Introduction to Technical Communication in Environmental Health

T Th 1:30 - 3:20   Location: SOCC 348   SLN: 14496   Credits: 5

Instructor: Dr. Deborah L. Illman   Email: illman@u.washington.edu

Description

This course provides an introduction to the basic principles of written and oral communication in environmental health and public health disciplines. Students will have the opportunity to interview practicing professionals about the genres of communication they use and to document some of their strategies for successful communication. Writing exercises throughout the quarter will help students gain experience with key forms of communication in these fields.

Students will study techniques of effective writing for technical articles, proposals, and reports. Particular emphasis will be given to organization, clarity, and language usage through a series of exercises focusing on structure and grammar. Students will craft an executive summary of a research report for technical audiences and will then translate that content into the form of a press release that could be disseminated to broader audiences through the media and the Web.

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.

Objectives

Upon successful completion of this course, students should be able to:
- Identify and strategically target a desired audience for a given communication situation.
- Create effective documents that clearly convey complex, technical information for target audiences.
- Translate information about environmental health for broader audiences in the public arena.
- 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.

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

Books On Reserve:

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.

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

Additional Resources:

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

Plagiarism Self Test: https://www.wcu.edu/learn/academic-success/tutoring-services/services-resources/writing-support/the-plagiarism-self-test/plagiarism-self-test/

Proofreaders' Marks http://www.chicagomanualofstyle.org/help-tools/proofreading-marks.html

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

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

The MIT Guide to Science and Engineering Communication, James G. Paradis and Muriel L. Zimmerman, Cambridge, Mass.: The MIT Press, 2002.

Associated Press Stylebook & Libel Manual, Addison Welsley.

Escape from the Ivory Tower: A Guide to Making Your Science Matter. 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. Attendance at all of the student presentations is required. 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).

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

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

Schedule	Topic	
Week 1		
Class 1 1/4	**Introduction to the Course** **Intro exercise** **Grammar Inventory:** Exercise #1	**Reading:** *Reporting Tech Info*: Ch 1 Overview of Technical Writing Ch 2 Composing Ch 3 Writing for Your Readers *Bare Essentials* Ch 4-7 Sentences, Fragments, and Run-Ons and self-paced exercises therein
Week 2		
Class 2 1/9	**Ex. #1 Due** **Professional Communication in EnvH/PH** **Assignment:** Case Study in Professional Communication **Assignment:** Proposed Plan (Due 1/11)	**Reading Assignment:** *Reporting Technical Information* Ch 4 Achieving a Readable Style Ch 12 Planning Correspondence and Email
Class 3 1/11	-- BRING HOUP BOOKS TO CLASS-- **Proposed Plan Due-**Email to instructor and turn in 1 hard copy **Writing in the Workplace** **Assignment:** Letter, Houp Ch12, Ex. 5, p. 337	**Reading Assignment:** *Reporting Technical Information* Ch 5 Writing Ethically Ch 6 Writing for International Readers *Bare Essentials* Ch 16-18 Punctuation
Week 3		
Class 4 1/16	**Letter assignment due--1 hard copy** **Writing for Technical Audiences** **- Research Publications** **- Technical Reports** **The Executive Summary** **Assignment:** Write an Executive Summary	**Reading Assignment:** *Reporting Tech Info*: Ch 10 Main Elements of Reports Ch 15 Empirical Research Reports
Class 5 1/18	**Structure in Technical Writing** **Ex. #3 In Class--**Commas, Semicolon, Verbs **Ex. #4 WA Dept of Health Factsheet**	**Reading Assignment** *Reporting Tech Info*: Ch 11 Creating Tables and Figures Gopen & Swan article--on Canvas *Bare Essentials* Ch 8 & 9 Modifier Problems; Parallel Construction

Week 4		
Class 6 1/23	**Executive Summary Due- turn in 1 hard copy** **Clarity & Style in Technical Writing** **Writing & Editing Processes** **Analyzing, Displaying, & Reporting Results** **Assignment: Ex. #5--Short Research Report**	
Class 7 1/25	**Discuss Executive Summary** **Assignment:** Revise Exec. Summary **EnvH & PH in the Public Arena** **DOH Factsheet:** Work in teams	**Reading Assignment:** *Explaining Research* Introduction (pp.1-13) Part IV (pp. 248-340)
Week 5		
Class 8 1/30	**Short Research Report Due** **Revised Exec Summary Due** **Case Study Project: Progress Report** **EnvH & PH in the Public Arena** **Writing for Broader Audiences** **Assignment: Ex. #6** News Summary	**Reading Assignment:** *Explaining Research*: Chs. 8-10 (pp. 97-133) Ch. 15 (pp. 172-193) *Selling Science*: Ch 1 (Canvas)
Class 9 2/1	**Ex. #6 News Summary Due** **The Press Release** **Interviews**	**Reading Assignment:** Press Release checklist and examples on Canvas
Week 6		
Class 10 2/6	**Group Interview: Speakers TBA** **Assignment:** Draft a Press Release based on the in-class interviews and the research papers	
Class 11 2/8	**Press Releases Due** **Effective Explanations** **Oral Presentations** **Topic Assignments** for Presentations	**Reading Assignment:** Chapter by Rowan on Effective Explanations in *Communicating Uncertainty* (On reserve) *Reporting Technical Information* Ch 19 Preparing Oral Reports

