

Advanced Technical Communication in Public Health

MW 3:30-4:50 Room: I-132 Health Sciences Credits: 3

Instructor: Deborah L. Illman, Ph.D. Email: illman@u.washington.edu

Description

This course focuses on written and oral communication for environmental health and public health professionals, with particular emphasis on three main areas: conveying information more effectively to technical audiences, translating that information for general audiences in the public arena, and crafting effective commentary or opinion pieces relating to topics of professional interest.

We will explore the principles of effective writing for technical articles, proposals, and reports with attention to structure, clarity, style, and language usage. Students learn to craft an executive summary of a research report for technical audiences. They develop greater agility as writers by translating that same content into the form of a press release that could be disseminated to broader audiences through the media and the Web.

Students explore issues in public communication of science and framing of science. They gain a greater familiarity with the societal context for environmental health and public health developments and learn to distill the essence of an issue for headlines and short spots. As an exercise in translating science for broader audiences, they will research and write a news article on a current research or policy topic. Students will then explore what makes an effective commentary, examining issues of content, structure, and tone, and they will write a "Policy Forum" style piece on a current topic.

The course is designed to build communication proficiency through a combination of writing and revising assignments, selected readings, lecture/discussion sessions, oral presentations, and hands-on activities. On selected assignments, students will have the opportunity to share drafts with the group, to practice their reviewing skills, and to receive feedback from classmates and the instructor. Students completing the class will have several professional writing samples to add to their portfolios.

Objectives

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

- Create effective documents that clearly convey complex, technical information for targeted audiences.
- Translate information about environmental and public health for broader audiences in the public arena.
- Write effective articles about environmental, science, and/or public health issues.
- Compose and revise documents with appropriate content, organization, and coherence as well as grammar, tone, and style.
- Create and deliver effective presentations, appropriate for audience, setting, and communication goal.
- Communicate effectively in interviews and in other professional, community, and policy settings.

Recommended Textbooks

Reporting Technical Information, 11th Ed., Kenneth W Houp, et al. New York: Oxford University Press, 2006.

Explaining Research: How to Reach Key Audiences to Advance Your Work, Dennis Meredith. New York: Oxford University Press, 2010. Available as a e-book through the library.

Supplemental Textbook -- Available as a coursepak at the University Bookstore.

The Bare Essentials: English Writing Skills, Sarah Norton, Brian Green, Michele A. Barale. Fort Worth: Holt, Rinehart and Winston, Inc., 1983.

Materials on Canvas:

Examples of Technical Reports; Policy Forum examples; selected handouts and materials discussed in class.

George D. Gopen and Judith A Swan, "The Science of Scientific Writing," *American Scientist*, **78**, 550 (1990).

"Science and Technology in the Media," Ch. 1 in *Selling Science*, Dorothy Nelkin, 1995.

Books on Reserve:

The Bare Essentials: English Writing Skills, S. Norton, B. Green, M. A. Barale. Fort Worth: Holt, Rinehart and Winston, Inc., 1983.

Reporting Technical Information, Kenneth W Houp, et al., 11th Ed. New York : Oxford University Press, 2006.

Explaining Research: How to Reach Key Audiences to Advance Your Work, D. Meredith. New York: Oxford University Press, 2010.

The Scientist's Handbook for Writing Papers and Dissertations, A. Wilkinson. Prentice Hall, 1991.

Additional Resources:

Online grammar and punctuation exercises, <https://owl.english.purdue.edu/exercises/>

Technical Communication, Markel, M., , 9th ed. Boston: Bedford/St. Martin's, 2010.

Communicating Uncertainty: Media Coverage of New and Controversial Science, edited by Sharon M. Friedman, Sharon Dunwoody, and Carol L. Rogers, 1999.

Selling Science: How the Press Covers Science and Technology, Dorothy Nelkin, 1995.

On Writing Well, William Zinsser.

Field Guide for Science Writers, D. Blum and M. Knudson, Oxford University Press, 1997 and 2nd ed., 2006.

The Elements of Style, William Strunk and E.B. White.

