

SEC 13: Written Communication about Engineering and Applied Science to Non-Specialists



Course Syllabus – Spring 2022

Section 02: Wednesdays, 1:00-1:55 pm in Watson 104

Instructor: Dr. Bridget Alex

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Office: Room 367 in Hixon Writing Center (Center for Student Services 3rd Floor)

Office hours: Tuesdays 1 – 2 pm in-person or Zoom; by appointment

Course Description

Engineers and applied scientists work on highly technical, specialized projects. However, their work may interest diverse readers including investors, community stakeholders, government regulators, consumers, voters, students, and enthusiasts. This course introduces students to STEM writing intended for "non-expert" readers who lack some or all of the technical knowledge the author has. Students will compose multiple texts written for different purposes and audiences. This course is recommended for students who may pursue entrepreneurial, non-profit, media, or government careers. It may also interest students who enjoy public advocacy or creative writing about technical topics. Fulfills the Institute scientific writing requirement. Enrollment is limited and priority is given to E&AS seniors. No prerequisites. 3 units (1-0-2).

Grading policy: Letter only.

Learning Outcomes

By the end of this course, you will be able to:

- Identify and analyze components of effective writing
- Characterize and communicate with different audiences
- Improve and gain confidence in your writing and communication abilities
- Evaluate others' writing and provide constructive feedback
- Create and revise documents for different audiences

A goal of this course is to produce better writers and not just better writing. Put your best effort into every writing opportunity. The more you practice writing (and reading and reviewing others' writing), the more skilled and confident you will become!

Course Materials

We will use Canvas for course documents and assignment submissions.

<https://caltech.instructure.com/courses/3874>

No textbook. All materials will be posted as pdfs or links on Canvas.

The **Caltech Library** also hosts a page with **SEC 13 resources**:

<https://libguides.caltech.edu/SEC13>

Assignments & Grading Summary

One-to-one meeting.....	2
Participation	
Pre-class assignments.....	28
<i>(4 points each, 7/8 possible assignments included, lowest dropped)</i>	
Attendance.....	7
<i>(1 points per class beginning Week 2, one missed class allowed)</i>	
Writing Assignments	
Pop-science news story.....	20
Pitches.....	20
1-Pager for policy.....	20
Final Portfolio and Reflection.....	13
Total.....	110

Letter Grades (% your points/total points)

A+ = 98-100

A = 93-97

A- = 90-92

B+ = 88-89

B = 83-87

B- = 80-82

C+ = 78-79

C = 73-77

C- = 70-72

D+ = 68-69

D = 60-67

F = 0-59

Assignment details

1) One-to-one meeting: During the first four weeks of class you will schedule a meeting with your Instructor to introduce yourself and discuss course goals. [2 points]

2) Pre-class assignments: Each week an assignment with multiple components will be posted to Canvas. These weekly pre-class assignments are due Tuesdays 11:59 pm, *before* our Wednesday meeting for that week. For example, the Week #2 homework is due Tuesday 5 April. [4 points each, lowest score dropped, 28 points total]

3) Participation: Throughout the term you attend class meetings, prepared to engage with the material and classmates. You respectfully listen to classmates and contribute thoughtful comments. All students can miss one class without losing participation points. Beyond that you must receive instructor permission to miss class for an excused absence. [1 point/class starting Week 2, one class dropped, 7 points total]

4) Writing Assignments: You will have 3 writing assignments, which will expose you to writing in different sectors: mass media, industry or non-profit, and government. The documents are short (1-2 pages), but will be well-informed, creative, and elegant. You will submit drafts as part of “pre-class assignments,” and the final versions will be graded according to rubrics on Canvas. [20 points each, 3 assignments, 60 points total]

5) Final Portfolio and Reflection: You will summarize and reflect on your writing and learning in this class. Includes course survey. [13 points]

Course Schedule: Overview

Subject to change. Consult Canvas for up-to-date schedule and assignments.

SUN	MON	TUES	WED	THURS	FRI	SAT
March 27 Week 1 Intro meeting DUE →	28	29	30 Intro + Library Resources	31	Apr 1	2
3 Week 2 Intro meeting DUE →	4	5 Week 2 Homework DUE	6 Stakes & Audiences	7	8	9
10 Week 3 Intro meeting DUE →	11	12 Week 3 Homework DUE	13 What Makes Writing Good; Language	14	15	16
17 Week 4	18	19 Week 4 Homework DUE	20 Pop-Science (Mass media)	21	22	23
24 Week 5	25	26 Week 5 Homework DUE	27 Editing & Feedback Midterms →	28	29	30
May 1 Week 6	2	3 Week 6 Homework DUE	4 Story Telling in Science	5	6 Pop-Sci Story DUE	7
8 Week 7	9	10 Week 7 Homework DUE	11 How to Pitch (Business, non-profit)	12	13	14
15 Week 8	16	17 Week 8 Homework DUE	18 Science for Action (Gov, Policy)	19	20 Pitches DUE	21
22 Week 9	23	24 Week 9 Homework DUE	25 Pulling it all Together	26	27 1-Pager DUE Seniors' Last Day	28
29 Week 10	30 Memorial Day	31	June 1 Finals for seniors →	2	3 Final assignment DUE	4
5	6	7	8	9	10 End of Term	11

Expectations & Policies

Attendance: We will generate knowledge and build community during our class meetings. Attending will enhance your enjoyment and mastery of course material. Attendance is expected and will be reflected in your class participation points (1 point per class possible). **All students have one free “class pass” – you can miss one class without notifying the professor.** Beyond that, you must notify the professor and provide a reason that merits an excused absence, such as sickness, emergencies affecting yourself or those close to you, or interviews for jobs or graduate school. Extenuating circumstances will be handled on a case-by-case basis.

