



# Engineering Communication

Fall 2019

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## What Students Say

“I would tell a colleague that this class requires effort, a good attitude, and a willingness to improve. ... I really enjoyed this class because I put in the effort, had a positive attitude regarding assignments and group work, and set goals because I personally wanted to improve myself.”

“The point of this class is personal growth. Don’t pay attention to the work you put into the class or the grade that you get out of it. What really matters is taking clear steps towards improvement. If you do that, you will get the grade you want.”

“From EE 333T, expect to learn how to work in a team environment, how to revise intensively, and know you will be given choices to participate often.”

**Instructor:**

**Dr. Tracy Wuster**

**Hours:**

Three hours or more per week; see weekly reading on Canvas

**Office:**

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**Email:**

wustert@utexas.edu

**TA:**

**Hours:**

Reservations on Canvas

**Email:**

## WHY ARE WE HERE?

Engineering is a career that involves both technical information and communication. That is, engineering involves both 1s and 0s—or transistors and resistors—and people. To succeed in your career, you will need to know how to communicate your engineering work to a range of audiences, both technical and non-technical. More pressingly, this semester most of you will be communicating your skills and experience to employers in order to obtain an internship, research position, or other useful experience. Our goal in this class is to help you communicate in both technical and non-technical situations to help you succeed now and in the future. Here are some skills you will need:

### Attributes Employers Seek on a Candidate's Resume

ATTRIBUTE	% OF RESPONDENTS
Communication skills (written)	82.0%
Problem-solving skills	80.9%
Ability to work in a team	78.7%
Initiative	74.2%
Analytical/quantitative skills	71.9%
Strong work ethic	70.8%
Communication skills (verbal)	67.4%
Leadership	67.4%
Detail-oriented	59.6%
Technical skills	59.6%
Flexibility/adaptability	58.4%
Computer skills	55.1%
Interpersonal skills (relates well to others)	52.8%
Organizational ability	43.8%
Strategic planning skills	38.2%
Tactfulness	25.8%
Creativity	23.6%
Friendly/outgoing personality	22.5%
Entrepreneurial skills/risk-taker	16.9%
Fluency in a foreign language	11.2%

Source: *Job Outlook 2019*, National Association of Colleges and Employers

## LEARNING OBJECTIVES

Engineering Communication focuses on communication skills and their relationship to career development, ethics, and collaboration. The class is based on a simple premise: all the technical knowledge and the skills that you have will be wasted if you are not able to explain your ideas to potential employers, colleagues, managers, and clients in writing and through presentations. We will practice writing and presenting as iterative processes that require planning, drafting, revising, and outside input. Each communication task we undertake in this course will require you to practice real-world skills in both individual and team environments to communicate your technical knowledge.

In the **career development** portion of the course, you will explore career options and practice key job search skills. You will practice written, verbal, and nonverbal communication in the context of real-world tasks such as talking to recruiters, writing resumes and cover letters, and interviewing.

In the **ethics** portion of the course, we will explore ethical considerations embedded in the communication process, from practical questions of ethical communication, diversity and inclusion, project management, academic honesty, and teamwork to big picture questions such as safety, user needs, intellectual property, and security.

In the **collaboration** portion of the course, you will learn how to work more effectively and efficiently with a variety of groups of people. You will practice team development and work on a team to develop your engineering ethics knowledge in order to design and present an engineering ethics lesson to the class.

The goal of the course is for students to practice and improve their ability to do the following:

### **Career Development**

- Consider your career options and develop a plan for developing necessary skills
- Produce effective job-related communication, including resumes and cover letters
- Network effectively with potential employers in writing and in person
- Conduct strong interviews and learn proper strategies for success
- Find and obtain the job you want

### **Ethics**

- Consider the ethical implications of an engineering career
- Learn professional codes of ethics and understand the role of professional societies
- Understand engineering design as an iterative process that includes ethical considerations
- Properly cite sources and understand what constitutes plagiarism
- Describe emerging engineering technologies and issues in writing and presentations

### **Collaboration**

- Work effectively with people by bringing different skills, expertise, and perspective to a project
- Build strong teams by developing effective methods for team management and performance
- Recognize the role of problem solving and critical thinking in the team process
- Design an engineering ethics lesson with a team to present to the class

### **Communication**

- Develop an effective and efficient communication style for written documents and oral reports
- Learn to identify and engage audience(s) in both writing and public speaking
- Appreciate writing and speaking as processes that require time management and revision
- Generate written reports that conform to strict standards of content and format

## COURSE POLICIES

Every academic institution or corporation sets policies to govern the flow of work within and between supervisors and colleagues. Policies — whether written, spoken, or assumed — are what create a “culture.” To ensure that all students are working according to the same standards, this course follows both class-specific policies and University policies as discussed below.

