**English 398:**

**Professional Communication for Engineers**

**Spring 2018**

## Contact Information

Instructor: Dr. Michelle Lyons-McFarland Class days and time: MW 2:15-3:05pm

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Office Location: Guilford 407 or Nord 202

## Course Description & Objectives

English 398 introduces principles and strategies for effective communication in both academic and workplace engineering settings. Through analysis and creation of professional genres, this course develops the oral and written communication skills that characterize successful engineers. Students will prepare professional documents that focus specifically on communicating technical knowledge to diverse audiences. Because such documents are always situated within professional, social, and rhetorical contexts, this course requires students to explain and justify their communicative choices in order to develop strategies for navigating the work environments of professional engineers. As a SAGES Departmental Seminar, English 398 aims to prepare students for the writing they will do in Capstone projects.

As a Departmental Seminar, ENGL 398's workload and time commitment outside of class time will be more demanding than one might expect for a 2-credit course. Be prepared and plan ahead. Beginning assignments early, particularly near the end of the semester, will allow you to finish on time and submit your best work.

**Course Objectives**

This course asks you to develop your written and oral communication skills while also honing your professional skills, including time management, organization, and punctuality. By the end of English 398, students should be able to:

* Produce written texts in a variety of professional genres, texts that communicate effectively and adhere to professional ethical standards.
* Deliver clear and professional oral presentations on scientific and engineering related topics.
* Reflect on and justify the rhetorical choices involved in planning, writing, revising, editing, and presenting professional documents.
* Summarize scientific, engineering and business related research for a non-technical audience.
* Demonstrate the ability to work as part of a team, coordinating workflow and collaboratively presenting outcomes.
* Synthesize the research and professional best practices related to a product or service design project.
* Demonstrate the capacity for life-long learning through sustained reflection, revision, and research.

**About ENGR 398**

ENGL 398 complements ENGR 398, a 1-credit co-requisite lecture course, which introduces practical, theoretical, and workplace issues that shape the communication environment among professional engineers. For details of the ENGR 398 objectives, work commitments, grade breakdown, and assignments, please see the separate syllabus for that course.

## Course Materials

*Required*

[1] M. Markel, *Practical Strategies for Technical Communication.* 2nd Edition. Boston, MA: Bedford/St. Martin’s Press, 2016. [Abbreviated below as “PSTC”].

Additional readings are available through our course website or Canvas space.

## Work Commitments

This course invites your thoughtful reflection about the rhetorical choices you make as an author. It demands not only that you produce clear and thoughtful texts, but also that you articulate the ways your communication practices (both oral and written) accommodate the needs of diverse audiences, contexts, and engineering problems. Therefore, you will be asked to compose various documents that require reflection on your decisions. These documents should be specific, detailed, and persuasive: they should make the case that you have carefully considered your options and made the best possible rhetorical choices (or explain poor rhetorical choices, the result, and plans for future success).

**In-Class Exercises & Participation (10% or 100 points)**

Various in-class assignments, activities, and homework exercises will be assigned throughout the semester. Your active, thoughtful and productive completion of these activities is essential to your success in this course.

**Unit Zero: Self-Reflection & Self-Evaluation (10% or 100 points)**

This unit consists of two documents that frame all of your work this semester. In the first assignment, you will describe your personal and professional goals and expectations, describe the steps you will use to monitor progress in meeting those goals and expectations, as well as corrective actions that you may take to meet your goals and expectations throughout the semester. In the final assignment, you will compose a document reflecting on your progress and development as a communicator over the course of the semester. You should list specific skills and areas in which you have developed, provide examples of that development, and discuss any skills or areas that need continued work.

*Unit Zero Assignments:*

1. Personal Goals and Expectations Document (1-2 single-spaced pages)
2. Final Reflection Document (2 single-spaced pages)

*Unit Zero Communication Skills:*

1. Demonstrating the capacity for life-long learning by reflecting on and explaining your development over the course of the semester
2. Designing and writing a document for a general audience
3. Editing written communication

**Unit One: Individual Project – Case Study on an Innovation (32.5% or 325 points)**

Individually, you will take a current technology-based object, product, or service already on the market and re-trace its progression from original need, to research and design, to development. Using research articles and other sources, you will study how a technological innovation moves from idea to product by backwards-engineering these steps. Your deliverables will require you to explain the original need or problem the innovation sought to address, the science behind the innovation, the innovation’s benefits and perhaps novelty, as well as its success (or failure) and its common uses.