The ASJA Guide to Freelance Writing, Timothy Harper, Editor. New York: St. Martin's Griffin, 2003.

Associated Press Stylebook & Libel Manual, Addison Welsley.

Escape from the Ivory Tower. N. Baron. Washington: Island Press, 2010.

A Scientist's Guide to Talking With The Media: Practical Advice from the Union of Concerned Scientists. R. Hayes & D. Grossman. New Brunswick: Rutgers University Press, 2006.

Am I Making Myself Clear? A Scientist's Guide to Talking to the Public, C. Dean, Cambridge, Mass.: Harvard University Press, 2009.

Creative Nonfiction: Researching and Crafting Stories of Real Life, Philip Gerard, 1996.

Course Policies

Participation

One aim of this course is to provide students with an experiential learning opportunity that will prepare them for the professional workplace. An important component of this experience is class participation and contribution to classroom discussions. Many of our graded activities require your presence in the classroom.

You are expected to attend class, complete the assigned readings, and be prepared to participate in the discussions and workshops. If you cannot attend class, please contact the instructor, in advance if possible, to make arrangements to make up work, and you should plan to catch up on what happened with a classmate. You are responsible for all material covered in class.

Updates and important information will be emailed to the class email list, so students should check their UW email accounts for announcements.

Assignment Submission & Evaluation

The ability to meet deadlines and format requirements is essential for professional work. Writing to length and writing to deadline are valuable skills you will practice in this course.

Assignments are due as specified in the course syllabus and/or in class. In the event of illness or emergency--or other unavoidable events, at instructor's discretion--please make arrangements for making up work or setting alternate due dates.

Written assignments are due at the beginning of class on the specified due date. Late assignments will be marked down one point for each day the assignment is late. Students must give oral presentations on their scheduled day; if they do not, they will receive a zero for that presentation unless they have made arrangements at least one day in advance of the scheduled presentation.

Written assignments generally will be evaluated based upon content, organization, and grammar/mechanics. Specific criteria for each assignment will be discussed in class. Oral presentations will be evaluated based upon content, organization, delivery, and quality of visual aids and especially on the appropriateness of these elements for the target audience (technical or general audience).

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, and other misconduct are serious violations of the University of Washington **Student Conduct Code** (WAC 478-120). 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** website.

Access and Accommodations

Your experience in this class is important to us, and 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 experience barriers based on a disability or temporary health condition, please seek a meeting with Disability Resources for Students (DRS) to discuss and address them. If you have already established accommodations with DRS, please communicate your approved accommodations to your instructor at your earliest convenience so we can discuss your needs in this course.

Disability Resources for Students (DRS) offers resources and coordinates reasonable accommodations for students with disabilities and/or temporary health conditions. Reasonable accommodations are established through an interactive process between you, your instructor(s) and DRS. If you have not yet established services through DRS, but have a temporary health condition or permanent disability that requires accommodations (this can include but not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact DRS at 206-543-8924 or uwdrs@uw.edu or disability.uw.edu