### Note:

- **We hold this syllabus and the Canvas site to be clear .** If you are unclear on any information, you are responsible for seeking clarification in class, in office hours, or via e-mail. We cannot read your mind if you are not finding information. We are happy to help you succeed in this course.
- **If you foresee any trouble adhering to any policy below,** speak to the instructor about reasonable accommodations as soon as possible.

### Professional Environment

The teaching team is dedicated to the educational experience of each student in this class. As educators, we will strive to be respectful of individual differences, encouraging of creativity, reasonably open and accessible to discuss material and assignments, thorough in evaluating assignments, and rigorous yet supportive in maintaining high standards for performance.

As a student, you are expected to work individually and with others to create an atmosphere that is safe, ethical, and open to diverse perspectives. Everyone is expected to show courtesy, civility, and respect for one another. Comments or postings that degrade or ridicule, whether based on individual or cultural differences, are unacceptable.

Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender, gender variance, and nationality. Harassment and/or discrimination of any sort are unacceptable, and any concerns should be brought to the attention of the professor, the ECE Department, or the appropriate University office.

Class rosters are provided to the instructor with the student’s legal name. We will gladly honor your request to address you by an alternate name or gender pronoun. Please advise us of this preference early in the semester so that we may make appropriate changes to our records.

### Communication

Both Dr. Wuster and your TA will maintain regular office hours for you to ask questions and to consult about your work. We will attempt to schedule our hours to be available as much as possible at convenient times. If you are unable to attend our hours, please email for appointment availability. Dr. Wuster will post his office hour availability in the weekly update. Your TA will have appointment times each week via the Canvas calendar. Show up on time and prepared for scheduled office hour visits and required consultations. If you need to cancel an appointment, please do so 24 hours in advance, barring emergencies.

Because the subject of this class is professional communication, your grade will reflect your ability to maintain a professional tone and practice proper etiquette when communicating:

- \* Use e-mail, office hours, class time, and other available communication channels to ask questions or address problems—*avoiding* communication can hurt your grade.
- \* Maintain a professional tone when e-mailing or speaking with the instructor, TA, and classmates. You can maintain a professional level of familiarity, but consider the tone and content you should—*and should not*—include your communication.
- \* Include an appropriate subject, salutation, and signature in your e-mails to the instructor or TA. See your reading on email etiquette from the first week for details.
- \* Maintain a professional and respectful environment in class and during teamwork.
- \* Visit *only* the Teaching Assistant assigned to your class section for consultations.

The best way to contact us is during office hours or via email. From Monday through Friday, we will strive to reply to emails within 24 hours. We will aim to answer emails sent on Saturday and Sunday within 48 hours.

One of the key skills for engineers to succeed—both in communication and in technical material—is the ability to pay close attention and follow directions. To see if you are paying attention, please Google images to find a picture of a Muppet (your choice) and send it to Dr. Wuster attached to your introductory e-mail that is required as part of your first action item. For the e-mail content, see our class reading for week #1.

### **Technology Use**

Dr. Wuster will post readings, updates, resources, and other information to Canvas weekly by Friday at 5pm. You will be responsible for completing the readings and Action Items by the assigned days. Plan on checking Canvas early to complete reading and other tasks well before class each week. Some readings should be printed and read; others may be read online. Your weekly Canvas update will specify.

The most efficient use of Canvas will be via the “Pages” tab. All information that you will need is available or linked to via these pages. Take some time to explore this page. We cannot read your mind to tell if you are unable to find information; you are responsible for learning where to find information and for asking questions if you cannot find information. Please do so.

Page title ▲	Creation date ▼	Last edit ▼
<a href="#">Action Items</a>	Aug 21, 2019	Aug 26, 2019 by Tracy Wuster
<a href="#">Assignments</a>	Aug 21, 2019	Aug 21, 2019 by Tracy Wuster
<a href="#">Class Schedule</a>	Aug 21, 2019	Aug 26, 2019 by Tracy Wuster
<a href="#">Contact Us</a>	Aug 21, 2019	Aug 21, 2019
<a href="#">Ethics, Technology, and Other Readings</a>	Aug 21, 2019	Aug 21, 2019
<a href="#">Handouts</a>	Aug 21, 2019	Aug 21, 2019
<a href="#">Lecture Slides</a>	Aug 21, 2019	Aug 21, 2019 by Tracy Wuster
<a href="#">Networking Events</a>	Aug 21, 2019	Aug 21, 2019
<a href="#">Week 1 Reading (8/28-8/30)</a>	Aug 25, 2019	Aug 26, 2019 by Tracy Wuster
<a href="#">Week 2 Reading (8/31-9/6)</a>	Aug 26, 2019	Aug 26, 2019 by Tracy Wuster

Because internet connected technology tends to distract both the user and nearby classmates, students may not use laptops or tablets during class unless they have obtained advance permission from the instructor or unless using for a specific classroom activity. Improper phone use of any sort is prohibited during class. Failure to adhere to this policy will affect your grade.

