BME185 Technical Writing for Biomolecular Engineers: Fall 2018

MW 5:20PM-6:55PM

Dr. Joy Hagen

Soc Sci 1 149

Office: Rachel Carson College Rm 333

Hours: Monday 2-4 PM

Texts and Other Course Materials

- ✓ $ For Printing
- ✓ Canvas course site, e-reader, and e-workbook
- ✓ Optional and Recommended:
  Writing handbook equivalent to Lunsford, A. (2009). *Everyday Writer*, 4e. Bedford, St. Martin.

  Huckin, T. N. & Olsen, L. A. (1991). *Technical writing and professional communication: For nonnative speakers of English*. New York: McGraw-Hill. (out of print—buy used)

Technical Writing for Biomolecular Engineers

Writing by biomolecular engineers, to engineers, including engineering managers and technical writers. Coursework includes creating job application letters and resumes, conducting library research, designing graphics, composing lab protocols, designing document specifications, writing proposals and progress reports, composing an effective technical report, writing abstracts, designing posters, and practicing oral presentations.

Prerequisites are satisfaction of Entry Level Writing and Composition requirements, previous or concurrent enrollment in BIOL 101L or BIOL 20L or permission of instructor, enrollment restricted to junior or senior bioengineering or bioinformatics majors.

Classroom Agreements and Responsibilities

CURIOSITY, OPENNESS, PERSISTENCE

1. Take risks in your writing, research, and class participation.
2. Be respectful—our classroom is a safe space for the interchange of ideas.
3. Be a fantastic collaborator and contribute fully in group work.
4. Respond to peer writing critically and helpfully, but not judgmentally.

CREATIVITY, PERSISTENCE, METACOGNITION

1. Write to learn, to define and hone your own thinking, and to communicate.
2. Develop your writing process and pursue a variety of goals for your writing.
3. Challenge yourself—use multiple strategies to accomplish writing and research goals.
4. Reflect—identify the skills or learning outcomes involved in your work.

ENGAGEMENT, RESPONSIBILITY, FLEXIBILITY

1. Bring writing (draft, copy) to class. Come prepared & on time. Keep your deadlines!
2. Take full ownership of your writing, revising deeply until you are truly happy.
3. Use your resources—from course readings to office hours—to increase competency.
4. Handle procedural questions outside of class time; read all assignment instructions; check the course schedule each week; check course website and email.

AVOIDING PLAGIARISM

Plagiarism and self-plagiarism (resubmission/recycling of an assignment) fall under "cheating" within the UCSC Student Code of Conduct. This includes (but is not limited to)

A. Copying from the writings or works of others into one's academic assignment without attribution, or submitting such works as if it were one's own;

B. Using the views, opinions, or insights of another without acknowledgment; or

C. Paraphrasing the characteristic or original phraseology, metaphor, or other literary device of another without proper attribution (102.012 Plagiarism, Code of Student Conduct 2015).

D. Representing, explicitly or implicitly, that work obtained from another source was produced by oneself (102.013 Furnishing false…, Code of Student Conduct 2015).

E. Submitting the same piece of work as partial fulfillment of the requirements in more than one course without permission of the instructor (102.013 Furnishing false…, Code… 2015).

Course Components and Evaluation

PORTFOLIOS

Keep all of your drafts, revisions, and (especially) feedback organized in a folder or binder. This final portfolio can help elevate your grade. A passing portfolio must be 1) complete, including required revisions, and 2) follow the Portfolio unit instructions and requirements.

NOTEBOOKS

Modeled after laboratory notebook practices, our Language, Style, and Mechanics notebooks contain weekly exercises, experiments, and observations.

WRITING GROUPS

Regular writing group meetings held with the instructor provide guided feedback on expectations and strategies for revision. Preparation includes preparing peer copies, peer reading, and comparing assignment submissions with rubrics.

UNITS AND ASSIGNMENTS

Assignments include genres common in technical or workplace writing for biomolecular engineering (technical reports, proposals, abstracts, posters, protocols, graphics, presentations) and work across genres on common expectations (scholarly research, writing style and conventions, design excellence, etc.). See assignment chart below.

CLASS AND HOMEWORK TIME

Success in five-unit writing courses requires considerable time and focus. Regular weekly work for this course includes 4–5 hours of reading and research, 6–7 hours of writing and revising, 30 minutes of reflection and quiz review, and 3+ hours of class time. Additionally, you will attend a one-hour writing group every week. (≈15 hrs/wk total.)

YOUR LEARNING OUTCOMES ARE TO:

1. Identify and use genre conventions (citation, design, report structure, graphical excellence, style, etc.) for academic and technical writing genres.

2. Exhibit audience awareness and meet reader needs across a variety of genres.

3. Meet standards for academic writing and for technical reports (front matter, document design, sentence style, etc.).

   3.1. Evaluate, propose, and use high-quality document design.

   3.2. Create excellent figures and graphics with strong captions.

   3.3. Proficiently revise for readability.

4. Demonstrate skill searching, evaluating, and documenting sources.

   4.1. Show well-designed search strategies for locating discipline-specific scholarly materials (data, genes, grants, literature, etc.) and demonstrate good practices for managing sources.

   4.2. Evaluate and display knowledge of sources when writing, including (a) discussing context, relevance, and rigor of sources, (b) appropriately choosing between paraphrase or summary, and (c) proficiently signaling authorship.

   4.3. Use information ethically, showing attribution when integrating sources and following conventions for citation.

5. Show effective strategies for planning and delivering projects through multiple revisions, improving focus, structure, quality, and coherence.