2016 Schedule Note: Readings are assigned on a given day for use in *subsequent* classes.

Schedule	Topic	
Week 1		
Class 1 9/28	<p>Introduction to the Course</p> <p>Intro exercise</p> <p>Assignment: Identify one of your own writing products or excerpt thereof (1 page max) to use in an editing exercise (proposal, manuscript, exam, etc) and bring 2 hard copies to class 10/5.</p>	<p>Supplemental Reading <i>Reporting Tech Info:</i> Review/Skim Chs 1-6</p> <p>Assignment--work in pairs: "Clean-up of Low-Level Radiological Contamination at Magnuson Park" Due 10/24</p>
Week 2		
Class 2 10/3	<p>Writing for Technical Audiences</p> <ul style="list-style-type: none"> - Research Publications - Tech. Reports and Executive Summary <p>Assignment #1: Draft an Executive Summary</p>	<p>Reading Assignment <i>Reporting Tech Info:</i> Ch 10 Main Elements of Reports & Ch 15 Empirical Research Reports Ch 16 Proposals & Progress Reports</p>
Class 3 10/5	<ul style="list-style-type: none"> - Structure in Technical Writing - Clarity & Style - Processes of Composing & Editing - Grammar Points - Grammar Inventory <p>Editing Assignment due 10/12</p>	<p>Reading Assignment Gopen & Swan article (on Canvas)</p>
Week 3		
Class 4 10/10	<p>Draft Exec. Summary Due--one hard copy</p> <ul style="list-style-type: none"> - Public Communication about Science - Writing for Broader Audiences <p>Progress Report: Magnuson Park flyer</p>	<p>Reading Assignment <i>Explaining Research:</i> Intro (pp.1-13), Part IV (pp. 248-340)</p> <p>Supplemental Reading <i>Selling Science:</i> Ch 1 (On Canvas)</p>
Class 5 10/12	<p>Editing Assignment Due--Turn in your marked up original and final clean version.</p> <p>Discuss Executive Summaries</p> <p>Assignment: Revised Executive Summary</p> <ul style="list-style-type: none"> - Audience Analysis - The News Format & The Press Release - Interviews 	<p>Reading Assignment <i>Explaining Research:</i> Chs. 8-10 (pp. 97-133)</p>

Week 4		
Class 6 10/17	<p>Revised Executive Summary Due (turn in 1 hard copy along with marked-up draft)</p> <p>Group Interview: Speakers TBA</p> <p>Assignment: Draft a Press Release based on the research paper and in-class interviews with sources</p>	
Class 7 10/19	<p>Draft Press Release Due (1 hard copy)</p> <p>- Writing the News Article</p> <p>-Effective Technical Presentations</p> <p>Assignment: News Articles Assignment: News brief (news article topic) Assignment: Technical Presentation</p> <p>Discussion: "Clean-up of Low-Level Radiological Contamination at Magnuson Park" Assignment: Revised Mockup due 10/24</p>	<p>Reading Assignment <i>Explaining Research:</i> Ch 16 (pp.194-212)</p> <p>Supplemental Reading: <i>On Writing Well</i> by Zinsser: Chapters on "The Lead and the Ending" and "Science and Technology"</p>
Week 5		
Class 8 10/24	<p>Magnuson Park --revised flyer mockup due</p> <p>Headlines & Short Spots: Workshop</p> <p>Discuss Press Release Drafts</p> <p>Assignment: Revised Press Release</p>	<p>Supplemental Reading: <i>Communicating Uncertainty:</i> Ch 12 by K. Rowan (pp.201-223)</p>
Class 9 10/26	<p>Assignment due: News brief (1 hard copy)</p> <p>Revised Press Release Due (1 hard copy + marked-up draft)</p> <p>Issues in Public Communication of Science: - Effective Explanations: Workshop - Metaphor in Public Communication of S&T - News & Numbers</p>	<p>Reading Assignment: "Policy Forum" Samples on Canvas & Suggested Commentary topics</p>
Week 6		
Class 10 10/31	<p>Effective Explanations</p> <p>Writing Essays and Commentaries</p> <p>Assignment: "Policy Forum" Essay</p>	

Class 11 11/2	Technical Presentations	
Week 7		
Class 12 11/7	Technical Presentations	
Class 13 11/9	Draft News Articles Due (hard copies for all) Assignment: Presentation to General Audience Assignment: WA Dept Health Factsheet (work in teams--revision due 11/28)	Read and prepare to discuss news article drafts
Week 8		
Class 14 11/14	Discuss News Article Drafts Assignment: Revised News Articles	
Class 15 11/16	Discuss News Article Drafts	
Week 9		
Class 16 11/21	Draft Essays Due (copies for all) Factsheet Assignment --Work in teams	Read and prepare to discuss essay drafts
Class 17 11/23	NO CLASS	
Week 10		
Class 18 11/28	Revised Factsheet Due Discuss Draft Essays Assignment: Revised Essay	
Class 19 11/30	Discuss Draft Essays General Presentations	
Week 11		
Class 20 12/5	Revised News Articles Due General Presentations	
Class 21 12/7	Revised Essays Due General Presentations Course Overview	