Deadlines and late assignments: I know it is challenging to meet deadlines. You have other priorities. Unanticipated trials will affect us variably at different times. Weekly pre-class assignments are due Tuesdays 11:59 pm, unless there is an emergency. Writing assignments are due at their respective deadlines, posted on Canvas and the course calendar. In most cases extensions will be granted provided they are requested at least 3 days prior. Late submissions without prior permission will be penalized 1 point every two days. If you have technical difficulties submitting an assignment, directly email it to your instructor along with screenshots showing the file, the final time it was edited, and the technical issue preventing you from submitting the assignment.

Academic Integrity Policy: You are expected to abide by the Caltech Honor Code: “No member of the Caltech community shall take unfair advantage of any other member of the Caltech community.” In SEC13, discussion and the exchange of ideas are encouraged. However, written work should reflect your own thoughts, inspired by class readings and discussions. Submitted documents must be written independently.

You will give and receive peer feedback. Still, *your words should be your own*. When providing feedback to others, point out elements that you think could be improved. Rather than directly editing another’s writing, explain *what* is difficult to follow as a reader and *why*. When receiving feedback from others, you are still the sole author of your writing. You aren’t required to incorporate their suggestions.

Your improvement as a writer depends upon writing and rewriting (and rewriting) in your own words. Plagiarism is prohibited and does not help you improve. Please read the [Hixon Writing Center’s Guide to Understanding and Avoiding Plagiarism](#). Self-plagiarism is also prohibited.

Accessibility and accommodations: I am committed to providing an accessible academic setting. The Accessibility Office offers a variety of accommodations and services to students with documented disabilities. Please visit <http://cass.caltech.edu/>

Wellness policy and Covid concerns: I believe in prioritizing mental and physical health of yourself and your loved ones. I encourage you to reach out to me if are feeling overwhelmed or would like help adjusting workload expectations or deadlines. Given the continued concerns and precautions related to Covid, please keep me informed if you encounter any discomfort with being back in-person.

Classroom Citizenship and Conduct:

This course depends on the community we build. I trust all students to:

- Come to class prepared to engage with course material, your instructor, and peers
- Be open to sharing their ideas and to make space for others' ideas
- Participate in activities with an openness for learning and growth mindset
- Put away electronic devices that interfere with class engagement
- Promote inclusion with your words and actions

Campus Academic Resources

- **Online Learning:** Resources, FAQs, and more for students learning online; <http://learn.caltech.edu/>
- **Tutoring:** The undergraduate dean's office provides a peer tutoring service; If the course isn't listed, students can talk with the dean's office to arrange for a tutor; <http://deans.caltech.edu/>
- **Writing:** The Hixon Writing Center provides professional writing tutors as well as peer tutors, individual and group writing space, and additional resources; <http://writing.caltech.edu>
- **Registrar & FERPA:** The registrar can answer questions about degree progress, privacy of student records, and course enrollment procedures; <http://registrar.caltech.edu>. The website also lists *Option Representatives* for option-specific advising, policies, and information.
- **Library:** Borrow books, retrieve journal articles, receive guidance about research; <https://www.library.caltech.edu/>
- **Dean of Undergraduate Students:** Wide-ranging assistance addressing issues (academic and other) for undergraduates; <http://deans.caltech.edu>
- **Dean of Graduate Studies:** Wide-ranging assistance addressing issues (academic and other) for graduate students; <http://gradoffice.caltech.edu>

Additional Student Resources

- **Student Wellness Center:** Wide variety of health and wellbeing services; <https://wellness.caltech.edu/>
- **Counseling Services:** Free for all students, regardless of insurance plan; <http://counseling.caltech.edu>

- **Occupational Therapy:** Individual sessions and consultations on building healthy habits and routines, time management, planning and organization, and more. Free for all students; <http://ot.caltech.edu>
- **Center for Inclusion and Diversity:** Resources concerning navigating diversity and inclusion, including staff who can speak with students about challenges of harassment and discrimination; <http://diversitycenter.caltech.edu>
- **Title IX:** Caltech's Title IX Coordinator (titleix@caltech.edu) works with students on issues related to sexual harassment, sexual misconduct, and sex discrimination; <http://titleix.caltech.edu/>
- **Caltech Accessibility Services for Students:** Deans work with students with physical and learning disabilities on accommodation requests and services; <http://cass.caltech.edu>
- **Residential Support:** Resident Associates (RAs) and Residential Life Coordinators (RLCs) are also resources for TAs and students; <http://www.residentialexperience.caltech.edu/>
- **Career Development Center:** Provides resources to help students make career decisions and implement career plans; <http://www.career.caltech.edu>