**J410 / J510: Science Communication Strategies**

Class Time: M/W Noon - 1:45 pm Hollie Smith, Ph.D.

Classroom: McKenzie 229 hollies@uoregon.edu

Office Hours: M/W 2-3 pm or by appt Office: Franklin Bldg, 131

TA:

Welcome to J410/510! Science Communication Strategies is designed for students from all disciplines and is designed to engage students with a wide variety of science interests. This course examines how science is communicated through popular media, outreach, and institutions of research. We will be examining current case studies of science communication – vaccines/autism, climate change and wildfire, and genetically modified food – and asking important questions about why some communication “sticks”, who benefits from it, and why science has become a point for discussion and debate. Students will be doing hands on science communication projects, learning how to communicate complex scientific topics in different formats to different groups. Students will also have the opportunity to attend multiple science communication “events” – pub talks, documentaries, and museums – throughout the semester. No science or communication background required.

So, why is this course important for *you*?

1. The way we communicate science and about science is critically important in today’s society.
2. This course will help you be both a more literate consumer of science messages and a more adept communicator for working with different audiences.

**Learning Outcomes**

At the end of the course, you should be able to:

* Critically reflect on the history of science in popular media
* Critically reflect on current science issues in the public sphere today
* Identify the popular strategies for communicating science to different audiences
* Simplify scientific findings / studies into key points
* Articulate ethical best practices for communicating science
* Present clearly, in an engaging manner both verbally and visually

**Canvas and Assigned Readings**

You should complete the assigned readings listed on the schedule *before* class

## Required Textbook:

## *Merchants of Doubt*

ISBN: 9781608193943

By Conway, Erik M. and Oreskes, Naomi

Digital subscription to High Country News (Free for you!) – Assigned readings in each issue

The news via major media outlets (at least start checking 1-2 throughout the week).

All other required readings will be posted on our course Canvas site at least 1 week in advance. Enrolled students will automatically have access to the course Canvas site, where important course updates and announcements will be posted. You should get in the habit of checking the site regularly.

**Grading Breakdown**

Communicate Science! 400 points

Public Communication Reflections 150 points

Group Case Study Assignment 250 points

Participation 200 points

1,000 points

**Grading System**

|  |  |  |  |
| --- | --- | --- | --- |
| Total Number of  Points Earned | Grade Equivalent | Total Number of Points Earned | Grade Equivalent |
| 951-1,000 | A | 734-766 | C |
| 901-950 | A- | 701-733 | C- |
| 867-900 | B+ | 667-700 | D+ |
| 834-866 | B | 634-666 | D |
| 801-833 | B- | 601-633 | D- |
| 767-800 | C+ | 600 or below | F |



**Assignment Details**

**Communicate Science! Assignment (40%):** For this assignment, you can choose any scientific topic but it should be something you’re interested in learning more about. You will have to create 3 different types of communication for 3 different audiences about the issue. Your options are open here and I want you to get creative. I tried to space the due dates out, so the first part of the assignment (an overview of the scientific topic) is due in Week 3, the first communication is due in Week 5, the second communication is due in Week 7, and the third communication is due in Week 9, along with a short reflection on what you learned as a communicator. Your options start with, but are not limited to:

A written piece that you would publish somewhere (think an Op-Ed or a Narrative Story)

A photographic piece that you would publish as a graphic representation of the issue (at least 5 photos that tell a story required for this)

A short digital piece (must be all original work)

You can do two of the same format (two written pieces, two photographic pieces, etc) but you cannot do all 3 the same.



**Public Communication Reflection (15% - 5% each):** For this assignment, you will consume/attend three different public communication events. First, you will attend two research talks outside of class during the term. I will provide a short list of options to start, but you can also find others that are not on the list. The research talk can happen on campus or off (think pub-talks). Second, you will find a documentary or pop culture film of your choice that takes on a scientific issue. I will also provide a starting list, but you can choose from films not on the list. This can be anything – health and fitness science, food-related science, climate change, etc – and it should be something you’re interested in. You will analyze both of these types of public communication from the perspective of a communicator: I want you to identify what strategies were used in this mode of public communication and provide a critique on whether you think the science was represented well and if the strategies were effective – and if so, why. What do you think worked? What didn’t work? Each public communication reflection will be approximately 2-3 double spaced pages and should be turned in within one week of attending the event.

