21W.781 (Sec 2) * Fall 1997
Practicum in Engineering and Science Writing

(Attached to 10.27-Chemical Engineering Projects Laboratory)

Instructor: SALEEM H. ALI

Dept. Phone: 617-258-0751
Home Phone: 508-992-2471
Email: saleem@mit.edu
Mailbox: Room 20B-140
Office: Rm: 9-324
The class will meet on Mondays 7-9 in Rm E53-220

Course Description

The practicum provides in-depth instruction and practice in written and oral communication. The primary focus is technical writing and presentation, although we will also explore other areas of professional writing. The class format is a workshop, and classes are built around in-class writing, student presentations, and peer review. We will relate most class materials and assignments to 10.27. However, some segments of the course will depart from 10.27 in order to expose you to other critical issues in professional communication. If successful, the course should help students to:

* improve their mastery of technical writing skills;
* enhance oral communication and presentation skills;
* learn to critically read and analyze their own and other's writing and
* expose them to the various roles of writing in a professional setting.

Texts & References

The texts for the class are as follows:


Other material will be distributed via class handouts and electronic documents. The MIT Writing Center is a wonderful resource which you are welcome to use.

Attendance

Class participation is an essential element of this course.
You are entitled to one unexcused absence during the semester. Any other absences will affect your grade.

Assignments

Various written assignments, of varying lengths, will be required during the course of the semester. A number of these will be directly related to the work that you are already doing for 10.27.

More detailed descriptions of these assignments will be provided later; however, the following general rules will apply to all assignments:
* Assignments are due at the beginning of class on the specified due date. You may turn in one assignment up to one week late with no penalty. Other than this, no late assignments will be accepted.

* You will have the opportunity to rewrite most assignments to improve your grade, but the quality of the original will always influence your grade.

* Unless otherwise specified, papers must be turned in as machine-printed, hard copy documents.

* To account for differences in font size and margin widths, the expected word count of a “one page” long assignment will be 400-500 words.

**Grades**

The final letter grade for the class will be calculated as follows:

* Experiment Reports (also assigned for 10.27).... 40%

* Other weekly writing assignments.... 20%

* Oral reports, class participation and attendance.... 40%

Particular emphasis will be placed on active participation in class, timely completion of assignments, and personal improvement.

**The Writing Requirement**

This subject is taught in the Program in Writing and Humanistic Studies as part of the Writing Initiative. There is no direct connection between this subject and the Writing Requirement. However, a grade of B or better in this subject can, at the discretion of a student's departmental writing coordinator, satisfy Phase Two of the writing requirement. In the case of Course 10 majors, blanket approval has already been given. Students in other departments should ask their departmental writing coordinator whether or not this subject can be used to complete Phase Two.

**Course Outline**

**September 15:**
Introduction to Effective Technical Communication

Class topics will include an introduction to the class, and a preliminary discussion on research methodology and good writing.

Readings: Booth, Chapter 1, handed out in class for review.

**September 22:**
Audience & Proposals

Class topics will include a discussion on the various requirements of communicating to various audiences and an introduction to writing proposals.

Readings:

Articles from *Scientific American, C&E News* and a Techical Journal.

Also read through: Barrett, Paradis, and Perelman, Online Handbook to Scientific and
Technical Writing. Go from "Planning and Producing Documents" (chapter 1) to read "Audience" (section 1.4). Also go to "Document Types" (chapter 2) and read "Memoranda" (section 2.1) and "Proposals" (section 2.6).

Assignment: Briefly discuss the differences in the writing styles of the 3 articles and point out how they may or may not be appropriate for their intended audience (1-3 pages).

September 29:
Style-I

Class will concentrate on technical writing style.

Readings: Barrett, Paradis, and Perelman, Online Handbook to Scientific and Technical Writing. Go from Planning and Producing Documents (Chapter 1) to read "Characteristics of effective technical communication" (section 1.1)

Everyone must also read Williams, Ten Lessons in Clarity and Grace, Chapters 3 and 4 (Actions and Characters).

Assignment: Write a 1-2 paragraph long description of what you intend to do in your first experiment for 10.27 for a layperson with some understanding, but no formal background in chemical engineering. Also write a one paragraph long technical description of a technical concept. This may be something that will become part of your experiment.

October 6:
Oral Presentations-I

Class topics will include an introduction to presentations including the use of presentation aids (such as note cards) and presentation tools (such as overheads).

Readings: Barrett, Paradis, and Perelman, Online Handbook to Scientific and Technical Writing. Go from "Document Types" (chapter 2) to read "Oral Presentations" (section 2.10).

Everyone must also read Hanna and Gibson, Public Speaking for Personal Success, pp. 12-18 (class handout).

