

Course Syllabus

Chemical Eng 185 Fall 2015

University of California at Berkeley

Technical Communication for Chemical Engineers

Course description:

In this course students learn to communicate technical information in the context of the professional and ethical practice of engineering. Students will craft and assess technical memos, laboratory reports, oral presentations, resumes, personal statements, and research papers. Students will develop skills in using appropriate grammar, tone, and depth to reach their audience and achieve their objectives.

Instructor:

Professor Ciston sciston@berkeley.edu 101-A Gilman Hall 510-643-8544

Office Hours: TBD

Graduate Student Instructors:

Jackie Bass jdbass@berkeley.edu

Office Hours: TBD

Douglas Greer dougreer@gmail.com

Office Hours: 4-5 wednesdays Chem Library 100

Class Meeting Schedule:

185-001:	Tuesdays & Thursdays	9:30-11:00 am	B56 Hildebrand Hall
185-002:	Tuesdays & Thursdays	11:00-12:30 pm	B56 Hildebrand Hall
185-003:	Tuesdays & Thursdays	2:00-3:30 pm	B56 Hildebrand Hall

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Recommended Texts:

No text is formally required for this course. For a complementary perspective on the material and a reference resource for use in your future, please consider one of these recommended texts:

Tebeaux, Elizabeth and Dragga, Sam. 2011. The Essentials of Technical Communication, second edition. Oxford University Press.

ISBN: 978-0199890781

Pfeiffer, William S. and Adkins, Kaye E. 2012. Technical Communication Fundamentals. Pearson Education, Inc. Prentice Hall.

ISBN: 978-0-13-237457-6

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Content Outline:

1. Reporting Experimental Data: **Laboratory Reports**, Posters, Journal Articles, Graphs
2. Explaining Design Decisions: **Oral Presentations**, **Written Summaries**, Formal Reports
3. Finding a Job: **Resumes and Cover Letters**, Interview Skills, **Networking**
4. Communicating with a General Audience: **Science Saturday Speech**, Word Choice, Perspectives, Instructions and User Manuals
5. Using Technology: Writing Email, **Networking Online**, Video Conferences
6. Creating Proposals: **Team Proposal Document**
7. Acting Ethically: **Ethics Case Studies**, Codes, Global Perspectives

Grading:

You will complete written and oral communications assignments including individual and group work throughout the semester. Details on assignment learning objectives, due dates, points available, and grading rubrics are on the bCourses site. Attendance is recorded each class, with one point per day, up to 25 points. There is no distinction between excused or unexcused absences; you can only get an attendance point for being present for the class. Your final grade will be determined on a total points basis, with XYZ points available for the course. Any errors or challenges to the grading must happen within two weeks of receiving your graded material, or before the end of RRR week, whichever comes first. Only integer scores will be assigned.

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Course Outcomes

At the conclusion of the course, students will be able to:

1. Identify the purpose, desired outcomes, and audience needs for various types of technical communication.
2. Write clearly, directly, and concisely in technical documents.
3. Identify and apply standard formats for common technical documents including resumes, cover letters, statements of purpose, project proposals, design reports, laboratory reports, and journal articles.
4. Use visuals including charts, diagrams, graphs, presentations slides, and tables to communicate ideas.
5. Speak clearly and effectively in situations with and without advanced preparation.
6. Adapt communication approaches for technical, non-technical, and managerial audiences.
7. Apply modern communication technologies.
8. Recognize the ethical responsibility of engineers, and articulate morally justified solutions to ethical problems.