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**Group Case Study (25%):** Working in groups of 6, you will analyze 1 case study out of the 5 cases we’ll be studying as a class. Each case study represents a time when science was politicized, polarized, or misrepresented in communication. You will analyze the history of the issue, the science itself, and the communication of the issue. Each group will then be required to lead the class for an entire class period to show the different sides of the issue. This is designed to get you thinking about how to communicate about the issue and be comfortable presenting in front of the class. You should plan on getting creative. Don’t just lecture for an hour and 30 minutes – plan an activity, get people outside (weather permitting), and figure out how to make this science learning participatory. All groups must meet with Dr. Smith at least 2 weeks before their presentation date to go over a game plan. Your peers will be filling out an evaluation of your class, which will be anonymized and then you’ll get to see the feedback, and the peer feedback grade will account for 5% of the 25%.

**Class Participation (20%):** This class depends on active participation. This grade differs from attendance; it evaluates your constructive, in-class contributions. I want to hear different ideas, approaches and solutions*.*

**Attendance Policy**

Class participation (see above) is not the same thing as attendance. Attendance is whether or not you’re in class. Participation is what you do once you’re there. You are expected to be in class for each class period. Accordingly, unless excused prior, more than two absences will begin to affect your final course grade negatively by one third of a letter grade (+ or -). (So, if your final grade is a A-, and you have three absences, your final grade becomes a B+.) Two notes:

1. Unless there are extenuating circumstances, you cannot pass this class if you have more than four absences.
2. I do NOT do excused vs. unexcused absences (unless it’s for official university business). So, choose them wisely.

**24/72/7 Rules**

**24:** When I return an assignment, please take at least 24 hours to review my feedback before you come to me to discuss it.

**72:** When you email me with questions or concerns, I will respond within 72 hours (3 days). Please understand that I teach multiple classes, do research, and advise multiple students. Immediate response is not often possible.

**7:** If you want to meet to discuss an assignment, you have 7 days to meet with me after it is handed back. I will not meet the last week of the semester to discuss assignments that were returned early on.

**Class Etiquette Policy**

The point of college is to prepare you to become a thoughtful citizen, who is ready to be engaged with the world, and give you skills that will serve you beyond your time at UO. I treat classes like a workplace built for learning– so I expect you to treat it the same. The basics:

* Be on time. Being late shows other people you think your time is more valuable than theirs.
* Be respectful to me and your peers. If it’s worth saying to your neighbor, it’s worth saying to the whole class.
* No cell phones. Period.

**Inclusiveness**

I want my classroom to be an inclusive, welcoming and respectful environment, which should extend into our work outside of class. If I can do anything to help foster an inclusive culture in class or on your team, please let me know. I’m always glad to listen and talk.

**Academic Integrity**

I expect everyone to follow the UO’s policies on academic integrity. Students should properly acknowledge and document all sources of information (e.g. quotations, paraphrases, ideas) and use only the sources and resources authorized by the instructor. If there is any question about whether an act constitutes academic misconduct, it is the students’ obligation to clarify the question with the instructor before committing or attempting to commit the act. Additional information about a common form of academic misconduct, plagiarism, is available at [www.libweb.uoregon.edu/guides/plagiarism/students](http://www.libweb.uoregon.edu/guides/plagiarism/students).

**Affirmative Action and Equal Opportunity**

The University of Oregon affirms and actively promotes the right of all individuals to equal opportunity in education and employment at this institution without regard to race, color, sex, national origin, age, religion, marital status, disability, veteran status, sexual orientation, gender identity, gender expression or any other extraneous consideration not directly and substantively related to effective performance. As a federal contractor, the University of Oregon is committed to affirmative action in employment as a means of ensuring equality of opportunity. For more info, please visit <http://aaeo.uoregon.edu>.

**Accessibility and Disability**

The University of Oregon is working to create inclusive learning environments. If there are aspects of the instruction or design of this course that create barriers to your participation, please notify me as soon as possible. You are also welcome to contact Disability Services: 164 Oregon Hall, (541) 346-1155, disabsrv@uoregon.edu. If you have not documented a disability through Disability Services, but you would like for me to know about class issues that will impact your ability to learn, I encourage you to visit me during my office hours so that we can strategize how you can get the most out of this course. (Statement paraphrased from The Teaching and Learning Center, retrieved from

<http://tep.uoregon.edu/resources/universaldesign/environment.html>)

**Prohibited Discrimination and Harassment Reporting**  
Any student who has experienced sexual assault, relationship violence, sex or gender-based bullying, stalking, and/or sexual harassment may seek resources and help at [safe.uoregon.edu](http://safe.uoregon.edu/). To get help by phone, a student can also call either the UO’s 24-hour hotline at 541-346-7244 [SAFE], or the non-confidential Title IX Coordinator at 541-346-8136. From the SAFE website, students may also connect to Callisto, a confidential, third-party reporting site that is not a part of the university.  
  