Assignments: Write a one-page essay describing what you consider to be the salient qualities of `good' oral presentation. Also discuss what you consider to be the strong and weak points of your presentation style.

Those of you presenting their proposals in 10.27 this week should come prepared to present before the class for peer review. Others should prepare a short (5 minutes) talk on any subject of their interest. Follow the principles outlined in the reading and use appropriate presentation aids and tools.

October 13: Columbus day holiday

October 20:
Business Communication, Resumes and Cover Letters

Class will focus on business communication of various kind and especially on resumes. Class will also include peer review of student resumes.

Readings: Barrett, Paradis, and Perelman, Online Handbook to Scientific and Technical Writing. Go to "Document Types" (chapter 2) to read "Letters" (section 2.5) and "Resumes" (section 2.12).

Assignment: Prepare a draft Resume and an accompanying cover letter
expressing interest in job vacancy.

October 27:
Technical Reports

Class will be structured around your Progress Report requirement for 10.27 and will provide an opportunity to work directly on reviewing and improving these reports.

Readings: Barrett, Paradis, and Perelman, Online Handbook to Scientific and Technical Writing. Go to “Document Types” (chapter 2) and read "Reports" (section 2.4).

All students must review 10.27 handouts on technical reports and Chapter 3 ("Elements of Technical Documents") of Barrett, Paradis, and Perelman, Online Handbook to Scientific and Technical Writing.

Assignment: Progress Report on Experiment 2

November 3:
Group Writing

Class will focus on organizing the writing for large team projects. It will include a discussion and exercises on collaborative writing.

Readings: Barrett, Paradis, and Perelman, Online Handbook to Scientific and Technical Writing. Go to "Planning and Producing Documents" (chapter 1) and read "Collaborative Writing" (section 1.12) and "Organization" (section 1.5).

Assignment: Each student is required to write a half-page review of their own recorded presentation from the previous week and a half-page review of someone else's presentation. (Details will be provided in class).

November 10:
Oral Presentations-II

Class will continue the discussion initiated on October 6 and root it in the presentation requirements of 10.27. Students presenting in 10.27 in this week will get a chance to present and get feedback for their colleagues.

Readings: Read Sommers, "Revision Strategies of Student Writers and Experienced Adult Writers" (handout). Also revisit readings assigned for October 11.

Assignment: Write a one-page essay describing commenting on your experience with revisions in light of the Sommers' paper.
- Students presenting the progress report in 10.27 this week will also present in the practicum this week. Others should prepare a short 'technical' talk on any subject of their interest. We will try to have these video-recorded for subsequent review.

November 17:
Style-II

Class will continue the focus on problems related to style and grammar and will include concision and coherence exercises.

Readings: All students must read Williams, Ten Lessons in Clarity and Grace, Chapters 5, 6 and 7 (Concision; Coherence & Cohesion; Emphasis).

Additional resources on grammar and punctuation include Barrett, Paradis, and Perelman, Online Handbook to Scientific and Technical Writing (Chapters 5-13) and Williams, Chapter 9 (Punctuation).
Assignment: A one page self-evaluation of your own writing style which reflects upon what you consider to be its major weaknesses. Also submit a copy of the Progress Report submitted to 10.27.

November 24:
Persuasive Writing and Argumentation

Class will focus on persuasive writing, deductive logic, and argumentation and why these skills are necessary for good technical writing.

Readings: Everyone must read Pattow and Wresch, Communicating Technical Information, pp. 280-293 (technical argumentation).

Also read Perelman, "The Rhetoric of a Major Malfunction" (handout). Since there is no on-line equivalent to the Pattow and Wresch section, we will provide this as a handout to those who don't own the book.

Assignment: To be announced (This assignment may be 4-5 pages long).

December 1:
Abstracts, Executive Summaries, Presentation, and the Visual Display of Quantitative Information

Class will include discussion on referencing norms, paper presentation and formatting. The relative strengths of various strategies and ideas about visually displaying quantitative information will also be discussed.

Readings: Barrett, Paradis, and Perelman, Online Handbook to Scientific and Technical Writing. Read "Graphs and Figures" (chapter 4). Also go to "planning and producing documents" (chapter 1) and read "document design" (section 1.14). Also go to "Elements of Technical Documents" (chapter 3) and read the section on "abstracts" (Section 3.2). Also go to Planning and Producing Documents (chapter 1) and read the sections on revision and review (1.8, 1.9, 1.10, 1.11).

Assignment: To be announced.

December 8:
Oral Presentations-III & Wrap Up

Class will include final student presentations and formal as well as informal practicum evaluations.

Readings: None.

Assignment: Students making final 10.27 presentation must present in the practicum this week. Other assignments to be announced.