## ENV H A **Introduction to Technical Communication in Environmental Health**

Winter 2025

## Contact information

**Instructor:** Tyler Babbie *(he pronouns)*, Dr., DEOHS

**Contact:** babbie@uw.edu

**Office hours:** Padelford B428, 11:30-12:30 Tuesday and Wednesday (or by appointment)

### Course times and locations

**Lecture: Tuesday/Thursday, 1:30-3:20**

**HSEB 145 Tuesday, HSEB 125 Thursday**

## Land Acknowledgement

The University of Washington acknowledges the Coast Salish people of this land, the land which touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip and Muckleshoot nations.

## ILLNESS PROTOCOL

If you feel ill or exhibit respiratory or other symptoms, you should not come to class. Seek medical attention if necessary and notify your instructor(s) as soon as possible by email. UW Environmental Health & Safety recommends that you wear a well-fitting mask while you are symptomatic.

Additional recommendations include getting your [annual flu shot](https://wellbeing.uw.edu/flu-vaccination/) and getting boosted with the updated COVID vaccines (available [at clinics and pharmacies, as well as through UW Medicine](https://www.washington.edu/coronavirus/vaccines/)and local health agencies).

Please check your email and Canvas announcements daily BEFORE coming to class. If we need to conduct class remotely because the instructor or a guest speaker is unable to attend in person, I will send all registered students an email and/or post a Canvas announcement with a Zoom link for remote instruction or a plan for making up the class.

## Course Description

## This course is an introduction to communicating science, with a focus on environmental and occupational health sciences. We’ll learn about the different forms of science communication, from academic papers to the casual talk, and we will practice writing and speaking skills with hands-on activities.

## We’ll also dive deep into skills that support good science communication. We’ll learn about tailoring our message for specific audiences, how to consume media critically, how to interview others, and how to revise your own and other people’s work. Ideally, you’ll leave this course with a better understanding of how science research makes it out into the world, and you'll have real-world skills you can apply whenever you have the opportunity to communicate science.

## I'm adapting a course designed by Dr. Jane Hu. I copied the course from last year over on Canvas, but I will be adjusting, adapting, and modifying the course as we go. The schedule is likely to change, especially as I add guest speakers and have to move things around to fit them.

## Course Learning Objectives

Upon completion of this course, students should be able to:

* Identify and strategically target a variety of audiences for science communication
* Find, evaluate, and use public health information to communicate with others
* Learn and practice the basic mechanics of writing and public speaking skills
* Compose and revise written materials and oral presentations
* Describe how the media ecosystem works, including the role and importance of data collection and research in public health
* Critically evaluate sources of information

## Council ON Education FOR Public Health (CEPH) Competencies

The School of Public Health (SPH) is accredited by the Council on Education for Public Health (CEPH). Students in DEOHS will meet the following degree competency(s) in this course, and will be assessed as indicated.

For additional information on the 2020 SPH CEPH accreditation please visit the SPH’s [CEPH Accreditation](https://sph.washington.edu/about/ceph-accreditation) webpage.

**SPH Core Competency: We will recognize the means by which social inequities and racism, generated by power and privilege, undermine health.**Note from instructor: we will examine the impact of science communication on community issues such as lead poisoning, pesticides, environmental policy, and climate change. We will use the lenses of racial justice, anticolonialism, and unequal socioeconomics throughout the course.

**D-10-1 Public Health Domains**

* **Role and Importance of Data in Public Health**: Address the basic concepts, methods, and tools of public health data collection, use, and analysis and why evidence-based approaches are an essential part of public health practice (this course covers: basic tools of data collection; data usage; data analysis)
* **Human Health**: Address the underlying science of human health and disease including opportunities for promoting and protecting health across the life course (this course covers: science of human health and disease; health promotion)
* **Determinants of Health**: Address the socio-economic, behavioral, biological, environmental, and other factors that impact human health and contribute to health disparities (this course covers environmental factors’ impacts on human health and health disparities)
* **Project Implementation**: Address the fundamental concepts and features of project implementation, including planning, assessment, and evaluation (this course covers introduction to planning concepts and features)
* **Health Communications**: Address the basic concepts of public health-specific communication, including technical and professional writing and the use of mass media and electronic technology

**D11. Public Health Bachelor’s Degree Foundational Competencies**

* Communicate public health information, in both oral and written forms, through a variety of media and to diverse audiences
* Locate, use, evaluate and synthesize public health information

**D13-1 Concepts**

* Community dynamics
* Research methods
* Teamwork and leadership

## Required Textbooks & Readings

Readings will be distributed by Canvas. Readings will include a mix of texts including Pulitzer Prize-winning investigative journalism, impactful research papers, the research of DEOHS’ own professors, news articles, executive summaries, and many more.

