BME 333T: Engineering Communication  
Spring, 2012

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BME 4.202C  
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Overview:  
Welcome to BME 333T, the communication course for biomedical engineering majors. Welcome whether you are from BME or another engineering major. In this class we will study communication across several dimensions and explore relationships between engineering and the social world. The main dimensions of communication covered are written, interpersonal/interactive (including leadership and working as part of a team), visual, presentational, and cultural. The course anticipates the main forms of communication used in engineering, medicine, and research. This course will show you ways to communicate effectively in a variety of professional and academic situations and give you practice in doing so.

Just as important as skills in the course is the experience of speaking and writing as means of discovering what you think—especially about issues in your field. E.M. Forester wrote, “How do I know what I think until I see what I write.” Language is not only the clothing of thought—it is thought. So this course will provide many varied opportunities to explore what you think about issues in biomedical engineering, how you think researchers and physicians should act when faced with difficult ethical decisions, and what roles and responsibilities engineers have in relation to their work and to the societies in which they work. You can expect to explore yourself to some degree, as well.

This course carries a Writing Flag and an Ethics Flag

Books:
- Richard Carlson, Don’t Sweat the Small Stuff—and It’s All Small Stuff  
- Stone, Difficult Conversations: How to Discuss What Matters Most  
- Diana Hacker, The Bedford Handbook

Carlson and Stone are available at the University Co-op.

Other readings will be posted on Blackboard.
Course Objectives:
1. To learn the rhetorical principles that underlie writing clearly, presenting confidently, designing professional graphics, and communicating face-to-face and on teams in various challenging situations.
2. To learn to communicate ethically and effectively as a leader or team member.
3. To explore issues in biomedical engineering, and develop understanding of the social role of science and engineering, especially in the biomedical and biotechnology fields. To learn to think about issues related to engineering (emphasizing BME) as they relate to the local, national, and international levels.
4. To develop useful ways to discuss ethics in engineering (emphasizing BME) and educated means to make ethical decisions.
5. To learn to do research in engineering (emphasizing BME) and understand how researchers build on each other’s work.

Teaching Approach:
The course will use a number of interactive approaches to explore BME and the human issues connected to it. Class discussion, small group projects, response papers, skits, web creations, and other projects of your choosing will all be means of thinking about the themes of the course. At the same time, you will receive support materials and instruction in all the media in which you work. Most activities will be interactive, and many will be group based. Therefore, attendance is paramount. The class needs you.

Knowledge, Abilities and Skills You Should Gain from this Course:
In this course, you will become a better writer as you explore topics in your field. You will learn research skills, such as how to find sources for literature review, how to evaluate the credibility of sources, and how to assimilate and analyze a variety of ideas in order to write a cohesive paper.

You will become better equipped to work in groups and on teams. You have the chance to practice specific interpersonal skills in ways that are appropriate to different kinds of situations. You will also learn skills for presenting effectively. In addition to written, interpersonal, presentational, and research skills, you will learn principles of visual design that can be applied to documents, slides, posters, figures, and other uses.

Finally, you will become more aware of ethical and social issues related to engineering and world health.

Summary of projects and assignments (100 points total):

<table>
<thead>
<tr>
<th>Project</th>
<th>Points</th>
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</thead>
<tbody>
<tr>
<td>Resume</td>
<td>2.5</td>
</tr>
<tr>
<td>Personal statement: 300-500 words</td>
<td>2.5</td>
</tr>
<tr>
<td>Instructions re-write</td>
<td>5</td>
</tr>
<tr>
<td>“How Stuff Works” essay: A technical description emphasizing clarity (800-1000 words)</td>
<td>10</td>
</tr>
<tr>
<td>Proposal for literature review: One page, ds</td>
<td>2.5</td>
</tr>
<tr>
<td>Literature review: 8-10 pages, ds, 11 pt font</td>
<td>25</td>
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Poster version of lit review 5
Presentation 5
Ethics Project (with short essay and performed skit): This is a case study of an ethical dilemma in engineering that you research, write about, and act out. This is a group project with an individual essay. 20
Reflection on Don’t Sweat the Small Stuff (600-800 words) 5
Written Dialogue based on Difficult Conversations (800-1000 words) 5
Announced and unannounced quizzes 7.5
Midterm 5

**Turning in work:** Always attach all previous drafts (with comments) when you turn in your work. Use a folder if possible. Never use plastic report covers with a removable binding. All work must be stapled. Buy a small stapler and keep it in your backpack.

**Attendance:** Absolutely mandatory and necessary for the grade you want. This pertains to both class and “recitation section.” Most of the material in class is taught with discussions, which cannot be posted online. If you need to be absent, email Julie Rytlewski and copy the message to Dr. Voss.

*In order to avoid misunderstandings about how much attendance counts, the following point system will apply:* The first two absences will have no effect; the third will cost ½ percentage point, the fourth and fifth will cost one per point each, and after that, absences will cost 2 points each.

Being late to class is not acceptable. If a pattern develops, we will begin to count lateness as absence. But if you have a long walk from another class, please tell us so that we can accommodate you.