*Unit One Assignments:*

1. Project Memo with Work Plan + Two Annotations of Sources (2-3 single-spaced pages)
2. Professional Resume + Cover Letter (2 single-spaced pages)
3. Brief Presentation (an individual 3-minute overview of your case study) with Visual Displays
4. Brief Case Study Report (3-4 single-spaced pages)

*Unit One Communication Skills:*

1. Writing and presenting for non-technical (managerial) audiences
2. Writing technical prose in a style appropriate for your audience
3. Finding, selecting and annotating scientific and/or engineering-related sources
4. Summarizing scientific research and other forms of information
5. Organizing information for non-technical audiences
6. Designing and writing documents and basic reports
7. Designing and creating visual materials appropriate for pitch presentations
8. Practicing and delivering brief presentations
9. Revising and editing written communication

**Unit Two: Team Project – Research-Based Proposal (45% or 450 points)**

The focus of this unit will take one of two forms: (a) an innovation-focused proposal (proposing to create a prototype and seeking funds for it) or (b) a more traditional engineering research proposal (proposing funds to do some kind of engineering research). Both of these approaches share a *problem-solution orientation*. In other words, both require your team to identify a problem, research engineering-based methods for solving that problem, and create a proposal that seeks funds to *begin* to solve that problem.

**Option A: Design or Prototype Proposal**

Working in teams, you will identify a consumer need requiring an engineering-based solution or a design problem in the field of engineering – a need or problem that can be solved through the creation of a technological object or service. Then using research, create a plan for addressing that need or problem with some product or service. Building from what you learned in Unit One, your team will do the following: research the problem/need, research the science involved in solving the problem as well as the related research on the problem, create a development plan (and work plan) that describes your solution, your approach to the solution, as well as the value of your approach, and write a proposal requesting the funds and resources necessary to further research, design, and development a prototype related to your product or service. Obviously, this assignment is not asking you to create the actual product; however, the proposal your team creates does require you all to research, devise, and communicate your design and development plan (including a reasonable budget) for an external, non-technical audience.

**Option B: Research Proposal**

Working in teams, you will identify a research problem in the field of engineering – a problem that can be solved by conducting engineering research. Then using published research, create a plan for addressing that problem by proposing some experiment or specific research project. Building from what you learned in Unit One, your team will do the following: research the problem, research the science involved in solving the problem as well as the existing research on the problem, devise a research project or experiment that would solve the specific research problem, create a research proposal that describes your proposed project and its value, and write a proposal requesting the funds and resources necessary to conduct this research study. Obviously, this assignment does not ask you to conduct the actual research; however, the research proposal your team creates does require you all to research, devise, and communicate your proposed study and research timeline (including a reasonable budget) for an external, non-technical audience.

*Unit Two Assignments:*

1. Team Charter (1-2 single-spaced pages)
2. Problem Statement/Project Idea Description + Team’s Workplan (1-2 single-spaced pages)
3. Detailed Project Memo + Literature Review (3-4 single-spaced pages)
4. Pitch-like Presentation (a team delivered 5-minute overview of your proposal) + Visual Displays
5. Proposal Report + Executive Summary (& Email/Letter of Transmittal) (8-10 pages)
6. Self/Team Evaluations (1 single-spaced page)

*Unit Two: Communication Skills:*

1. Writing technical descriptions and statements of method and procedure
2. Summarizing scientific and other forms of research
3. Writing brief literature reviews
4. Designing and writing value propositions, innovation plans, and budgets
5. Designing and composing proposal reports
6. Designing and creating data displays appropriate for non-technical audiences
7. Designing and creating visual materials appropriate for pitch presentations
8. Practicing and delivering pitch-like presentations
9. Revising and editing written communication

## Grading

Your final grade for this course will be calculated based on the following:

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| --- | --- |
| ***Major Assignments*** | ***Points*** |
| **Unit 0: Self-Reflection and Self-Evaluation (100 total)** |  |
| 0.1: Personal Goals and Expectations Document (1-2p) | 50 |
| 0.2: Final Reflection Document (2p) \* | 50 |
|  |  |
| **Unit 1: Individual Project: Innovation Case Study (325 total)** |  |
| 1.1: Project Memo with Work Plan + Two Annotated Sources (3p) | 75 |
| 1.2: Professional Resume + Cover Letter (2p) | 50 |
| 1.3: Presentation (individual) with Visual Displays (3 minutes) \* | 100 |
| 1.4: Brief Case Study Report (4-5p) \* | 100 |
|  |  |
| **Unit 2: Team Project: Research-Based Proposal for Academy or Industry (475 total)** |  |
| 2.1: Team Charter (1-2p) | 25 |
| 2.2: Problem Statement/Project Idea + Work Plan (1-2p) | 50 |
| 2.3: Detailed Project Memo with Literature Review (3-4p) | 75 |
| 2.4: Presentation (in teams) with Visual Displays (5 minutes) | 100 |
| 2.5: Proposal with Executive Summary (& Letter/Email of Transmittal) (8-10p) | 200 |
| 2.6: Self/Team Evaluations (1 single-spaced page) \* | 25 |
|  |  |
| **Participation/In-Class Work (100 total)** | 100 |
| **Total Points:** | **1000** |
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**Grading Scale**

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| --- | --- |
| **Grade** | **Total Score** |
| **A** | 901-1000 |
| **B** | 801-900 |
| **C** | 701-800 |
| **D** | 601-700 |
| **F** | ≤ 600 |

**\*Uploading Work to Via**

ENGL 398 is used by the CSE as part of its accreditation process. Specifically, CSE must demonstrate to the Accreditation Board for Engineering and Technology (ABET) that students in CSE’s undergraduate programs fulfill assignments that assess specific learning outcomes. Please see the ABET Info Sheet for Students for more information (available in Canvas).

## Course Policies

**Attendance**

If you miss a class, you must email or speak with a classmate regarding the work you missed. Only after you have spoken with a classmate should you contact me for clarifications.

Starting with your **fourth (4th) absence, 100 points** will be deducted from your final course grade **for each additional absence.** A student with **six (6) absences**, regardless of the reason or excuse, **will fail the course automatically**.

**Participation & In-Class Work**

You are expected to attend class on-time and actively participate in all class sessions. If you miss a class session, you cannot make up the in-class work nor the participation points for that day. In addition, your thoughtful and productive participation will have a positive effect on any rounding necessary in your final grade.

**Presentation of Written Work**

If you have questions about the expectations for each assignment, check the individual assignment sheets and ask me. The page numbers on assignment sheets usually refer to single-spaced pages. General guidelines for individual genres and documents appear in our textbook, *PSTC*; always consult *PSTC* when creating your documents.

All written work should appear in a professional typeface with a 12-point font and margins of no larger than one inch on all sides. Unless otherwise specified, all written work should be submitted as a .doc, .docx, or .pdf file.

**Late Work**

Any work not turned in by the deadline is late work. I will deduct a full letter grade each day the work is late. Work submitted beyond 3 calendar days will receive a zero. Late work is not revisable.

Work may not be considered late if a student makes alternate arrangements in advance. If you wish to inquire about alternate arrangements, contact me as early as possible. *Understand that I will not be able to grant every request for alternative arrangements.*

**Revisions of Written Work**

You will have the chance to revise one independently-produced work (from Unit 1) and one team-produced work (from Unit 2).

Kind in mind, if the assignment was an individual assignment, the revision should be your independent work. If the assignment was collaborative, the revision should be produced with collaborative effort.

To submit a revision, you or your team must follow these steps:

1. Make substantive revisions to the document (as opposed to simply correcting spelling or simple grammatical mistakes).
2. Write a short email that reflects upon and explains the decisions you or your team made while revising the document.
3. Turn in the revised document and the email between 1-2 weeks of the return of the original, graded assignment.