## Grading

Like any other skill, science communication requires practice. Around half of your total grade will be based on weekly reflections and your participation in class discussions, quantified via Canvas discussions or other small assignments.

These discussions are designed to provide an opportunity not only to write, but also to think about your audience and what makes for compelling science writing. These discussions will usually be assigned before class, but occasionally we may write them during class--if you need to, you may go back to your in-class discussions and expand them later.

The discussions will hopefully allow us to build an ecosystem of conversation that will allow everyone to talk in class--it's easier when you have a chance to write down your thoughts in advance!

Speaking of speaking in class: in my experience, spoken class conversations often revolve around a few people who find it easy to contribute. If that's you, great! Welcome and please do! If it's not, let's work on it. Introverts: I am one of you, and I understand it's hard. People who might have language barriers: I admire your courage and am ready to do whatever I can to help you. People who may have real-life issues that may make this class especially difficult: I'm always willing to talk to you individually, not just about course content, but about life. If you are having trouble, reach out! If you fall behind, I may be able to design a make-up assignment.

Throughout the course, we’ll build our toolkit of writing and communication skills, first practicing how to read, analyze, and summarize research for others within our field, then trying our hand at writing and talking about it to a general audience.

Reflections, discussions, and exercises: 45%

Literature review: 5%

Executive summary: 10%

Grant application: 10%

News article: 15%

Final presentation: 15%

### Grading Criteria

Your final grade will be the percentage of completed work above multiplied by 4.0, rounded up to the nearest tenth of a digit.

### Late assignment policy

I accept late work and resubmissions, but I may require extended work for full credit. I believe that my educational mission is best served by being flexible on these fronts, but please don’t take advantage of this flexibility. On the other hand, don’t hesitate to reach out if you need it. Every quarter, a handful of students will have an incredibly difficult time outside of class. I am here to help those students.

### Student responsibilities

You should be present in class every day. Of course, sometimes there are good reasons to miss a day--sickness, for instance, or for a religious holiday. I may offer a Zoom option for people who are sick or who let me know in advance that they will be missing class. These links are not simply so anyone can attend from home (shoutout to commuter students, working students, student parents: I need you here to teach you best). Zoom is an important public health tool. Don't hesitate to ask for a link if you need it, but don't abuse the offer, either.

### Provisional Course Schedule

| **Date** | **Topic** | **Instructor** | **Reading** |
| --- | --- | --- | --- |

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| --- | --- | --- |
| **WEEK 1** | **in-class activities** | **homework** |
|  | Welcome, introductions.  How to write a good email. How to read a research paper. Brief history of scientific journals (*Nature* as example).  Journal rankings. Using Google Scholar and Altmetric to assess the state of a field. | Send a “good email” introduction to me.  Read scientific paper guides.  Read Vicedo-Cabrera 2021, Doubleday 2022. Complete Hypothesis reading assignment. |
| **WEEK 2** |  |  |
|  | Reading Vicedo-Cabrera together. Intro to literature reviews. | Be sure to complete Doubleday. Post topic for literature review. |
|  | Reading Doubleday et al. Using PubMed. Meet research groups. | Write literature review. Read slides on using research tools. Read executive summary examples before class Thursday. Class Tuesday moved asynchronous to make room for career fair. |
| **WEEK 3** |  |  |
|  | Professional Development Day: Attend DEOHS govt. career fair and/or complete an alternative assignment option that matches your professional goals. | Complete professional development assignment. |
|  | Literature reviews: present to research groups. Intro to executive summaries. | Write executive summary draft. Read materials on bias, Andrejko et al. |
| **WEEK 4** |  |  |
|  | Reading critically. “Crummy science.” Fake news and how to spot it. CRAAP test. Misleading and biased science writing. Andrejko et al. | Peer review of executive summary next class: complete your draft! |
|  | Editing, copyright, plagiarism. Peer review. | Read materials on science journalism. Read *Poisoned* in Tampa Bay Times. Complete discussion on your topic in the news. |
| **WEEK 5** |  |  |
|  | Science journalism. Anatomy of a news article: lede, nutgraf, ending.  The creation of Pulitzer-Prize winning series *Poisoned.* | Continuing with materials from last weekend. |
|  | Assessing ledes for your article.  Investigative journalism and human interest via *Poisoned.* | Write news article first draft. Read materials on investigate reporting. Reading “The Department of Yes” in *The Intercept.* |
| **WEEK 6** |  |  |
|  | News article peer review.  Government, journalism, and science in “The Department of Yes.” | Read message box materials. |
|  | Message box by COMPASS.  Investigative journalism continued. | Complete second draft of news articles.  Complete message box.  Discussion on take-aways of science arts.  Read materials on science arts: Baciagalupi, Carson. |
| **WEEK 7** |  |  |
|  | Science arts, audience engagement, popularizing science in fiction. Short film: *Pumzi.* Comparing two desert visions: “Tamarisk” and *Pumzi.* | Take a look at abstracts of scholarship on science arts. Read the abstract for Rosenthal, 2020, in particular. |
|  | Science arts and engagement: empirical analysis of the consequences of pessimism in climate fiction.  Informal conversations on news article topics as first preparation for presentations. | Read materials on public speaking. |
| **WEEK 8** | *wrap up second sequence* |  |
|  | Public speaking continued. María Neira on air pollution as an example. |  |
|  | Public speaking continued. Bill Gates on pandemic preparedness, Ndidi Okonkwo Nwuneli on food systems.  Design in science communication: visual creation. | Read background materials on guest speakers. |
| **WEEK 9** |  |  |
|  | Guest speaker: Dierdre Lockwood. |  |
|  | Guest speakers: Emily Hovis and Resham Patel. | Finish final presentations.  Write feedback for guest speakers. |
| **WEEK 10** |  |  |
|  | Final Presentations. |  |
|  | Final Presentations.  Course evaluations. |  |

