Technical Communication 1
ENGR 1181
Class 4
Technical Communications in the Real World

Communication, both oral and written, is extremely important in the business world. The best communicators are often the most successful people. Steve Jobs was an excellent communicator.
Today's Learning Objectives

- After today’s class, students will be able to:
  - Define technical communication, especially in engineering.
  - Explain at least three differences between technical communication and high school writing.
  - Discuss at least two specific uses for technical communication in engineering.
  - Describe and distinguish between written and oral forms of technical communication.
What is Technical Communication?

 A method of sharing information about specialized subjects

 Examples include:
  • Project contract or bid proposal
  • Assembly instructions for a toy
  • User guide for software
  • Drug prescription
  • Technical articles and publications
  • Sharing research at conferences
  • Presenting research or job status to management/clients
Technical Writing and Speaking

- For the purposes of this class, technical communication involves:
  - Writing executive summaries, memos, reports, and project notebooks
  - Verbal presentation to colleagues

- Completing these different types of technical writing and speaking will prepare you for your future careers and possible post-graduate research
Technical Communication vs. High School Writing

High School Writing
- Expository
- Double spaced
- Essay format
- Descriptive
- Length requirement

Technical Communication
- Informative
- Often Single Spaced
- Professional format
- Concise and precise
- Short is preferred
Key Techniques

- Technical Communication Style:
  - Use 3rd Person
  - Use Past Tense
  - Avoid Emotional Statements
  - Use Passive Voice Deliberately
  - Use Short Sentences
  - Use Bulleted and Numbered Lists
Written Communication In This Class

- Four types of written documents:
  - Executive Summary
  - Lab Memo
  - Lab Report
  - Project Notebook

- Start simple and gradually increase in detail, content sections, and overall size
Using the Technical Communication Guide

- The Technical Communication Guide aids students and contains:
  - An introduction to technical communication
  - An explanation of the different types of written and verbal presentation assignments in the class
  - A description of helpful software tools and grammatical rules
Written Communication

**Executive Summary:**
- This short document (1-2 pages) provides a brief overview of the lab and contains key facts, results, and conclusions.

**Lab Memo:**
- This document is formatted like a standard business memo. Its purpose is to report the data, observations, and results obtained in lab.

**Lab Report:**
- This document is a more detailed version of the Lab Memo; unlike the Lab Memo, its format is that of a condensed formal report.

**Project Notebook:**
- This large document (in a 2-3 inch binder) serves to record your team’s activities and progress through completion of an extensive design/build task.
Written Communication Practice

- In-Class Activity: Practice Grading Session
  - Sample lab documents (i.e. Executive Summaries) are available on the course website
  - Follow the instructions
  - Refer to the Tech. Comm. Guide to practice evaluating the documents
Technical Verbal Communication

- Verbal communication is a large part of the engineering field, as well as other professions.
  - What to present and how to present it
- How to effectively communicate information in a presentation.
- Using visuals to supplement the speaking points.
- Practice with good presentations versus bad.
Why Verbal Communication?

- The purpose is to get practice communicating ideas concisely and effectively.

- There are two opportunities in ENGR 1181/1182 to present using different media:
  - Ethics case
  - Advanced Energy Vehicle (AEV) project
Using the Technical Communication Guide

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  - A description of helpful software tools and grammatical rules
Presentation Organization

- Cover/Title slide
- Introduction to the speaker or team
- Purpose statement/overview slide
- The main “body” of the presentation
- Conclusion/Recommendations
- References
Planning Presentations

- Audience
- Message and Supporting Detail
- Purpose
- Organization Strategy
- Figures/Graphics/Illustrations
- Other Media?
Quality Content Found in Communications

- Clear message presented
- Content focused on message
- Information is obvious while the presenter gives details and explanations
- Titles indicate sequence of topics
- Title/text font consistent by information type
- Research is cited
- Content free of typos, spelling errors etc.
Important Takeaways

- Different from High School Writing
  - concise and precise
  - contains bulleted and numbered lists, as needed

- Specifically styled and formatted (e.g. lab memo)
  - 3rd person, past tense, and passive voice
  - free of emotional statements

- Used for written and verbal communication

- Use the Technical Communications Guide → Resources Page
Preview of Next Class

- Excel - Graphing!
What’s Next?

- Review today’s lecture.
- Open the in-class activity from the EEIC website and we will go through it together.
- Then, start working on homework.