Grading

Env H 520 Fall 2016			
<i>Due Date</i>	<i>Assignment</i>	<i>Pts.</i>	<i>Combined Weight</i>
10/10	Draft Executive Summary for Technical Audiences (1 hard copy) Topic: Assigned research paper. Download from Canvas. Length: 440 ± 10 words. Must fit to one page only! Font: Times New Roman 11 pt Margins: 1 in left, top, and bottom; 2 in right . No subheads. Use ragged right margin and paragraph indents. Line numbering on.	10	20 %
10/17	Revised Executive Summary (1 hard copy plus the marked-up draft)	10	
10/19	Draft Press Release (1 hard copy; double-sided ok) Topic: Same as executive summary. Format: Press release format discussed in class and on Canvas. Length: maximum 2 pp.	10	20 %
10/26	Revised Press Release (1 hard copy plus marked-up draft)	10	
Short Assignments			
10/12	Editing Exercise (on your own writing product, 1 page max!)	5	20%
10/24	Magnuson Park Workshop--Revised Mockup of Public Info Flyer	5	
10/26	News Brief: Topic same as news article, 170-180 words max, including headline and byline. News structure (inverted pyramid). Line numbering on.	5	
11/28	WA Dept Health Anencephaly Investigation--Revised Q&A Factsheet	5	
11/9	Draft News Article (copies for all; double-sided ok) Length: 600 words, including headline. Headline & your byline at top. At least two independent sources in addition to primary source(s). Format: Times New Roman, 11 pt Margins: 1 inch left; 3 inches right . Use ragged right margin and paragraph indents. Line numbering on.	5	10 %
12/5	Revised News Article (1 hard copy plus instructor's marked-up draft)	5	
11/21	Essay/Commentary (copies for all; double-sided ok) Length: 800 words; plus a maximum of 5-6 references (refs not included in word count). Style of Policy Forum in <i>Science</i> . Format: same layout as news article	10	20 %
12/7	Revised Commentary (1 hard copy plus instructor's marked-up draft)	10	
11/2, 11/7	Oral Presentations on the assigned news article topic. - Technical Presentation (5 min., with PowerPoint slides)	5	10 %
11/30, 12/5 & 12/7	- Presentation for General Audience (2 min., no slides)	5	
TOTAL		100	100%

Assignment Guidelines

Executive Summary

You will be assigned one of two research papers as the subject of your executive summary (download from Canvas). Audiences include specialists and interested non-specialists, management, policy-makers, stakeholders, and industry and NGO representatives. This summary must fit to one page only! See the Grading page for more details. Please use a ragged right margin, turn the line numbering on, and use paragraph indents. Do not use subheads in this summary.

Press Release Assignment

This is a simulation involving hypothetical scenarios. You are a public information officer for the organization pertaining to the research paper you used in the executive summary assignment. You must create a press release consistent with the premise of the hypothetical scenario and the press release format discussed in class (see checklist and examples on Canvas.)

You will have an opportunity in class to interview one or more authors of the research paper. Come prepared for that session with a list of questions (an interview guide) to ask during the group interview.

The press release should be no more than 2 pages and should follow the "inverted pyramid" news structure and press release layout discussed in class. It should be accessible to broader audiences, including journalists, lawmakers, and members of the interested public.

News Article

Writing a news article provides an intensive experience in translating information about technical developments for diverse audiences.

The writer must research an emerging topic quickly and efficiently, mastering a subject at the frontiers of knowledge that may be totally unfamiliar. Having the opportunity to interview leading researchers and a variety of stakeholders gives students greater insights not only about the process of science but also on communicating about science in the public arena.

The writer will need to exercise professional judgment to understand the landscape of opinion about the topic. This task includes assessing the extent of scientific consensus on the development in order to identify at least two independent sources, including scientists and stakeholders, whose voices would be appropriate to include in the article in addition to comments by at least one of the researchers involved in the work. The writer must become conversant enough to formulate compelling interview questions and to manage the interview interaction in a professional manner. Learning how to analyze and contrast or reconcile differing viewpoints and how to represent those viewpoints with accuracy, fairness, and balance are part of this assignment.

