BME 333T: Engineering Communication
Fall, 2013

Instructor: Dr. Randi Voss
BME 4.202C
Office hours: Thursday 10:00-11:30 and 1:00-2:00; and gladly by appointment
rvoss@mail.utexas.edu

TA: Maria Jimenez
Office hours: Monday 10:00am-11:00am; Wednesday 4:00-5:00pm; and (also gladly) by appointment

BME 333T ENGINEERING COMMUNICATION

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<tr>
<td>14345</td>
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<td>11:00 - 12:00</td>
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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, and presentational. All these forms are 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

Book to buy:
• Richard Carlson, Don’t Sweat the Small Stuff—and It’s All Small Stuff

Other readings:

Values and Career Choice
“This I Believe” Essays from National Public Radio database.
http://thisibelieve.org/themes/

Rhetoric, Writing, and Language
“Mother Tongue,” by Amy Tan.
swhs.swisd.net/teachers/perry/033BDE8E...2/Tan_MotherTongue.pdf

Interpersonal Communication
Selections from Difficult Conversations: How to Discuss What Matters Most, by Douglas Stone, Bruce Patton, Sheila Heen, and Roger Fisher. (Will be posted.)

Visual Communication and Graphic Design
Selections from The NonDesigner’s Design Book, by Robin Williams. (Will be posted)
http://colinpurrington.com/tips/academic/posterdesign

Biomedical Ethics
Ethical Decision Making, Markkula Center for Applied Ethics, Santa Clara University
Also, articles that you will find on the topic you choose.

History of Technology
(Posted)
www.newyorker.com/arts/critics/books/2007/05/14/070514crbo_books_shapin
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>
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<th>Assignment</th>
<th>Points</th>
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<tr>
<td>This I Believe essay: 500-700words</td>
<td>5</td>
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<tr>
<td>Resume</td>
<td>2.5</td>
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<td>Personal statement: 300-500 words</td>
<td>5</td>
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<tr>
<td>Don’t Sweat the Small Stuff essay/report (reflection on experience): 1000 words</td>
<td>10</td>
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<tr>
<td>Proposal for Technology and Culture project: One page, double spaced</td>
<td>2.5</td>
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<tr>
<td>Technology and Culture essay: 8-10 pages, ds, 11 pt font</td>
<td>30</td>
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<tr>
<td>Technical description</td>
<td>5</td>
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<td>Grade Component</td>
<td>Points</td>
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<tr>
<td>Poster version of Technology and Culture project; must be presented in class</td>
<td>5</td>
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<tr>
<td>Quizzes</td>
<td>10</td>
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<td>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 in the form of a written dialogue.</td>
<td>20</td>
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<tr>
<td>Finale: A celebration of an interest, talent, or skill</td>
<td>5</td>
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**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 the last two weeks of class.

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; other work will be credit/no credit. These small projects are also important; it is just that no purpose is served by making small distinctions in evaluation.

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:
I like referring to this issue as honesty, not dishonesty, since I assume that you are honest, unless something happens to suggest otherwise. Know that 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

W 8-28  What is BME? When people ask you what your major is, how do you explain it?

F 8-30  Please read the essay "Mother Tongue" by Amy Tan.
http://swhs.swisd.net/teachers/perry/033BDE8E-011F79E5.2/Tan_MotherTongue.pdf

[Labor Day]
W 9-4 Please read Professional Writing Style, Lesson 1; Listen to three or four "This I Believe" essays and choose one to discuss in class. (Print it or bring laptop/tablet.)
Professional writing style: http://www.designsensory.com/pws/
This I Believe: http://thisibelieve.org/search/

F 9-6 Bring "This I Believe" (Or engineering-specific TIB) draft to class to discuss.

For Discussion Sections: Read Don't Sweat the Small Stuff (DSSS), Chapters 1-12. Bring to class a paragraph responding to a favorite chapter.

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M 9-9 Final version of "This I Believe"; Read Professional Writing Style, Lesson 2

W 9-11 Read about preparing for a career:
https://career.berkeley.edu/Guide/PreparingJobSearch.pdf
Bring to class your resume as it is. We’ll work on it in class. An old version is fine.

F 9-13 Career panel in class! Read about resume writing:
https://career.berkeley.edu/Guide/ResumeLetterWriting.pdf

For Discussion Sections: Read DSSS, 12 more chapters of your choice. Bring to class a paragraph responding to a favorite chapter.

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M 9-16 Bring to class your REVISED resume to turn in. We’ll work on interviewing in class.

W 9-18 Read sample personal statements (will be posted). Read Professional Writing Style, Lesson 3.

F 9-20 Bring to class a draft of a personal statement.

For Discussion Sections: Read selections of Mindful Communication. (Relevant sections will be posted)

For your calendar and semester planning:

• Weeks 1-4, Career Unit (through 9-20). Includes readings, brainstorming, discussion, career panel, resume, and personal statement.

• Weeks 5-9, Technology and Culture Unit (through Aug. 28); FINAL VERSION of Technology and Culture essay due October 28. Also
includes readings, research, discussion, selecting and shaping a topic, poster session, Describing a Technical Process (short piece of writing).

• Weeks 10-14, Ethics Unit (through Nov. 22). Includes readings, discussion, skits, and individual position paper and dialogue

• Weeks 15-16, “Finale” presentations

Developing skills in writing, speaking, and interpersonal communication happens throughout the semester.