

Introduction to Technical Communication in Environmental Health

Schedule: T, Th 1:30 - 3:20 SLN: 14051 Credits: 5

Location: Tues: T-360+A Thurs: T-530

Instructor: Dr. Deborah L. Illman Email: illman@uw.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 hear from practicing professionals about the genres of communication they use and 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 professional, community, and policy settings.

Textbooks

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

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

Coursepak: *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/>

UW Student Technology Loan Program (check out laptops, adaptors, recorders, etc)
<https://stlp.uw.edu/#/overview>

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. 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 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 late. Written assignments generally will be evaluated on content, organization, and grammar/mechanics. Specific criteria will be discussed in class. Students must turn in the marked-up draft with all revision assignments; if the marked-up draft is not turned in, the grade on the revision will equal that of the draft. If the marked-up draft is turned in late, the revision will be treated as a late paper.

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). Students are responsible for previewing/testing their own slides prior to presentation day. If needed, technologies for that purpose may be checked out from the student technology loan program--see "Additional Resources" on previous page. Students must give oral presentations on their scheduled day; if they do not, they will receive a zero unless they have made arrangements at least one day in advance of the scheduled talk.

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 4/2	<p>Introduction to the Course</p> <p>Intro exercise</p> <p>Grammar Inventory: Exercise #1</p>	<p>Reading: <i>Reporting Tech Info:</i> Ch 1 Overview of Technical Writing Ch 2 Composing Ch 3 Writing for Your Readers <i>Bare Essentials</i> Ch 4-7 Sentences, Fragments, and Run-Ons and self-paced exercises therein</p>
Class 2 4/4	<p>Ex. #1 Due</p> <p>Professional Communication in EnvH/PH Assignment: Case Study in Prof. Communication</p> <p>Assignment: Read interview summaries and write a personal reflection about them (1-2pp max)</p>	<p>Reading Assignment: <i>Reporting Technical Information</i> Ch 4 Achieving a Readable Style Ch 12 Planning Correspondence and Email</p>
Week 2		
Class 3 4/9	<p>-- BRING HOUP BOOKS TO CLASS--</p> <p>Personal reflection due (1 hard copy in class)</p> <p>Writing in the Workplace Assignment: Letter, Houpp Ch12, Ex. 5, p. 337</p> <p>Case Study Project: Data Coding Assignment: Coding Sheets (email Word file to instructor)</p>	<p>Reading Assignment: <i>Reporting Technical Information</i> Ch 5 Writing Ethically Ch 6 Writing for International Readers Ch 11 Creating Tables and Figures</p> <p><i>Bare Essentials</i> Ch 16-18 Punctuation</p>
Class 4 4/11	<p>Letter assignment due--1 hard copy</p> <p>Writing for Technical Audiences - Research Publications & Technical Reports</p> <p>Analyzing, Displaying, & Reporting Results Assignment: Ex. 4 Table Charts & Graphs</p>	<p>Reading Assignment: <i>Reporting Tech Info:</i> Ch 10 Main Elements of Reports Ch 15 Empirical Research Reports</p>
Week 3		
Class 5 4/16	<p>Coding Sheets due--Email WORD file to instructor</p> <p>Structure in Technical Writing The Executive Summary Assignment: Write an Executive Summary</p> <p>Ex. #3 In Class--Commas, Semicolon, Verbs</p>	<p>Reading Assignment Gopen & Swan article--on Canvas</p> <p><i>Bare Essentials</i> Ch 8 & 9 Modifier Problems; Parallel Construction</p>

Class 6 4/18	Assignment due: Tables, Charts, & Graphs Clarity & Style in Technical Writing Writing & Editing Processes	
Week 4		
Class 7 4/23	Executive Summary Due- turn in 1 hard copy Assignment: Ex. #5--Short Research Report EnvH & PH in the Public Arena Study Guide: Explaining Research (for 5/14) Case Study: Teams tally results using compiled set of coding sheets	Reading Assignment: <i>Explaining Research</i> Introduction (pp.1-13) Part IV (pp. 248-340)
Class 8 4/25	Discuss Executive Summary Assignment: Revise Exec. Summary Case Study Project: Discuss Progress EnvH & PH in the Public Arena Writing for Broader Audiences Assignment: Ex. #6 News Summary	Reading Assignment: <i>Explaining Research:</i> Chs. 8-10 (pp. 97-133) Ch. 15 (pp. 172-193) <i>Selling Science:</i> Ch 1 (Canvas)
Week 5		
Class 9 4/30	Revised Exec Summary Due Ex. #6 News Summary Due The Press Release In-class: Planning to Write the Press Release Assignment: Draft Press Release	Reading Assignment: Press Release checklist and examples on Canvas
Class 10 5/2	Short Research Report Due Effective Explanations	Reading Assignment: Ch by Rowan on Effective Explanations in <i>Communicating Uncertainty</i> (On reserve) <i>Reporting Technical Information</i> Ch 19 Preparing Oral Reports
Week 6		
Class 11 5/7	Draft Press Release Due Oral Presentations Topic Assignments for Presentations Discuss Short Report. Assignment: Revision	