**A Few Other Rules:**
It is acceptable to eat quiet food in class, but not crunchy, loud food (like chips). You shouldn’t chew gum in class.

Our class involves a lot of risk-taking and self-revelation. It is therefore crucial that everyone respects each other and supports each other. One way to show respect is to respect each other’s views. Another way is to be a wonderful audience when someone is presenting. A third way is to give your all when helping others with projects.

One way to show courtesy to instructors is to always put your name, date, section, and name of assignment on all your work.

The TA should be treated with the same respect as the teacher. She is an *amazing* resource.

Part of being respectful in class means not reading the paper, being on your computer (Facebook), being on your phone (texting), or sleeping. Actually be *present.*
Exam Schedule: We will have one or more quizzes on readings and skills and concepts from class. The “final” will be a finale—a celebration of your work, and will happen according to the final exam schedule published by the University.

Grading Procedure: Work in this course will receive several kinds of responses, much of it before a project is finished (which is when the feedback is most useful!). Most work can be revised. The ongoing conversations about your work are aimed at developing projects (and you as a communicator) to the fullest potential. You will be actively involved with evaluating your own progress; in addition, you will be asked to evaluate the progress of the course itself as the semester progresses. (Evaluation is a two-way street, and we need your help to make the course great!)

In our class some work will get a numerical grade on a 100-point scale (where 90-100 is A, and so on) that is keyed to the University’s 4-point grading system; a few assignments fall under the homework grade, and it is expected that you will give all assignments due attention. Even on credit/no credit assignments, we will not give full credit for lackluster work. All the small assignments serve a purpose; if they seem like busywork to you, you should come talk to us. What you should not do is treat the work casually.

Course Assignments and Announcements:
Posted on Blackboard; you are expected to check Blackboard regularly. Notice if you haven’t before that you can track announcements backward (last 7 days, etc.). Also, please note that the reading assignments need to be read for the day when they are listed.

Academic Honesty:
You are expected to understand the University’s policies regarding academic dishonesty, which includes even unintentional plagiarism. This is an area where I am not at all lenient.

Disabilities:
The University of Texas provides upon request appropriate academic accommodations for qualified students with disabilities. For more information contact the Office of the Dean of Students at 471-6259, 471-4641 TTY.

Course Schedule, BME 333T

Week 1
Jan 17 Welcome to Engineering Communication! Rhetorical situation and kairos.

Jan 19 Read syllabus (posted under Syllabus) and “Resume and Letter Writing Section” pdf at https://career.berkeley.edu/tools/resume.stm
AND, please bring your as-is resume to review in class. It’s fine if you have not worked on it in a couple of years. If you don’t have a resume, draft one quickly for class.

Discussion sections: Introduction activity
Week 2
Jan 24  Bring revised resume to class. No ECAC format, please. Complete questionnaire (under Course Documents). Go to TED.com and also http://thisibelieve.org/search/ and find one selection from each site (a talk on TED, an essay from NPR’s This I Believe series) that you love. For class, briefly summarize each and discuss why you are inspired by it. (Total length, around 1 page, double spaced.) Note: In order to find your two choices, you will have to explore several talks and essays. (Oh, darn.) Allow time to do this.

Jan 26  Career panel! Guests will be in class to discuss career choices and application processes. Bring your questions. It will be very cool and useful.

Discussion sections:
Read 12 chapters from Don’t Sweat the Small Stuff—you choose the chapters. Choose one that inspires or intrigues you. Write a paragraph that first briefly summarizes the idea (one or two sentences) and then reflects on it. (For example, why do you think the idea is important? What does it mean in your life? Would it be difficult or easy to implement? How would you do that?) You will be sharing your responses in your discussion section.

Week 3
Jan 31  Reading: 5 pages from each main section of Robin Williams’ The Non-Designer’s Design book. (This reading will be posted.) As you read, think about how to apply this design advice to your resume. In class we will talk design and also about how to write a terrific personal statement.

Feb 2  Final version of resume due. Read Trimble on readability (Course Documents).

Discussion sections: Please read 10 more chapters of DSSS and again write a reflection paragraph to share in class.

Week 4
Feb 7  Draft of your personal statement due in class (300-500 words).

Feb 9  TBA

Discussion sections: Practice one of the skills from DSSS for one week as an experiment. Write a short essay describing your experiment (600-800 words). Bring the draft to class for peer review.

Outline of remainder of semester

Week 5 (2-14) Personal statement due

Week 6 (2-21) Instructions draft due; Proposal for lit review due
Week 7 (2-28) Instructions final version due; Ethics Project begins

Week 8 (3-6) How Stuff Works draft due; Ethics Project continues

Week 9 (3-13) Spring Break

Week 10 (3-20) First set of sources for lit review due; midterm; ethics project continues

Week 11 (3-27) Ethics project continues—skits are performed; Ethics essay/dialogue due

Week 12 (4-3) Difficult Conversations essay due

Week 13 (4-10) Presentations begin

Week 14 (4-17) Lit review draft due; Presentations continue

Week 15 (4-24) Poster version of lit review due

Week 16 (5-1) Lit review final version due