6. Implement strategies for editing according to genre and disciplinary conventions such as arrangement, structure, language use, and mechanics.

TO MEET THE LEARNING OUTCOMES:

✎ Compose in a variety of genres common for both technical and academic writing across engineering, molecular biology, and chemistry disciplines.

   • Write workplace documents, such as job application letters, resumes, protocols, and technical reports.

   • Write academic genres, such as abstracts, in addition to protocols and reports that overlap workplace genres.

✎ Practice library research for topics in biomolecular engineering and for a variety of information sources (data, figures, patents, etc. as well as published reviews and primary research articles).

✎ Navigate different interfaces for researching information (for example data repositories, protocols, preprints, patents, genes, and article databases).

✎ Explore good practices for managing sources, including use of reference management software and effective strategies for reading and note-taking.

✎ Revise for excellent acknowledgment of sources in all coursework.

✎ Write frequently in and out of class to generate ideas, assess understanding of challenging concepts, and communicate in clear and concise prose.

✎ Revise recursively, improving a variety of the conventions of academic and technical writing style (such as clear structure and excellent readability).

✎ Practice strategies for identifying and correcting problems with your own prose, including both style and error.

✎ Develop a vocabulary for discussing writing and revising.

Unit	Genres & Goals	Assignments	% of Grade

1. Job Application Documents	Resumes
	Letters
	Document Design
		1.1 Job resume
		  1.1.1 Peer Review
		  1.1.2 Revision
		1.2 Cover letter
		  1.2.1 Peer Review
		  1.2.2 Revision
		1.3 Quiz
			10%

2. Library research skills	Annotated Bibliography
	In-text citation
		2.1 Library Assessment
		2.2 Library Worksheet
		2.3 Annotated Bibliography
		  2.3.1 Peer Review
		  2.3.2 Revision
		2.4 Tech Report Bibliography*
			10%

3. Lab Protocol	Protocols Standard Operating Procedures	3.1 Quiz 3.2 Protocol Draft 3.3 Peer Review 3.4 Revised Protocol	10%
4. Scientific Graphics	Figures Tables Diagrams Graphical Display Universal Design	4.1 Critique 4.2 Graphics and Figures 4.3 Captions 4.4 Quiz 4.5 Graphics in Posters and Technical Reports*	15%
5. Poster	Posters	5.1 Poster Draft 5.2 Peer Review 5.3 Revision	10%
6. Oral Presentation	Digital Display Oral delivery	6.1 Presenting Graphic OR Library research tool 6.2 Presenting Poster OR Technical Report project 6.3 Peer Response 6.4 Quiz	10%

7. Technical Report*	Memos
	Proposals
	Document Design
	Progress Reports
	Letters of transmittal
	Technical Reports
		7.1 Research Proposal
		  7.1.1 Peer Review
		  7.1.2 Proposal Revision
		7.2 Document Design
		7.3 Progress Report
		7.4 Technical Report
		  7.4.1 Peer review
		  7.4.2 Tech Report Revision Task
		7.5 Final Report
			25%

8. Language, Style, and Mechanics*	Lab Notebooks Glossaries Captions Abstracts	8.1 Notebook 8.2 Worksheets 8.3 Abstracts 8.4 Quiz 8.5 Revisions*	10%
9. Portfolio	Reflection	9.1 Cover Letter 9.2 Annotated Table of Contents	Bonus credit

*This unit or assignment continues throughout the quarter and is evaluated in the final portfolio.

REVISIONS AND GRADING

Fifty percent of an assignment's grade is for the draft and the other fifty percent is for revision. Revision criteria and grading are outlined in specific assignment rubrics. To allow for additional review and revision, there is a re-submission policy (see below). Assignments with no revision—quizzes, notebook work, and worksheets—are awarded point scores. See assignment chart (above) for each assignment unit's contribution to the course grade.

Resubmission: You may resubmit some eligible assignments with required revisions for regrading (once per assignment). Assignments eligible for re-submission include Resume (1.1), Cover Letter (1.2), Protocol (3.4), Poster (5.3), Proposal (7.1), and Technical Report (7.5). All re-submissions must be turned in for re-grading within one week after receiving graded feedback.

The goal is personal development as a writer and a scholar, with the instructor coaching individual progress as much as possible during the five-week session.

COURSE SCHEDULE AND DEADLINES

The weekly course schedule is attached as a separate document and found on the Canvas course site. This schedule contains deadlines for assignments and readings plus other course details.

DRC ACCOMMODATION

UC Santa Cruz is committed to creating an academic environment that supports its diverse student body. If you are a student with a disability who requires accommodations to achieve equal access in this course, please submit your Accommodation Authorization Letter from the Disability Resource Center (DRC) to me privately during my office hours or by appointment, preferably within the first week of the session. At this time, I would also like us to discuss ways we can ensure your full participation in the course. I encourage all students who may benefit from learning more about DRC services to contact DRC by phone at 831-459-2089 or by email at drc@ucsc.edu.

TITLE IX

Title IX prohibits gender discrimination, including sexual harassment, domestic and dating violence, sexual assault, and stalking. If you have experienced sexual harassment or sexual violence, you can receive confidential support and advocacy at the Campus Advocacy Resources & Education (CARE) office by calling (831) 502-2273. In addition, Counseling & Psychological Services (CAPS) can provide confidential counseling support, (831) 459-2628. You can also report gender discrimination directly to the University's Title IX Office, (831) 459-2462. Reports to law enforcement can be made to UCPD, (831) 459-2231 ext. 1. For emergencies call 911.