*Please note the following exclusions:*

1. The revised assignment must have earned a B- or lower.
2. In-class assignments, class participation, and extra credit exercises are not eligible to be revised or submitted after the scheduled date.
3. Revisions are my lowest priority for grading. I always grade current work before revisions of previous work.

If you follow the above process and if I find the revisions substantive, I will assign a new grade; the higher of the two grades will serve as the grade for the assignment.

**Academic Integrity**

The ethical exchange of ideas is at the heart of academic inquiry and professional practice. Such exchanges require that you complete your own individual and collaborative work and that you give credit to those whose ideas have influenced your own. Failing to give credit for ideas not your own constitutes plagiarism, which can be defined as the unacknowledged use of another’s words and/or ideas. CWRU’s Academic Integrity policy is available online: (<http://studentaffairs.case.edu/groups/aiboard/policy.html)>.

Work you create for another class may not be used for this course (or any other course) without the permission of the professor.

**Students with Additional Needs**

In accordance with federal law, if you have a documented disability, you may be eligible to request accommodations from Disability Resources. Please contact their office to register at 216.368.5230 or get more information: <http://students.case.edu/academic/disability/>

Please keep in mind that accommodations are not retroactive.

**Comments, Concerns & Emergencies**

Should some unforeseen event occur that affects your ability to complete the work for this course, contact me as soon as possible. If you have comments or concerns about what is happening in class, talk to me during office hours or email me to make an appointment. If you are at any time feeling overwhelmed or confused, please see me to discuss strategies to handle workload, timetables for assignments, and ways to articulate ideas.

**Incompletes**

I will NOT assign incompletes in this course. No section of ENGL 398 assigns incompletes.

**Additional Writing Support**

All CWRU students are encouraged to seek additional writing support at the Writing Resource Center (WRC). The WRC is open Monday-Friday, 9:00-5:00. Most one-on-one tutoring sessions take place in Bellflower Hall, though some sessions occur in Nord. You can sign up for a tutorial using the online appointment system: <http://case.mywconline.com/>