Students will be assigned a news article topic selected from the current literature.

Essay/Commentary

Essays and commentaries make a vital contribution to public discourse about environmental and public health and are an important channel for scholarly output and professional service. Recent years have seen the proliferation of blogs and informal web content in addition to the more traditional formats, and in class we explore the factors involved in constructing an effective and compelling essay.

Students will have the opportunity to develop an analytical essay after the fashion of the "Policy Forum" pieces in the journal *Science*. They will develop a well-structured piece that illuminates a current subject in environmental or public health and that elaborates a point of view while incorporating recent information from the relevant discipline(s). Students may either suggest their own topic or choose one from a suggested list.

The length should be about 800 words, not including a maximum of about 5-6 references.

Press Release Assignment

This is a simulation involving hypothetical scenarios.

You are a public information officer for the University of Washington and you're preparing a press release about the research paper you used in the executive summary assignment. The release should be consistent with the premise of the hypothetical scenario described below and the press release format.

You will have an opportunity in class to interview one or more authors of the research paper. Come prepared for that session with a list of questions (an interview guide) to ask during the group interview.

Your press release should be no more than 2 pages and should follow the "inverted pyramid" news structure and press release layout discussed in class (see checklist and examples on Canvas).

The release should be accessible to broader audiences, including journalists, lawmakers, and members of the interested public.

The scenarios:

1. Guest Speaker: Marilyn Roberts

"Vancomycin resistant *Enterococcus* spp. from crows and their environment in metropolitan Washington State, USA: Is there a correlation between VRE positive crows and the environment?"
Marilyn C. Roberts, David B. No, John M. Marzluff, Jack H. Delap, Robert Turner, *Vet. Microbiol.* (2016), [http:// dx.doi.org/10.1016/j.vetmic.2016.01.022](http://dx.doi.org/10.1016/j.vetmic.2016.01.022)

Today is Feb. 1, 2016. You are a public information officer for the UW, and you're preparing a press release to send out on Feb. 3, 2016 , for immediate release, when the paper is published online.

2. Guest Speaker: Brittany A. Weldon

"Occupational exposure limit for silver nanoparticles: considerations on the derivation of a general health-based value," Brittany A. Weldon, Elaine M. Faustman, Günter Oberdörster, Tomomi Workman, William C. Griffith, Carsten Kneuer & Il Je Yu, *Nanotoxicology*, 2016; 10(7): 945–956.

Today is March 12, 2016. You are a public information officer for the UW, and you are preparing a press release for distribution on March 14, 2016 , to be embargoed until March 16, 2016, when the paper is available online.

Oral Presentations

Students will have the opportunity to prepare and deliver two very different talks about the same assigned topic. One version will be geared for an audience of science specialists, while the other will be aimed at the general public and lawmakers. By doing these different treatments, students gain practice in audience analysis and in tailoring communication for the particular audience, goal, and setting.

The topic for both talks will be the subject of the news article assignment. Students may not read either of these talks, but rather, must deliver them in a conversational manner.

Technical Presentation (5 Minutes, with PowerPoint slides). Create a 5-minute talk with appropriate PowerPoint slides geared for a scientific audience and meeting the criteria described below. Be sure to practice your talk several times to perfect the timing and flow. **Submit a hard copy of your visual aids to the instructor before presenting your talk.** All presenters should prepare to field a few questions from the class afterwards.

General Audience (2 Minutes, no slides). This 2-minute presentation should be geared for general audiences, e.g. community members, journalists, policymakers, educators, industry representatives, and others. You may not use any slides for this presentation.

Criteria for evaluating the effectiveness of oral presentations:

Content and Organization. Completeness, accuracy, and appropriateness for the stated purpose and audience. Level of detail that suits the oral medium, format, and the time constraints. Structure suitable to purpose and audience, and revealed verbally and/or visually through the use of overviews, transitions, and summaries.

