worked out to support your success. You should also contact McBurney Disability Resource Center (702 W. Johnson Street, Ste. 2104 / 608-263-2741 (voice) / 608-225-7956 (text) / mcburney@studentlife.wisc.edu) for support. Please communicate with Dr. Druschke about your needs!

The Writing Center

Make use of free writing assistance at The Writing Center, 6171 Helen C. White Hall, during any phase of a writing project. Schedule online: <https://writing.wisc.edu/individual/makeanappointment/>.

Respect and Inclusion

I am committed to fostering a shared classroom community that is sensitive to the very different experiences and realities of our students, and that views our various forms of diversity as our greatest resources: differences of immigration status, gender, sexuality, disability, age, socioeconomic status, ethnicity, race, political affiliation, religion, and language, 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 and invite you to introduce yourselves with your preferred names. If these change during the semester, I invite you to let me know so that you can work together to develop a plan to share this information in a way that is safe for you. I want all of my students to know that I welcome you, and I hope to connect you to whatever campus resources you need (the LGBT Campus Center, the Multicultural Student Center, the Writing Center, the Black Cultural Center, and so on). I will probably screw up from time to time, but I hope you will call me on it, and I will do my best to demonstrate that commitment in all of our activities this semester.

WRITING PROJECT DESCRIPTIONS

ENGAGEMENT EVENT ANALYSIS PAPER | 15% of course grade | Due Feb. 13 – Mar. 31 | 4-5 pgs. + references

You will select and attend a public engagement event during the semester and write a summary/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 & ANALYSIS | 35% of final grade | Due May 5 | 10 pgs. + references & appendix

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 their 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 and multiple peer workshops.

Process:

Meet with Dr. Druschke: Tuesday, March 3 and Thursday, March 5
Pitch your project: Tuesday, March 10 and Thursday, March 12
Workshop with peers: Tuesday, April 14 (assessment) and Tuesday, April 28 (paper drafts)
Do something: Wednesday, April 1 – Thursday, April 30
Present about what you're doing: Thursday, April 16, Tuesday, April 21, and Thursday, April 23
Submit final paper to Canvas: Tuesday, May 5

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 BIIF framework, or a logic model
- analyzes the action taken including a consideration of:
    - what the specific exigence was that you were reacting to and why you addressed this exigence in this particular way
    - 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?)
    - the specific audience that you targeted and why this was appropriate – what do they know about the issue? what do you know about them? how did you work to connect to them specifically? how did this choice improve the inclusivity of science communication?
    - 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!) (with *specific, cited, deep* connections to class readings)
    - how you assessed or evaluated the success of your action and how satisfied you are with the outcome
- includes an appendix that documents 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?
- Explain how this project engaged with the spirit of inclusive science communication and demonstrated a nuanced understanding of the Wisconsin Idea.
- Draw heavily from multiple course readings, including specific, cited concepts, ideas, quotes, and theories. In the "A" project, students will use course readings to complicate, clarify, or analyze their action, and will use their action to complicate, clarify, or analyze course readings.
- Describe in specific detail the action taken and include documentation of that action.
- Include a detailed formal assessment of the project, relying on a course assessment model.
- Use that assessment to consider why or why not this action achieved the desired outcome.
- Be grammatically and syntactically appropriate.
- Be imaginative, lively, informative, and consequential.