

WRIT 44 - Science and Technology Writing - Summer 2018

Professor Deanne Harper

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Office hours: 244 Baker Library, Tuesdays 12:00-2:00 PM *and by appointment*

Texts and Other Supplies

- Writing Science: How to write papers that get cited and proposals that get funded. Joshua Schimel. Oxford UP, 2012.
- Selected readings as PDF via Canvas (see schedule below)
- Style guidelines for your discipline (MLA, APA, Chicago Style, IEEE – you decide). Use Web resources to define particular requirements

The Course

In science, technology, engineering, and mathematics, your ability to flexibly present data and information selecting different genres and appropriate media is important to your professional success. Writing, revision, and presentation are key components in the design process, which requires both internal and external communication throughout. This course focuses on individual work within and across disciplines including creative research, literature reviews, papers, grant proposals, poster design, and media driven presentations. Assignments may be adapted for students already at work on research projects in their discipline. Given that the design process is collaborative, assignments offer frequent opportunities to work in teams.

Science and technology writing requires that data, whether simple or complex, are presented in a variety of genres and in language that is clear and precise. A professional must decide what information to present and how to present it. The writer must be keenly aware of audience and able to adapt to the audience's heterogeneity. Writing may be informative, persuasive, or descriptive. Text may be presented as solid prose or it may be more appropriately presented in lists, charts/graphs, models, videos/photos, etc. Resources include library media, lab or field work, and interviews.

In this course, we will define a specific project for each student. We will proceed through an entire (though abbreviated) project life cycle. You'll prepare one document every week, each document constituting small steps toward your large final portfolio/project. We begin with topic identification and continue through a survey of literature to refine the topic then proceed to job-task analysis, project proposal and plan, internal reviews and revisions, final report/proposal or thesis component. We will work closely with each document during class, on some days, to practice and refine elements of quality writing as to genre, but also rhetorical structural elements from vocabulary, to sentences, to paragraphs, sections/chapters, entire document and to adapt your information to accommodate different audience – customers, colleagues, regulators, and so on.

Plan to hone your ability to quote, explain, support your position, deliver bad news, ask for resources, define limitations, set expectations and adapt to circumstances as they evolve over the course of a project. Let research lead your questioning and your conclusions; your task is not to look for materials that only support existing opinions or ideas. Be creative, in the sense of innovative.

I assume you are here to learn all you can. I want to spend time with you learning, exploring ways to write and think, and making progress in your writing--not haggling over requirements, late assignments, absences, etc. Thus, I am setting out the requirements below as guidelines for you to follow.

Objectives

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

1. Identify who should be the audience for a "text" and list important considerations for each portion of the audience identified.
2. Design an appropriate and useful structure for each document in terms of genre and audience requirements.
3. Incorporate visual aids within a text that are useful and unbiased.
4. Optimize the logical flow of elements within a document's structure.
5. Create clear and concise visual aids that are properly labeled, annotated, and referenced within the text.
6. Write so that different audiences can successfully evaluate the persuasiveness of the analysis presented.
7. Perform research (library, lab, fieldwork, and interview) to uncover key positions and advocates in an area of controversy.
8. Evaluate the quality of argument presented by two or more experts.
9. Logically support your own position using sufficient and appropriate evidence.
10. Create a document that is simple and easy to understand because its sentences are precise, logically presented, and correct, and because its use of evidence and analysis are sufficient and clearly presented.

Assignments

In general, you can expect the following assignments. I will refine this listing and post details next week (to Canvas), once I know better the projects each of you will address.

Project Plan. I've assigned many deliverables, but they function as parts of a whole, steps in a project cycle. If you work consistently, you should progress successfully without undue time challenges.

Week 1	Introduction and begin analysis of texts/genres - journal conventions review, op-ed, science articles about published research
Week 2	More analysis of texts/genres. Project Plan. 1st draft of Literature Review assignment for scientific report or grant proposal
Week 3	Literature review of prior research; write pro and con on one topic
Week 4	Proposal assignment, presentation to class including portfolio work to date
Week 5	Begin report or grant document – Outline and draft introduction, draft report's visuals/posters for peer review
Week 6	First draft of full report or grant (all sections) for peer review
Week 7	Second draft of full report or grant (all sections) with peer review + instructor conferences
Week 8	Final scientific report or grant. Proposal for report/article /grant application to alternative audience
Week 9	First draft of report/article/grant application to alternative audience for peer review + instructor conferences
Week 10	Final reflections and presentation to class. Final of science article for general audience

Expectations

- This class should be a lot of fun and of great interest/value to your own goals. It requires consistent effort but shouldn't be onerous so long as you schedule your time consistently – project planning is a big part of successful writing.