- Attention-getting opener
- Clear purpose statement
- Overview of main points
- Information at a level suited to the audience
- Detail appropriate for the oral medium
- Detail appropriate for the time constraint
- Effective transitions
- Examples where appropriate
- Summary of main points at closing (no new information)
- Take-away(s) and graceful closing

Delivery. Appropriateness for purpose and audience (e.g., level of formality, engagement, persuasiveness). Fluency of movement and speech (e.g., gestures, articulation, pace, volume, tone).

- Enthusiasm and professionalism
- Eye contact with the entire room
- Natural gestures and movement
- Clearly articulated speech. Spoken conversationally; no reading of notes.
- Appropriate speaking pace & volume

Visual Aids (Technical Presentation Only). Access and visibility, given the communication context. Adherence to effective design principles. Appropriateness for the stated purpose and audience. Effectiveness of the integration into the presentation.

- Easy to see—large enough to be visible from all parts of the room
- Appropriate fonts, color and layout choices. Simple and uncluttered—no extraneous information.
- Appropriately introduced and interpreted. Relevant to the message of the presentation
- Appropriate graphics for the information being conveyed

Clean-up of Low-Level Radiological Contamination at Magnuson Park

This flyer, addressed to "Current Resident," was received through the mail at a North Seattle location.

Discussion Questions:

1. Identify some of the audiences likely receiving the document.
2. Assess its overall effectiveness in terms of meeting the needs of each audience identified. Include issues of cross-cultural communication in your assessment.
3. Analyze elements of the **content, organization, and design / layout:**
 - a) What are the "chunks" of information presented to the reader? In what order is this information presented? How effective is this order?
 - c) If readers did not know anything about Magnuson Park and/or its radiological contamination prior to receiving the flyer, what would they understand from this document?
 - d) How effective are the section headings?
 - e) Analyze the accessibility of terminology and concepts viz. the likely intended audiences. Are there unfamiliar terms? Familiar terms used in unfamiliar ways? Are definitions provided?
 - f) Characterize the writing style and tone.
 - g) How easy is it to use this document?
 - For example, how clear are the illustrations and graphics?
 - The four-page folded piece contains a double-sided, loose insert. The comment form, meant to be returned, is the third panel of the folded piece. What are the tradeoffs of such a layout? Can you imagine other layouts?
 - h) What questions would be raised in readers' minds after seeing this document? What impression does it leave? Are there unanswered questions? Is there information that should be added or omitted?
 - i) How well would this document motivate readers to carry out the action(s) that the piece is soliciting, i.e. writing and sending feedback and/or attending the public meeting?

4. How could this flyer be improved?

Assignment:

Revise and redesign the Magnuson Park mailer to fit on both sides of **one** 8.5" x 11" sheet, and figure that one half of one side is needed for postal info. Develop a "mockup" containing the revised content and layout. Make any changes you think are needed to the text, organization, and design. Turn in one hard copy of your revision with the names of all team members on the document. Come prepared to share your revised flyer with the class and discuss the workshop questions.

Factsheet -- Washington State Dept. of Health

Questions and Answers about the Anencephaly Investigation

<http://www.doh.wa.gov/YouandYourFamily/IllnessandDisease/BirthDefects/AnencephalyInvestigation/QuestionsandAnswers>

Discussion Questions:

1. Identify some of the audiences likely to view the factsheet.

2. Assess its overall effectiveness in terms of meeting the needs of audiences. Include issues of cross-cultural communication in your assessment.

3. Analyze elements of the **content, organization, and design / layout:**
 - a) Analyze the content and order of information.

 - c) If readers did not know anything about anencephaly prior to receiving the flyer, what would they understand from this document?

 - d) How effective are the section headings? Overall layout?

 - e) Analyze the accessibility of terminology and concepts viz. the likely intended audiences. Are there unfamiliar terms? Familiar terms used in unfamiliar ways? Are definitions provided?

 - f) Characterize the writing style and tone.

 - g) What questions would be raised in readers' minds after seeing this document? What impression does it leave? Are there unanswered questions? Is there information that should be added or omitted?

4. How could this factsheet be improved?

Assignment:

Work in teams to revise and redesign the factsheet. Develop a "mockup" containing the revised content and layout. Make any changes you think are needed to the text, organization, and design. Turn in one hard copy and include all team member names on the revision.