

Env H 590 Advanced Technical Communication in Public Health

MW 3:30-4:50

Credits: 3

Instructor: Deborah L. Illman, Ph.D., illman@u.washington.edu, 616-4826**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 issues. 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 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, practice their reviewing skills, and 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 for target audiences about environmental 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.

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.

Supplemental Textbook

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

Materials on the Catalyst ShareSpace:

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

Bubela, T., Nisbet, M. C., Borchelt, R., et al. "Science Communication Reconsidered," *Nature Biotechnology*, **27**(6), 514-518 (2009).

Matthew C. Nisbet and Chris Mooney, "Framing Science," *Science*, **316**, p. 56 (6 April 2007).

Borchelt, R. E. Communicating the Future: Report of the Research Roadmap Panel for Public Communication of Science and Technology in the Twenty-First Century. *Sci. Comm.*, **23**(2), 194-211 (2001).

Weigold, M. "Communicating Science: A Review of the Literature," *Sci. Comm.*, **23**(2), 164-193 (2001).

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

Books on Reserve:

The Bare Essentials: English Writing Skills, Sarah Norton, Brian Green, Michele 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.

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

The Scientist's Handbook for Writing Papers and Dissertations, Antoinette Wilkinson, Englewood Cliffs, N.J., Prentice Hall, 1991.

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.

Additional Resources:

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

Alred, G., Brusaw, C. and Oliu, W. *Handbook of Technical Writing*, 9th ed. Boston: Bedford/St. Martin's, 2009.

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 additional information may be emailed to the class email list. You should check your UW email account 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).

2014 Schedule Note: Readings assigned on a given day are for use in *subsequent* classes.

Schedule	Topic	
Week 1		
Class 1 9/24	Introduction to the Course Intro exercise	Supplemental Reading <i>Reporting Tech Info:</i> Review/Skim Chs 1-6
Week 2		
Class 2 9/29	Writing for Technical Audiences - Research Publications - Tech. Reports and Executive Summary Assignment #1: Draft an Executive Summary	Reading Assignment <i>Reporting Tech Info:</i> Ch 10 Main Elements of Reports & Ch 15 Empirical Research Reports Ch 16 Proposals & Progress Reports
Class 3 10/1	- Structure in Technical Writing - Clarity & Style - Processes of Composing & Editing - Grammar Points	Reading Assignment Gopen & Swan article--see Catalyst ShareSpace
Week 3		
Class 4 10/6	Draft Exec. Summary Due--one hard copy - Public Communication about Science - Writing for Broader Audiences	Reading Assignment <i>Explaining Research:</i> Intro (pp.1-13), Part IV (pp. 248-340) Supplemental Reading <i>Selling Science:</i> Ch 1 (On Catalyst & library reserve)
Class 5 10/8	Discuss Executive Summaries Assignment: Revised Executive Summary - Audience Analysis - The News Format & The Press Release - Interviews	Reading Assignment <i>Explaining Research:</i> Chs. 8-10 (pp. 97-133)
Week 4		
Class 6 10/13	Revised Executive Summary Due (1 hard copy) Group Interview: Speakers TBA Assignment: Draft a Press Release on the research paper used for the executive summary based on in-class interviews with sources	

Class 7 10/15	Draft Press Release Due (1 hard copy) - Writing the News Article & Query Letter -Effective Technical Presentations Assignment: News Articles Assignment: Technical Presentation	Reading Assignment <i>Explaining Research:</i> Ch 16 (pp.194-212) Supplemental Reading: <i>On Writing Well</i> (on reserve): Chapters on "The Lead and the Ending" and "Science and Technology"
Week 5		
Class 8 10/20	Headlines & Short Spots: Workshop Discuss Press Release Drafts Assignment: Revised Press Release	Supplemental Reading: <i>Communicating Uncertainty</i> (on reserve): Ch 12 by K. Rowan (pp.201-223)
Class 9 10/22	Revised Press Release Due (1 hard copy) Issues in Public Communication of Science: - Effective Explanations: Workshop #1 - Metaphor in Public Communication of S&T - News & Numbers	Prepare to Discuss Workshop #2: "Clean-up of Low-Level Radiological Contamination at Magnuson Park"
Week 6		
Class 10 10/27	Effective Explanations: Workshop #2 Magnuson Park Cleanup Role of Scientist in Public Communication about Science: Framing of Science Stories	Supplemental Reading Bubela, T., Nisbet, M. C., Borchelt, R., et al. "Science Communication Reconsidered," <i>Nature Biotechnology</i> Nisbet & Mooney, "Framing Science" & responses (Catalyst)
Class 11 10/29	Writing Essays and Commentaries Assignment: "Policy Forum" Essay Technical Presentations	
Week 7		
Class 12 11/3	Technical Presentations	
Class 13 11/5	Draft News Articles Due (copies for all) Technical Presentations Assignment: Presentation to General Audience	Read Draft News Articles & Prepare to Discuss

Week 8		
Class 14 11/10	Discuss News Article Drafts	
Class 15 11/12	Discuss News Article Drafts Assignment: Revised News Articles	
Week 9		
Class 16 11/17	Draft Essays Due (copies for all) General Presentations	
Class 17 11/19	Discuss Draft Essays Assignment: Revised Essay	
Week 10		
Class 18 11/24	Discuss Draft Essays General Presentations	
Class 19 11/26	NO CLASS	
Week 11		
Class 20 12/1	General Presentations Revised News Articles Due Course Evaluation	
Class 21 12/3	Revised Essays Due Course Overview	

Grading

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<i>Due Date</i>	<i>Assignment</i>	<i>Pts.</i>	<i>Combined Weight</i>
10/6	Draft Executive Summary for Technical Audiences (1 hard copy) Topic: Assigned research paper. Download from Catalyst. Length: 400-450 words. Must fit to one side of one page. Font: Times New Roman 11 pt Margins: 1 in left, top, and bottom; 2 in right . No subheads. No right justification! Use paragraph indents. Line numbering on.	10	25 %
10/13	Revised Executive Summary (1 hard copy)	15	
10/15	Draft Press Release (1 hard copy) Topic: Same as executive summary. Format: Press release format discussed in class and on Catalyst. Length: maximum 2 pp.	10	20 %
10/22	Revised Press Release	10	
11/5	Draft Short News Article (copies for all; double sided ok) Length: 600 words, including headline. Headline and your byline at the 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 . No right justification. Use paragraph indents. Line numbering on.	10	25 %
12/1	Revised News Article (1 hard copy)	15	
11/17	Essay/Commentary (copies for all) 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 %
12/3	Revised Essay/Commentary (1 hard copy)	10	
10/29, 11/3&5 11/17&24, 12/1	Oral Presentations Related to the assigned news article topic. - Technical Presentation (5 min., with PowerPoint slides) - Presentation for General Audience (2 min., no slides)	5 5	10 %
	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 Catalyst ShareSpace). Audiences include specialists and interested non-specialists, management, policy-makers, stakeholders, and industry and NGO representatives. This summary must fit to one side of 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 Catalyst ShareSpace.)

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. 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 in understanding the landscape of opinion about the topic. This task includes assessing the extent of scientific consensus on the development in order to identify two independent sources, including scientists and a variety of stakeholders, whose voices would be appropriate to include in the article. 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 to represent those viewpoints with accuracy, fairness, and balance is 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.

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 after 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