### Communication and Writing Skills

Communication through writing and speaking is an important transferable skill for all career pathways. Establishing a strong foundation in communication skills will help you be successful throughout your future course work and career. Therefore, this course includes assignments with the goal to help you identify areas of strength and improvement in your communication. If you feel that you could benefit from additional opportunities to improve your writing skills in particular, a list of resources at the UW and others accessible online can be found on the SPH website [here](https://sph.washington.edu/sites/default/files/2020-09/Writing-Resources-9.24.20.pdf).

## Important Policies & Resources

### Academic Integrity

Students at the University of Washington (UW) are expected to maintain the highest standards of academic conduct, professional honesty, and personal integrity.

The UW School of Public Health (SPH) is committed to upholding standards of academic integrity consistent with the academic and professional communities of which it is a part. Plagiarism, cheating, unauthorized use of artificial intelligence (AI) tools, and other misconduct are serious violations of the University of Washington [Student Conduct Code (WAC 478-121)](https://apps.leg.wa.gov/WAC/default.aspx?cite=478-121). We expect you to know and follow the university's policies on cheating and plagiarism, and the SPH Academic Integrity Policy. Any suspected cases of academic misconduct will be handled according to University of Washington regulations. For more information, see the University of Washington [Community Standards and Student Conduct](https://www.washington.edu/cssc/).

### Use of Generative Artificial Intelligence in Coursework

We’re at a turning point in the use of AI in writing. It is strong enough to be useful, tempting as a shortcut, and painfully fallible in application. If you use AI, you must acknowledge your use in the heading of the paper, including the name of the program you used. If your work has AI-related mistakes, it will mean you didn’t proofread adequately. You are responsible for the quality of the AI outputs that you submit. Further, some assignments will specifically forbid AI or will specifically require it. I want you to understand that AI is only worth using if your quality stays high as your productivity increases. I also want you to understand the price you pay when you replace your voice and signature style with a generic product.

### Access and Accommodations

Your experience in this class is important to me. It is the policy and practice of the University of Washington to create inclusive and accessible learning environments consistent with federal and state law. If you have already established accommodations with Disability Resources for Students (DRS), please activate your accommodations via myDRS so we can discuss how they will be implemented in this course. I’ve already received several accommodation requests, which I’m happy to discuss with the specific students involved.

If you have not yet established services through DRS, but have a temporary health condition or permanent disability that requires accommodations (conditions include but not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), contact DRS directly to set up an Access Plan. DRS facilitates the interactive process that establishes reasonable accommodations. Contact DRS at [disability.uw.edu](https://depts.washington.edu/uwdrs/).

### Religious Accommodations

Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW’s policy, including more information about how to request an accommodation, is available at [Religious Accommodations Policy (https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/)](https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/). Accommodations must be requested within the first two weeks of this course using the [Religious Accommodations Request form (https://registrar.washington.edu/students/religious-accommodations-request/)](https://registrar.washington.edu/students/religious-accommodations-request/).