Class 12 5/9	Discuss Press Release Drafts Assignment: Revise Press Release Ex. #7 In Class --Colon; Modifiers; Parallelism	
Week 7		
Class 13 5/14	Revised Short Research Report Due Case Study: Discuss Progress and Draft Report Study Guide: Class Discussion	
Class 14 5/16	Revised Press Release Due Technical Presentations	
Week 8		
Class 15 5/21	Draft Case Study Report Due. Turn in 1 hard copy in class Technical Presentations	
Class 16 5/23	Discuss Draft Case Study Reports. Assignment: Revision Technical Presentations	
Week 9		
Class 17 5/28	General Presentations	
Class 18 5/30	General Presentations Final Report on Case Study due (turn in 1 hard copy in class with marked-up draft and email Word file to instructor)	
Week 10		
Class 19 6/4	General Presentations	
Class 20 6/6	Course Overview	

Grading

<i>Due Date</i>	<i>Assignment</i>	<i>Pts.</i>	<i>Combined Weight</i>
	Exercises and Short Assignments:		
4/4	Ex. #1 Grammar Inventory	3	30%
4/11	Ex. #2 Business Letter (Houp Ch12, Ex. 5, p. 337)	3	
4/16	Ex. #3 Commas; Semicolon; Verbs	3	
4/18	Ex # 4 Tables, Charts, and Graphs	5	
5/2	Ex. #5 Draft Short Research Report: Mining Study	5	
5/14	Short Research Report-Revision (1 hard copy with marked up draft)	5	
4/30	Ex. #6 News Summary	3	
5/9	Ex. #7 Colon; Modifiers; Parallel Construction	3	
	Professional Writing Products:		
4/23	Draft Executive Summary 450 words. Must fit to one page only. Times New Roman 11 pt Margins: 1 in left, top, and bottom; 2 in right . No right justified margin! No subheads. Use paragraph indents. 1 hard copy in class.	10	20%
4/30	Revised Executive Summary (1 hard copy plus marked-up draft)	10	
5/7	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. 1 hard copy in class.	10	20%
5/16	Revised Press Release (1 hard copy plus marked-up draft)	10	
	Case Study in Professional Communication:		
4/9	Personal Reflection on Interview Summaries (1-2pp max, 1 hard copy in class)	5	20%
5/21	Draft Report (see syllabus page 8 for report format)	5	
5/30	Final Report (1 hard copy and marked up draft, email Word file to instructor)	10	
	Oral Presentations:		
5/16, 21, 23	Technical Presentation 5 minutes with PowerPoint slides. Email pdf of slides to instructor by deadline discussed in class.	5	10%
5/28,30, 6/4	General Audience (journalists & public) 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 explore in more detail how environmental health and public health professionals use written communication in the workplace and how to enhance the success of writing processes and products.

Students will have the opportunity to read and reflect upon a set of interview summaries of professionals in the field obtained by previous EnvH 320 students. We will give attention in these interview summaries to written communication products and processes, directed toward the research questions presented on the next page (see syllabus p. 9). Students from previous classes administered open-ended, oral interviews by telephone or in person, and then they prepared 1-2 page summaries of the information provided by interviewees.

After reading the summaries, write a personal reflection about what you have learned from these accounts. For example, what made the greatest impression on you? What if anything surprised you? What kind of insights have you gained about these jobs and how writing tasks are conducted in the workplace? (2 pp max)

In the next phase, students will analyze the data in teams and tally the results. Each team member will receive a copy of the raw data tables to use in preparing his or her **own** report about the findings.

Data Analysis and Report

- Students will work in teams to code the information in their interview summaries, producing data sheets that will be shared with the class. The instructor will collect all sheets and distribute the set to class members. Students teams will then tally the information from all of the data sheets to generate raw data tables.
- Each student will receive a copy of the team's data tables and will write his/her own individual final report. The document should be structured as a research report with introduction, approach, results, and conclusions contained in the body of the text, and the tables and charts all presented in an appendix, as indicated below.
- Please indicate the name of your data analysis partner in your report.
- Structure of report: Text with sections on Introduction, Approach, Results, Conclusion (2-3 pp. max), plus the Appendix with Tables/Graphs (~5 pp. max)
- Results should cover
 - demographics;
 - importance of writing;
 - writing products;
 - obstacles; and
 - strategies for success.
- Students will need to decide on the appropriate kinds of tables and charts needed to display their data. All tables and charts should be contained in the appendix (not in the body of the text). Tables and figures should be numbered and given titles and captions (NO ITALICS!). Results should be described and interpreted in the report text, making mention of the particular table number or figure number when discussing particular results.
- Draft Report: Turn in one hard copy.
- Final Report: Turn in the marked up draft with one hard copy of revision in class and email to instructor.