This course supports the Chemical Engineering undergraduate student outcomes (bold):

1. an ability to apply knowledge of mathematics, science and engineering
2. an ability to design and conduct experiments, as well as to analyze and interpret data
3. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
4. an ability to function on multidisciplinary teams
5. an ability to identify, formulate, and solve engineering problems
6. **f. an understanding of professional and ethical responsibility**
7. **g. an ability to communicate effectively**
8. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context

9. a recognition of the need for, and an ability to engage in life-long learning
10. a knowledge of contemporary issues
11. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Expectations of Conduct:

We are privileged to participate in the pursuit of knowledge and truth in higher education, and students and instructors are expected to maintain an environment of respect for the course of study and one another at all times. Our classroom is a safe space for people diverse in traits and ideology to exchange ideas and grow in experience and knowledge. No form of excessive teasing, discrimination or bullying shall be tolerated at any time. Concerns about classroom environment should be addressed immediately to Dr. Ciston. Instructors reserve the right to adjust attendance scores by up to five points in case of violation of the conduct policy.

Expectations of Academic Integrity

We must respect one another's ideas by giving credit where it is due, avoiding all forms of plagiarism and cheating. Any item submitted by you and that bears your name is presumed to be your own original work that has not previously been submitted for credit in another course unless you obtain prior written approval to do so from the instructor.

In all of your assignments, including your homework or drafts of papers, you may use words or ideas written by other individuals in publications, web sites, or other sources, but **only with proper attribution**. "Proper attribution" means that you have fully identified the original source and extent of your use of the words or ideas of others that you reproduce in your work for this course, usually in the form of an endnote.

As a general rule, if you are citing from a published source or from a web site and the quotation is short (up to a sentence or two) place it in quotation marks; if you employ a longer passage from a publication or web site, please indent it and use single spacing. In both cases, be sure to cite the original source in an endnote.

If you are not clear about the expectations for completing an assignment, be sure to seek clarification from your instructor or GSI beforehand.

Finally, you should keep in mind that as a member of the campus community, you are expected to demonstrate integrity in all of your academic endeavors and will be evaluated on your own merits. So be proud of your academic accomplishments and help to protect and promote academic integrity at Berkeley. The consequences of cheating and academic dishonesty – including a formal discipline file, possible loss of future internship, scholarship, or employment opportunities, and denial of admission to graduate school – are simply not worth it.

--Modified from *Report of the Academic Dishonesty and Plagiarism Subcommittee, June 18, 2004.*

Accommodation of Special Situations and Needs

If you need accommodations related to physical, psychological, or learning abilities, please speak to me after class or during office hours.

If you must miss class because of religious observation or holy day, please speak to me after class or during office hours, at least one week prior to the absence, in order to make arrangements to submit work early. It is your responsibility to review materials outside of class on your own to make up for class time missed. (UC Berkeley's policy: <http://opa.berkeley.edu/religiouscreedpolicy.htm>)

If you must miss class because you are a student athlete, a student musician, or you have an off-campus interview, you must notify me in writing by the second week of the class, or at least two weeks prior to the absence, along with a suggested solution to make up the work early. It is your responsibility to review materials outside of class on your own to make up for class time missed.

Tentative Class Schedule: (subject to modification)

TBD

Date	Details
Tue Jan 27, 2015	Cover Letter due by 11:59pm Resume due by 11:59pm
Thu Jan 29, 2015	Elevator Pitch (Impromptu) due by 11:59pm
Tue Feb 3, 2015	Personal Statement Draft due by 11:59pm
Tue Feb 17, 2015	Design Oral Presentation due by 11:59pm Personal Statement Final due by 11:59pm
Thu Mar 5, 2015	Design Executive Summary due by 2:59pm Proposal Planning Form due by 11:59pm
Thu Mar 12, 2015	Bonus Points: Design Ideas due by 11:59pm Written Critique of Design Presentation Video due by 11:59pm
Thu Mar 19, 2015	Online Professional Networking Portfolio OR Mentoring Log due by 11:59pm
Tue Mar 31, 2015	Science Saturday Talk due by 11:59pm
Thu Apr 2, 2015	P3 Awards Proposal Draft due by 9:30am
Tue Apr 21, 2015	P3 Awards Proposal Final due by 9:40am
Mon Apr 27, 2015	Lab Report Revision due by 11am
Thu Apr 30, 2015	Attendance due by 11:59pm Written Ethics Response due by 11:59pm
	Roll Call Attendance