### Inclusion & Diversity

Diverse backgrounds, embodiments and experiences are essential to the critical thinking endeavor at the heart of University education. In SPH, we are expected:

1. To respect individual differences, which may include, but are not limited to, age, cultural background, disability, ethnicity, family status, gender, immigration status, national origin, race, religion, sex, sexual orientation, socioeconomic status and veteran status.
2. To engage respectfully in the discussion of diverse worldviews and ideologies embedded in course readings, presentations and artifacts, including those course materials that are at odds with personal beliefs and values.
3. To encourage students with concerns about classroom climate to talk to their instructor, adviser, a member of the departmental or SPH EDI Committee, the Assistant Dean for EDI, or the program’s director.

### Classroom Climate

We are co-creators of our learning environment. It is our collective responsibility to develop a supportive learning environment for everyone.  Listening with respect and an open mind, striving to understand others’ views, and articulating your own point of view will help foster the creation of this environment.  We engage our differences with the intent to build community, not to put down the other and distance our self from the other.  Being mindful to not monopolize discussion and/or interrupt others will also help foster a dialogic environment.

**The following guidelines can add to the richness of our discussion:**

* We assume that persons are always doing the best that they can, including the persons in this learning environment.
* We acknowledge that systematic oppression exists based on privileged positions and specific to race, gender, class, religion, sexual orientation, and other social variables and identities.
* We posit that assigning blame to persons in socially marginal positions is counter-productive to our practice. We can learn much about the dominant culture by looking at how it constructs the lives of those on its social margins.
* While we may question or take issue with another class member’s ideology, we will not demean, devalue, or attempt to humiliate another person based on her/his experiences, value system, or construction of meaning.
* We have a professional obligation to actively challenge myths and stereotypes about our own groups and other groups so we can break down the walls that prohibit group cooperation and growth.  
  [Adapted from Lynn Weber Cannon (1990). Fostering positive race, class and gender dynamics in the classroom. Women Studies Quarterly, 1 & 2, 126-134.]

We are a learning community. As such, we are expected to engage with difference. Part of functioning as a learning community is to engage in dialogue in respectful ways that supports learning for all of us and that holds us accountable to each other. Our learning community asks us to trust and take risks in being vulnerable.

**Here are some guidelines that we try to use in our learning process:**

* Listen well and be present to each member of our group and class.
* Assume that I might miss things others see and see things others miss.
* Raise my views in such a way that I encourage others to raise theirs.
* Inquire into others’ views while inviting them to inquire into mine.
* Extend the same listening to others I would wish them to extend to me.
* Surface my feelings in such a way that I make it easier for others to surface theirs.
* Regard my views as a perspective onto the world, not the world itself.
* Beware of either-or thinking.
* Beware of my assumptions of others and their motivations.
* Test my assumptions about how and why people say or do things.
* Be authentic in my engagement with all members of our class.

### Pronouns

We share our pronouns because we strive to cultivate an inclusive environment where people of all genders feel safe and respected. We cannot assume we know someone’s gender just by looking at them. I invite everyone to share their pronouns in their introduction post.

### Bias Concerns

The Office of the Dean has a [student concern policy](https://sph.washington.edu/students/student-concern-policy), a faculty concern policy and standard HR procedures for staff concerns. Our 2018 climate survey states that most people in SPH do not report bias incidents because they do not know where to go. Students are encouraged to report any incidents of bias to someone they feel comfortable with, including instructors, advisers or department staff. They can email [dcinfo@uw.edu](mailto:dcinfo@uw.edu )for immediate follow up. Bias concerns can be anonymously and confidentially reported via the online form found here: <https://sph.washington.edu/about/diversity/bias-concerns>. Data is collected by the Assistant Dean for EDI and the Director of Program Operations for Student and Academic Services and tracked for resolution and areas are identified for further training.

### Sexual Harassment

Sexual harassment is a form of harassment based on the recipient’s sex that is characterized by:

1. Unwelcome sexual advances, requests for sexual favors, or other verbal or physical conduct of a sexual nature by a person who has authority over the recipient when:
   * Submission to such conduct is an implicit or explicit condition of the individual’s employment, academic status, or ability to use University facilities and services, or
   * Submission to or rejection of the conduct affects tangible aspects of the individual’s employment, academic status, or use of University facilities.
2. Unwelcome and unsolicited language or conduct that creates an intimidating, hostile, or offensive working or learning environment, or has the purpose or effect of unreasonably interfering with an individual’s academic or work performance.

If you believe that you are being harassed, or have observed harassment, you can report it to SPH using the [bias concerns link](https://sph.washington.edu/about/diversity/bias-concerns). The University also has designated offices to help you: [SafeCampus](https://www.washington.edu/safecampus/); [Office of the Ombud](https://www.washington.edu/ombud/); [Title IX Investigation Office](https://www.washington.edu/titleix/report/); and [University Complaint Investigation and Resolution Office](https://www.washington.edu/compliance/uciro/).