Week 7		
Class 12 2/13	**Interview Summaries Due--**turn in 1 hard copy in class and also email Word file to instructor **Case Study: Data analysis and reporting** **Ex. #7 In Class --**Colon; Modifiers; Parallelism	**Assignment:** Working in pairs, analyze all interview data obtained by classmates. Each student prepares his/her **own** Final Report on the Case Study Project (Max. 2 pp) Report should note the name of the data analysis team member.
Class 13 2/15	Workshop: **Headlines** **Discuss Press Release Drafts** **Ex #4 DOH Factsheet: Work in teams** **Assignment:** Revised Press Release **Assignment:** Revise Interview Summary.	
Week 8		
Class 14 2/20	**Revised Press Release Due** **Data Analysis for Case Study Final Report: Work in teams**	
Class 15 2/22	**Technical Presentations**	
Week 9		
Class 16 2/27	**Ex. #4 Factsheet Due** (1 hard copy; include both team members' names) **Technical Presentations**	
Class 17 3/1	**Technical Presentations**	
Week 10		
Class 18 3/6	**Final Report Due with Revised Interview Summary.** Turn in 1 hard copy and email Word files to instructor **General Presentations**	
Class 19 3/8	**General Presentations** **Personal Reflection on Case Study Project due (1-2pp. max)** Course Overview	

Grading

Due Date	Assignment	Pts.	Combined Weight
	Exercises and Short Assignments:		
1/9	Ex. #1 Grammar Inventory	3	
1/16	Ex. #2 Business Letter (Houp Ch12, Ex. 5, p. 337)	3	
1/18	Ex. #3 Commas; Semicolon; Verbs	3	
1/30	Ex. #5 Short Research Report: Mining Study	7	25%
2/1	Ex. #6 News Summary	3	
2/13	Ex. #7 Colon; Modifiers; Parallel Construction	3	
2/27	Ex. #4 WA Dept. of Health Factsheet on Anencephaly	3	
	Professional Writing Products:		
1/23	**Draft Executive Summary** 450 words. Must fit to one page only. Font: Times New Roman 11 pt Margins: 1 in left, top, and bottom; **2 in right.** No right justified margin! No subheads. Use paragraph indents. Line numbering on.	10	20%
1/30	**Revised Executive Summary**	10	
2/8	**Draft Press Release** Press release format discussed in class & on Canvas. Inverted pyramid structure. For general audiences. Max 2 pp. Margins: 1" except 2" right. Use paragraph indents. Line numbers on.	10	20%
2/20	**Revised Press Release**	10	
	Case Study in Professional Communication:		
1/11	Proposed Plan with Draft Email	5	
2/13	Draft Interview Summary (max. 2 pages)	5	
3/6	**Final Report** and **Revised Interview Summary** (report is max. 2pp of text and 1 p. of tables/figures)	10	25%
3/8	**Personal Reflection** on the Case Study Project (1-2pp. max)	5	
	Oral Presentations:		
2/22, 2/27, 3/1	- Technical Presentation 5 minutes with PowerPoint slides Turn in one hard copy of slides at beginning of talk.	5	10%
3/6 , 3/8	- General Audience 2 minutes, no slides	5	
	TOTAL	100	100%

Case Study in Professional Communication

We have discussed in class how writing in the professional workplace may differ from the kinds of writing you have done in the past in the academic setting. In chapter 1 of your textbook, *Reporting Technical Information*, the authors outline eight basic differences between professional writing and writing in school.

Now, students will have a chance to interview environmental health or public health professionals to understand more specifically the kinds of oral and written communication they use in these fields and how to enhance the success of communication processes and products.

Students will identify an interviewee, conduct the interview using a standard set of questions (below), and prepare a written summary (max 2 pages) of the information obtained from the interview.

All of these interview summaries will be made available to the class. Students will analyze the data in teams, and then each student will write his or her own 2-page report on the findings.

The standard set of questions (below) should be used in the interviews so that we can compare across cases in the final analysis. Target = a 20-minute interview.

Identification of Interviewee and Alternates

- Identify a professional who is working in the field of environmental or public health in the U.S. This person should be currently in government, industry, or non-governmental organization (NGO).

- Interviewees may be alumni of UW DEOHS or School of Public Health only if they graduated June 2013 or before. Interviewees may **not** be current UW faculty members.

- Please also identify two alternates in case your first choice is unavailable.