### Assignments

You will complete written and oral assignments both individually and on a team. Each assignment will be covered in a handout posted on Canvas. These handouts are not step-by-step instructions; they require that you work to draft and revise good content. If you are unclear on course expectations, grading, or assignments, you are responsible for clarifying expectations with the teaching team. We are happy to work with you to improve individual assignments and your overall communication skills.

<b>Assignment</b>	<b>Grade %</b>	<b>Due Date</b>
Job Packet (I)	16%	9/16 or 9/17
Expertise Presentation	4%	Week 6
Career Development Presentation (I)	6%	TBD
Research Email (I)	10%	10/24
Leadership Memo (T)	8%	10/31
Team Progress Report (T)	8%	Week 11
Team Ethics Memo (T)	8%	11/11
Triple E Workshop (T)	16%	Weeks 13 & 14
Action Portfolio	24%	12/9

I = Individual; T = Team

Note: This information is on Canvas under “Pages > Assignments”

During the semester, you will complete a number of “Action Item” assignments that will allow you to practice key communication skills. Details on each assignment are listed on the “Action Item” page of Canvas.

Improving your communication skills will be a career-long task. As you move forward in your career, you will need to identify your strengths and weaknesses and develop concrete plans for improving. In order to practice this skill, you will undertake an “Action Portfolio” project that will demonstrate your effort in the key skill areas through planning, implementing, and reflecting on your learning. See the handout on the portfolio process and be prepared to ask questions as we move through the process this semester.

### **Grading**

Your work will be evaluated according to four general criteria: how well your work conveys necessary information effectively and efficiently, how well you organize your work, how you improve through consistent effort, and how well you follow the instructions for the assignments.

You are welcome to visit either Dr. Wuster or your section TA for any assignment. You are welcome to discuss feedback on the papers or presentations, but you must wait one day to come to office hours to allow you to digest our comments. You will want to consult about comments on a paper with the person who made those comments. For assignments graded by a TA, you should first discuss the feedback with that TA. The TA will not change a grade at any time.

Assignment grades and your final course grade are affected by the following course policies and assignment specifications:

1. All memos must conform to course formatting requirements listed in “Specifications for Written Assignments” on Canvas.
2. Formatting or submission errors will result in a penalty, up to 10 points. If you are unclear on formatting expectations, you should seek clarification.
3. Any papers submitted after the assigned time will be late and will receive a 5% deduction, with an additional 5% each day up to 80%. For example, if a paper is due on Tuesday at the start of class, any paper submitted after that time will receive -5%, on Wednesday -10%, etc.
5. Please email a late paper as soon as possible, and bring a paper copy to our next class meeting.
6. You are *always* permitted to submit an assignment late. You are much better off receiving a reduced grade than you are receiving a zero.
7. Unless the instructor grants permission, no papers may be submitted later than the Thursday following the last class day of the semester.

**GRADE SCALE**

For most assignments, we will assign grades on the following scale:

A+ = 100

A = 95

A/B = 90

B = 85

B/C = 80

C = 75

C/D = 70, etc.

In addition, you may lose points for submission and formatting errors.

**FINAL GRADE CURVE**

91.5 – 100 = A

89.5 – 91.49 = A–

86.5 – 89.49 = B+

83.5 – 86.49 = B

80.0 – 83.49 = B–

77.0 – 79.99 = C+

73.0 – 76.99 = C

70.0 – 72.99 = C–

67.0 – 69.99 = D+

63.0 – 66.99 = D

60.0 – 62.99 = D–

0.0—59.99 = F

You will have the opportunity to rewrite several of the assignments for a new grade. That revision must be substantive if you wish the grade to improve. You may receive a grade of up to one letter grade higher than the original grade for a revision, but a minor revision may result in no grade change. Any penalty for turning in a paper late continues to the revision grade.

Note: Students must receive a C– or above to continue to EE 364D.

**Class Participation**

Improving your communication skills takes effort. We will approach this course as if we are all a team working to improve all of our writing, speaking, and other communication skills. You should strive to be an active and engaged participant through active listening, thoughtful consideration, skillful question asking, and appropriate comments. In other words, you will not succeed in the course by constant talking or by silence. What you will need to do is develop a plan for your personality and goals. Consider the following as foundational steps:

1. Show up to class on time having completed the reading and ready to work.
2. Engage fully in presentations and class exercises by both talking and listening.
3. Conscientiously participate in peer reviews and team projects.
4. Assess and advise peers on their performance on writing and presentation tasks.
5. Help maintain a professional and respectful environment in the classroom.
6. Cooperate patiently and enthusiastically with team during collaborative projects.
7. Ask questions, listen closely, and actively participate in class.
8. Use e-mail, office hours, and class time to ask questions or address issues.
9. Maintain a professional tone and style when e-mailing or speaking with the instructor or TA.