**ENGL 398 Weekly Schedule: Fall 2017**

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| --- | --- | --- | --- |
| Weeks | Topics Covered | Readings Due for Class | Assignments Due |
| Wk 1  M: 8/27 | Introducing technical communication;  Reviewing the syllabus, policies, & major units (especially Units 1 & 2)  Introducing memos |  |  |
| Wk 1  W: 8/29 | Writing to inform and persuade audiences;  Frontloading documents  Discuss Unit Zero and Unit 1 Assignment Sheets | *PSTC*: Ch.1, "Writing in the Technical Communication Environment" (3-15);  *PSTC*: Ch.4, "Analyzing Your Audience & Purpose" (54-77)  *PSTC*: Ch.9, "Writing Correspondence" (240-245; 253-258) | Due Monday, 9/3, at 11:59pm: Personal Goals and Expectations Memo |
| Wk 2  M: 9/3 | Labor Day -- NO CLASS |  |  |
| Wk 2  W: 9/5 | Understanding Value Propositions: Need, Approach, Value, Competition | Carlson & Wilmot: Ch.5, "It's as Simple as NABC" (85-100) |  |
| Wk 3  M: 9/10 | Locating and identifying research | *PSTC*: Ch.5, "Researching Your Subject" (79-94) | Due Sunday, 9/15, at 11:59pm: Project Topic Worksheet |
| Wk 3  W: 9/12 | Summarizing research and technical information | Penrose & Katz: Ch.3, "Reading & Writing Research Reports" (33-63) |  |
| Wk 4  M: 9/17 | Working with style guides (citations) | IEEE Citation Guide (https://www.ieee.org/documents/ieeecitationref.pdf ) | Due Sunday, 9/23, at 11:59pm: Project Memo with Work Plan + Two Annotations |
| Wk 4  W: 9/19 | Composing professional resumes | PSTC: Ch.10, “Writing Job-Application Materials” (265-290) |  |
| Wk 5  M: 9/24 | Composing professional resumes |  | Due Sunday, 9/30, at 11:59m: Professional Resume |
| Wk 5  W: 9/26 | Writing technical descriptions and definitions | *PSTC*: Ch.14, "Writing Definitions, Descriptions, & Instructions" (386-402) |  |
| Wk 6  M: 10/1 | Introducing progress and status reports | *PSTC*: Ch.12, "Writing Informational Reports" (318-334) |  |
| Wk 6  W: 10/3 | Delivering presentations | *PSTC*: Ch.15 "Making Oral Presentations" (424-446) | Due Sunday, 10/7, at 6:00pm: 6 students post online the video of their presentation |
| Wk 7  M: 10/8 | **Unit 1 Presentations**  Discuss 6 Video Recorded Presentations | Q&A of 6 Video Presentations  View the 6 video presentations and come with comments/questions | Due Tuesday, 10/9, at 6:00pm: 7 students post online the video of their presentation |
| Wk 7  W: 10/10 | **Unit 1 Presentations**  Discuss 7 Video Recorded Presentations | Q&A of 7 Video Presentations  View the 7 video presentations and come with comments/questions | Due Sunday, 10/14 at 6:00pm: 7 students post online the video of their presentation |
| Wk 8  M: 10/15 | **Unit 1 Presentations**  Discuss 7 Video Recorded Presentations | Q&A of 7 Video Presentations  View the 7 video presentations and come with comments/questions | Due Sunday, 10/21, at 11:59pm: Final Unit 1 Case Study Report |
| Wk 8  W: 10/17 | Collaborative writing and working in teams;  Assign & Review Unit 2 Project and Teams | *PSTC*: Ch.3, “Writing Collaboratively and Using Social Media” (34-51);  Wolfe: Ch.1, Ch.3, & Ch.4 (3-12; 27-48) |  |
| Wk 9  M: 10/22 | Fall Break -- NO CLASS |  |  |
| Wk 9  W: 10/24 | Writing proposals | *PSTC*: Ch.11, "Writing Proposals" (292-316) | Due FRIDAY, 10/26, at 11:59pm: Team Charter + Topic Worksheet |
| Wk 10  M: 10/29 | Finding trends in research & writing literature reviews | Penrose & Katz: Ch.4, "Reviewing Prior Research" (74-85) |  |
| Wk 10  W: 10/31 | Ethics in engineering | *PSTC*: Ch.2, "Understanding Ethical & Legal Considerations" (15-32);  IEEE Code of Ethics:  http://www.ieee.org/about/corporate/governance/p7-8.html |  |
| Wk 11  M: 11/5 | Presenting data ethically and persuasively | *PSTC*: Ch.8, "Creating Graphics" (197-235)  *PSTC*: Ch.7, "Designing Print & Online Documents" (158-177) |  |
| Wk 11  W: 11/7 | Presenting data ethically and persuasively |  | Due Saturday, 11/11, at 11:59pm: Problem Statement/Project Idea + Work Plan |
| Wk 12  M: 11/12 | Literature Review Activity |  |  |
| Wk 12  W: 11/14 | The verbal design of documents (Organizational patterns to paragraph writing) | *PSTC*: Ch.6, "Writing for Your Readers" (**108-123 only**) |  |
| Wk 13  M: 11/19 | Detailed Project Memo + Literature Review Peer Review |  | Due Sunday, 11/25, at 11:59pm: Detailed Project Memo + Literature Review |
| Wk 13  W: 11/21 | NO CLASS |  |  |
| Wk 14  M: 11/26 | Writing technical prose (fine-tuning sentences & paragraphs) | *PSTC*: Ch.6, "Writing for Your Readers" (**123-153 only**) |  |
| Wk 14  W: 11/28 | Creating budgets &  Team Project Work Day |  | Due Sunday, 12/2, at 11:59pm: OPTIONAL –A draft of a major section of their Proposal, which allows me to give feedback |
| Wk 15  M: 12/3 | Practice your Unit 2 pitches (in class) |  |  |
| Wk 15  TW: 12/5 | **Formal Unit 2 Team Pitches (in class)** |  |  |
|  | Due Friday, 12/7, at 11:59pm: Final Unit 2 Team Proposal with Letter/Email of Transmittal  Due Friday, 12/7, at 11:59pm: Self/Team Evaluations (Completed Individually) |  |  |
|  | Due Friday, 12/7 at 11:59pm: Reflection Document (Completed Individually) | | |
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