Students experiencing any other form of prohibited discrimination or harassment can find information at [respect.uoregon.edu](https://titleix.uoregon.edu/respect.uoregon.edu) or [aaeo.uoregon.edu](https://titleix.uoregon.edu/aaeo.uoregon.edu) or contact the non-confidential AAEO office at 541-346-3123 or the Dean of Students Office at 541-346-3216 for help. As UO policy has different reporting requirements based on the nature of the reported harassment or discrimination, additional information about reporting requirements for discrimination or harassment unrelated to sexual assault, relationship violence, sex or gender based bullying, stalking, and/or sexual harassment is available at [Discrimination & Harassment](http://aaeo.uoregon.edu/content/discrimination-harassment).

**Course Schedule**

This is our anticipated schedule for the term, but I reserve the right to adjust the schedule to ensure the best learning environment. The deadlines are firm and I do not accept late work. Address potential conflicts or issues with me at least one week in advance.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Wk | Day | Date | Topic | Deliverable |
| Setting the Stage: Merchants of Doubt & The Politicization of Science | | | | |
| 1 | M | Jan 7 | Introductions / Syllabus / What to Expect | Syllabus |
|  | W | Jan 9 | Science, it’s story, and it’s role in society today | MOD Introduction, Ch 1 |
| 2 | M | Jan 14 | Models of Science Communication & Public Engagement | Guest Lecture: Dr. Brianne Suldvosky, Assistant Professor of Science & Environmental Communication |
|  | W | Jan 16 | Why do people believe what they do? What influences our decisions? | MOD Ch 2 & 3 |
| 3 | M | Jan 21 | MLK Jr Day – No Class |  |
|  | W | Jan 23 | Media & Science: What’s the problem? | MOD Ch 4 & 5  Scientific Issue Overview Due |
| 4 | M | Jan 28 | Media & Science: What’s the solution? | MOD Ch 6 & 7 |
|  | T | Jan 29 | Special Event: 7:30 pm Hult Center / National Geographic Live: Into the Arctic Kingdom |  |
|  | W | Jan 30 | Merchants of Doubt Film Screening | MOD Conclusion & Epilogue  Public Communication Reflection #1 Recommended Due Date |
| Alda Method & Science Museum Visit | | | | |
| 5 | M | Feb 4 | Alda Method Workshop |  |
|  | W | Feb 6 | Alda Mehtod Workshop | Comm 1 & Reflection Due |
| 6 | M | Feb 11 | Private Tour / Museum Visit – Meet at the Museum of Natural and Cultural History ( https://natural-history.uoregon.edu/) |  |
|  | W | Feb 13 | Alda Method Workshop | Public Communication Reflection #2 Recommended Due Date |
| Case Studies | | | | |
| 7 | M | Feb 18 | Case Study Group Presentation |  |
|  | W | Feb 20 | TBD | Comm 2 & Reflection Due |
| 8 | M | Feb 25 | Case Study Group Presentation |  |
|  | T | Feb 26 | Special Event: 7:30 pm Hult Center / National Geographic Live: Ocean Soul |  |
|  | W | Feb 27 | TBD | Public Communication Reflection #3 Recommended Due Date |
| 9 | M | Mar 4 | Case Study Group Presentation |  |
|  | W | Mar 6 | TBD | Comm 3 & Reflection Due |
| 10 | M | Mar 11 | Case Study Group Presentation |  |
|  | W | Mar 13 | Course Wrap Up |  |

Pub Talk Options:

Viking Braggot (2490 Willamette St) – all talks start at 6 pm – get there early to secure a seat

Wednesday, February 6: Taking to the Sky: Mosaic Evolution and the Rise of Bird Flight

Wednesday, March 6: Changing Landscapes, Evolving Practices

Wednesday, April 3: Climate Action: Taking on the Government

Downtown Athletic Club (999 Willamette St) – all talks start at 6 pm – get there early to secure a seat

Wednesday, January 9: The Science Behind a Good Cup of Coffee

Wednesday, January 23: When Should we Trust Artificial Intelligence

Wednesday February 6: Mapping the Wildness of Yellowstone

Wednesday, March 20: Your Gut Feelings: Where do They Actually Come From?

Movie Options:

Food Inc

An Inconvenient Truth

Chasing Ice

Forks Over Knives

BlackFish

Chasing Coral

Planet Earth

The Blue Planet

Life (Docu-series in 2009)

Cowspiracy

Virunga

Explained (series on Netflix in 2018)

Rats

Into the Inferno