- Often, we will work as if this is a professional situation and emulate some of the expectations of a work environment. This means that you should address assignments not so much as a student (though of course we don't overlook that) but as an important team contributor. I want to help you develop your voice as an expert as well as your responsibility as an expert. Expertise is something you earn, and it will grow and change throughout your life, so we might as well get started sooner than later.
- Attendance policy: We meet twice a week, and I will assign x-periods if needed. You and I will meet in scheduled conferences, perhaps in small groups. You can also schedule time with me or drop in to office hours. Text messages are encouraged since I'm not always on campus and check email inconsistently through the day; we can always arrange for a phone conference when you have questions to discuss beyond mere messaging.
- Much of our learning and work together happens collaboratively and cannot be "made up," so your presence matters to your learning. Missing more than two of any class or other meeting, for any reason, will affect your course grade: **each additional absence lowers your course grade one half letter grade.**
- Do not turn in work late; **I will not accept it.** Being absent does not give you the right to turn in work late. Everyone gets **one** exception, no questions asked, to this policy; beyond that, your grade may be affected. If you are having difficulty meeting a deadline, let me know ahead of the deadline.
- Drafts and final versions of your documents need to be designed within the expectations of a given situation, whether genre or audience or purpose.
- Save your work, and always make a back-up copy (ideally this is automated and will require no real attention on your part). Name your documents (internally and externally) to include your name and the nature of the assignment and also including version information.
- Don't throw away ANY of your work during the term nor any reviews or notes prepared by your peers or by me (most of this will be on Canvas, anyway, but keep your own copy in case of technology or access failure).
- Bring all books, materials, drafts, etc. to class with you (likely this mostly means bring your laptop). This is a workshop class; if you don't have the work or the materials, you are absent. You may use your laptop to take notes and to look up complementary material so long as you don't let that intrude on class discussion or other assigned work. **Any time on the laptop (or other device) not directly related to class is equivalent to your being absent.**
- Don't come late if you can help it; you miss important directions and disrupt other students. If you are more than 15 minutes late, or late often, you will be marked absent. Turn off all cell phones before coming to class. Texting in class is equivalent to your being absent.

Projects

As noted, you will produce at least one document every week and will provide smaller documents as well (e.g., periodic status reports). Various media are appropriate for this course, and your project will culminate in either a 30-minute presentation using PowerPoint or Prezi **or** a poster with presentation.

All work will be graded on organization, ideas, originality, clear purpose or thesis, effective use of rhetorical modes such as summary, narrative, description, comparison/contrast, argument, and appropriate use of technology. Your goals are to master both the genres and media that are most effective and to refine your writing style to present information in the way most useful for your audience(s).

I will present final details on each assignment in the second week, once your choice of project topic is finalized, as the documents may be adapted for individual projects.

Grading (this is approximate) – each week’s work will comprise 5-10% of your grade, though the final presentation/poster will constitute 20% of the grade overall. Again, once we finalize our list of documents to prepare, I will be able to itemize their relative value and will post that to Canvas.

We will discuss what a “multimodal” project is early in the term and enlarge on the discussion on an online portfolio of your work, as these will be components of your final project. If necessary, we will arrange for one or more librarians to show us how best to research and/or work with multi-modal ‘texts.’

I will post more specific readings and project schedule to canvas during week 2 of this term. All documents and work should be submitted through the Canvas site as well.

General Advice

I want you to succeed in this course, at university, and professionally. Please talk to me as often as you want for help or guidance with your writing, reading, and general progress.

Honor Principle. I encourage students to discuss ideas about the readings and other course information outside of class. However, papers other than group projects are to be completed independently. All work must comply with proper source citation. We will also spend considerable time in class working on understanding these issues. Plagiarism will result in a failing grade in the course and disciplinary action.

If you are having ANY trouble, don't wait until you have fallen far behind. Come see me or schedule a call or a conference to speak with me.

Students with disabilities enrolled in this course and who may need disability-related classroom accommodations are encouraged to make an appointment to see me as soon as is possible. All discussions will remain confidential, although the Student Accessibility Services office may be consulted to discuss appropriate implementation of any accommodation requested.

Student Accessibility Services (<http://www.dartmouth.edu/~accessibility/facstaff/>)

Additional Support for Your Learning

Academic Skills Center (<http://www.dartmouth.edu/~acskills/>)

The Academic Skills Center is open to the entire Dartmouth Community. Here are some common reasons why you might visit the ASC:

- You're getting B's but you want to get A's
- You don't feel comfortable talking in class
- You're attending class regularly but you feel like you're missing important points
- You feel like you're a slow reader
- You're having trouble completing tests in the allotted time
- You're spending hours studying for foreign language but still not “getting it”
- You feel like you don't have enough time to get everything done
- You're not sure how to take notes
- You want to sign up for a tutor or study group
- You're not sure if you should get tested for a learning disability

The Research Center for Writing, and Information Technology (RWiT)
(<http://www.dartmouth.edu/~rwit/>)

RWiT is a place where you can meet with an undergraduate tutor to discuss a paper, research project, or multi-media assignment. The RWiT tutors are trained to help you at any phase of your process. Whether you are brainstorming or planning, drafting or structuring, tweaking or polishing, the RWiT tutors can provide feedback that will help you to create final products of which you can be proud.