### **Class Attendance**

Since our work often includes in-class activity, your attendance will be a factor in your final grade—just as it is a factor in your success in industry and/or academia. Please observe the following attendance policies for this class:

1. No excused absences. You may ask Dr. Wuster for information on what we did in class and possible ways to supplement your portfolio for days you missed.
2. If you must miss class or be late to class for documented medical (or other significant) reasons, please speak with the professor as early as possible to make accommodations.
3. Significant absences will impact your final grade. For absences 4 through 6, we will deduct one point each from your final grade. For each absence from 7 to 8, we will deduct two points from your final grade.
4. At 9 absences, you will fail the course.
5. Consistently arriving late will also impact your final grade. Lates 4 through 6 will each result in a .5 point penalty from your final grade. Seven through nine will result in one point each from your final grade. Each late arrival after 10 will result in five points deducted for each infraction.
6. Perfect attendance will result in +.75 extra credit on your original grade. One absence will result in +.25 point.
7. Showing up to class late or leaving early without permission will impact the bonus/penalty total. Zero late arrivals will add +.25 to your final grade. Three late arrivals will count as one absence, for extra credit purposes, and each additional late arrival will count as an additional absence.
8. Arriving more than 20 minutes late, or leaving more than 20 minutes early, counts as an absence.
9. All communication regarding attendance should be professional and timely.

### **UNIVERSITY OF TEXAS POLICIES**

The University of Texas at Austin has its own policies, which both you and the ECE Department must adhere to, concerning accommodations for students and regarding academic honesty.

### **Writing Flag Course**

Writing Flag courses are designed to give students experience with writing in an academic discipline. For our purposes, we will consider both oral presentations and written work as “writing assignments” that require planning, drafting, and revision. You can expect to write regularly during the semester and receive constructive feedback to help you improve your writing. You will also have the opportunity to revise assignments and to read and discuss your peers' work.

### **Ethics Flag Course**

Ethics courses are designed to equip you with skills that are necessary for making ethical decisions in your professional life. You should therefore expect a substantial portion of your grade to come from assignments involving ethical issues and the process of applying ethical reasoning to real-life situations, especially in relation to team performance and leadership.

## Students With Disabilities

Students with disabilities may request appropriate academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities, 471-6259.

## Accommodations for Religious Holidays

According to UT policy, you must notify the instructor of your pending absence at least 14 days prior to the date of observance of a religious holy day. If you must miss a class, work assignment, or project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.

## Emergency Preparedness

Every member of the university community must take appropriate and deliberate action when an emergency strikes a building, a portion of the campus, or entire campus community. Emergency preparedness means we are all ready to act for our own safety and the safety of others during a crisis. It takes an effort by all of us to create and sustain an effective emergency preparedness system. Your support is important to achieving the best possible outcomes during a crisis event. You should be aware of emergency procedures and evacuation routes for all of your classes. Find more information here: <http://www.utexas.edu/safety/preparedness/>

## Academic Honesty

You are responsible for understanding and avoiding academic dishonesty as defined by the UT Honor Code. Penalties for plagiarism or other academic dishonesty can range from point deductions to a zero for the assignment to an “F” in the course. If you have questions, please ask.

- Plagiarism occurs if you represent **as your own work** any material that was obtained from another source, regardless how or where you acquired it.
- Using **verbatim** material (e.g., exact words) without proper attribution (or credit) constitutes the most blatant form of plagiarism. However, other types of material can be plagiarized as well, such as **ideas** drawn from an original source or even its **structure** (e.g., sentence construction or line of argument).
- Plagiarism can be committed intentionally **or** unintentionally.
- By merely changing a few words or rearranging several words or sentences, you are **not** paraphrasing. Making minor revisions to borrowed text amounts to plagiarism. Remember, too, that even a well-paraphrased idea must be cited.
- Collusion or turning in assignments not completed by you is another form of dishonesty.

### Important Dates

If at any time you want to drop this course, be aware of the following dates:

September 3	Last day of the official add/drop period.
September 13	Last day to drop for a possible refund.
October 31	Last day to withdraw from the University or to drop a course except for urgent and substantiated, nonacademic reasons. Requires the dean's approval.

## Prerequisites

Electrical Engineering 312 or 313 with a grade of at least C-, and one of the following with a grade of at least C-: English 316L, 316M, 316N, or 316P, (or 316K).