Research 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 are some of the challenges or obstacles you face relating to writing in your job?
6. What strategies enhance the success of writing 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.

Audiences for an executive summary may include specialists and interested non-specialists, management, policy-makers, stakeholders, and industry and NGO representatives.

Now, you will be assigned one of two research papers (download from Canvas) as the subject of your executive summary writing assignment.

The summary should fit to one page only. The structure of the summary should follow the structure of a research report: introduction, methods, results, conclusions. The nature and amount of detail included in the summary should be appropriate for the audiences of the document.

You should write in third person (e.g. the researchers did this, the team did that, etc.), and be sure to use your own words.

It should be made clear to readers that you are the author of the summary, and that the summary author was not involved in the research. Therefore, give the document an appropriate heading ("Executive Summary by Your Name") followed by the full reference information for the paper (paper title, authors' names, journal name, volume, pages, year).

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 use paragraph indents. No subheads.

Turn in 1 hard copy in class.

Revision Assignment: Turn in 1 hard copy in class along with the marked-up draft.

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. The goal is to 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.)

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. Turn in 1 hard copy of the draft in class. Revision assignment: turn in 1 hard copy in class along with the marked-up draft.

Topic 1

"Geogenomic Segregation and Temporal Trends of Human Pathogenic *Escherichia coli* O157:H7," Gillian A.M. Tarr, Smriti Shringi, Amanda I. Phipps, Thomas E. Besser, Jonathan Mayer, Hanna N. Oltean, Jon Wakefield, Phillip I. Tarr, Peter Rabinowitz, *Emerging Infectious Diseases*, Vol. 24, No. 1, January 2018.

- Today is Dec. 28, 2017. You are a public information officer for the UW, and you're preparing a press release to send out on January 1, 2018 when the paper is published in the journal.

Topic 2

Using High-Resolution Mass Spectrometry to Identify Organic Contaminants Linked to Urban Stormwater Mortality Syndrome in Coho Salmon," Katherine T. Peter, Zhenyu Tian, Christopher Wu, Peter Lin, Sarah White, Bowen Du, Jenifer K. McIntyre, Nathaniel L. Scholz, and Edward P. Kolodziej, *Environ. Sci. Technol.*, Vol. 52, 10317–10327, September 7, 2018,

- Today is Sept. 3, 2018. You are a public information officer for UW, preparing a press release for distribution on Sept. 6, embargoed until Sept 7, 2018 when the paper is published in the journal.

Oral Presentations

- Students will have the opportunity to deliver two very different talks about the same assigned topic. Topics have been selected from the current research literature-- many involve researchers from UW.
- One version of the talk 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, deliver them in a conversational manner. Note cards are ok.
- Students are required to attend all of the oral presentations by their classmates. The presentations help expand students' knowledge about cutting-edge work in the field while helping them to learn about the factors that affect the quality of oral presentations and visual aids. They will have the opportunity to develop professional skills by learning how to provide constructive feedback to presenters.

Technical Presentation (5 Minutes, with slides).

Create a 5-minute talk with appropriate PowerPoint slides geared for a scientific audience and meeting the criteria described below. Practice to perfect timing and flow. Students are responsible for previewing/testing their own slides prior to presentation day. Laptops and adaptors for this purpose may be checked out from the UW Student Technology Loan Program. **Save your talk as a pdf and email to instructor by deadline discussed in class.** All presenters should prepare to field a few questions from the class.

General Audience (2 Minutes, no slides).

This 2-minute presentation should be geared for general audiences, e.g. community members, journalists, educators, industry representatives, etc. 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 & audience. Level of detail suits the oral medium, format, and time constraints. Structure suitable to goal & audience, and revealed through the use of overviews, transitions, and summaries.

- Attention-getting opener.
- Clear purpose statement.
- Overview of main points.
- Information level suited to the audience.
- Detail appropriate for the oral medium.
- Detail appropriate for the time constraint.
- Effective transitions.
- Examples where appropriate.
- Summarize main points at end (no new info).
- 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.

- Easy to see from all parts of room.
- Appropriately introduced and interpreted.
- Appropriate fonts, color, layout choices.
- Simple & uncluttered. Appropriate graphics.