- **Furnish job titles and full contact information for all of these individuals.**

Proposed Plan

- Justify in your proposed plan why this individual is appropriate for inclusion in our study. Then, develop an approach for contacting the interviewee and requesting the interview. You should include
    - full contact information for your proposed interviewee and alternates, including name, title, organization, web url, telephone number, and email address; and
    - a draft email and the general text of a phone communication that you will use to introduce yourself, describing the goal and requesting the interview.

- The plan should describe how you will capture information from the session, e.g. taking notes and recording the interview.

    NOTE! If you record the interview, you must ask the interviewee for permission first, so be sure to include that language in the proposed plan, which must be approved by instructor before proceeding.

- Email your plan to the instructor by or before 1/11, and turn in 1 hard copy in class. If modifications to the plan are required, the revised plan must be approved by the instructor before contacting interviewees.

Draft Interview Summary

- After conducting the session, prepare a summary (2pp. max) of these interview results.

- Please organize your material under the following headings and in this order:
    - I. Job title, job description, and rationale for inclusion in the study
    - II. Role of oral and written communication in the interviewee's job
    - III. Examples of Communication Products and Processes
    - IV. Challenges and Obstacles
    - V. Strategies to Enhance the Success of Communication
    - VI. Other

- Email the summary to illman@u and turn in one hard copy in class. Instructor's comments on your draft should be incorporated into a revised interview summary, due with the final report.

Final Data Analysis and Report

- All of the interview summaries will be made available to the class. Students will work in pairs on the data analysis portion of the project, but each student is required to write his or her own individual final report. Please indicate the name of your data analysis partner in the report.

- Structure of report: Introduction, Approach, Results, Discussion (2 pp. max),
                              Appendix with Tables/Graphs (1 page max)

- Results in the final report should cover: demographics; writing products; importance of writing; writing process; oral communication types; importance of oral communication; obstacles; and strategies for success. Students will need to decide on the appropriate kinds of tables, charts, and/or graphs to use to display their data. All tables, charts, and/or graphs should be contained in the appendix, and they should be numbered and given titles and captions. Results should be described and interpreted in the report text.

- Your revised interview summary and your final report should be emailed **as separate files** to illman@uw and one hard copy of everything submitted in class.

Personal Reflection on the Case Study Project

- Reflect on the entire case study experience, from contacting your interviewee and managing the interview process to what you take away about the role of communication and other insights gained from the data analysis phase (1-2 pp. max). Turn in one hard copy and email to instructor.

Interview questions

1. Interviewee name; Organization name; Job title & Job description; Educational background.
2. What role does writing play in your job? Would you rate its importance as high, medium, or low?
3. What are some typical examples of specific writing products that you generate (~2-3 examples).
4. Describe the writing process:
    a. Who decides what needs to be written? Who decides specifications for the product?
    b. Who drafts the document? Who reviews the document? Who has final approval?
    c. How is the document disseminated?
5. What role does oral communication play? Would you rate its importance high, med., or low?
6. What are some typical examples of oral communication?
7. What are some of the challenges or obstacles you face relating to communication in your job?
8. What strategies enhance the success of communication in your job?

Executive Summary

The reading in your textbook, *Reporting Technical Information,* discusses the function of the executive summary for a research report and describes the elements and structure it should have. Now, you will be assigned one of two research papers as the subject of your executive summary writing assignment (download from Canvas). Audiences for an executive summary may include

- specialists and interested non-specialists
- management
- policy-makers
- stakeholders
- industry and NGO representatives

Format: 450 words. Must fit to one page only. Use 11 pt font, Times New Roman, 1-inch left, top, & bottom margins, and 2-inch right margin. Please turn the line numbering on and use paragraph indents. No subheads.

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 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 layout discussed in class. It should be accessible to broader audiences, including journalists, lawmakers, and members of the interested public.

Topic 1   Guest Speaker: James P. Meador

"Determining potential adverse effects in marine fish exposed to pharmaceuticals and personal care products with the fish plasma model and whole-body tissue concentrations," James P. Meador, Andrew Yeh, Evan P. Gallagher, *Environmental Pollution* **230** (2017) 1018-1029.

Today is Oct. 27, 2017 . You are a public information officer for the UW, and you're preparing a press release to send out on Nov. 1, 2017, for immediate release, when the paper is published in the journal.

Topic 2   Guest Speaker: Deborah Fulton-Kehoe

"Patterns of Opioid Use and Risk of Opioid Overdose Death Among Medicaid Patients," Renu K. Garg, Deborah Fulton-Kehoe, and Gary M. Franklin, Medical Care, **55**(7), (2017) 661-668.

Today is June 26, 2017 . You are a public information officer for UW, preparing a press release for distribution on June 28, to be embargoed until July 1, 2017, when the paper is published online.

Oral Presentations

- Students will have the opportunity to 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 preparing these different treatments, students gain practice in audience analysis and in tailoring communication for a particular audience, goal, and setting.

- 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 at the beginning of 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. 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.

Factsheet -- Washington State Dept. of Health

Questions and Answers about the Anencephaly Investigation

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

<u>Discussion Questions:</u>

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?

<u>Assignment:</u>

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.