

ENCS 282: TECHNICAL WRITING AND COMMUNICATION

Center for Engineering in Society, Faculty of Engineering & Computer Science, Winter 2020

Professor: Kamal W. Fox

Lecture: Tuesdays 17:45-20:15, H-411

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Office Hours: By Appointment Only (Please Instructions below to make an appointment)

Prerequisite: Students must have satisfied the requirements in §71.20.7 by passing the Engineering Writing Test (EWT), or by passing ENCS 272 with a grade of C- or higher.

Important Academic Dates

Last day to Drop with Refund: Monday Jan. 20, 2020

Final day to Drop without Refund: Monday March 23, 2020

PROSPECTUS

In this course, students learn professional norms of technical communication and the dominant forms knowledge sharing within the professional fields of engineering and computer science. This course covers the following material: technical writing form and style; technical and scientific papers, abstracts and reports; definitions, descriptions and instructions; visual and oral presentation; interpersonal communication; research and referencing methods; critical thinking; rhetorical strategies for persuasion.

This course will follow, broadly, a dual pedagogical strategy. The first aspect encourages students to think carefully and critically about language and communication skills in general, but specifically about the language and communication skills that they will use in different professional settings once they leave the university. The second aspect of this course will be to provide students with some specific skill sets that will be valuable in a professional context.

This course will promote the students' ability to think clearly and analytically. It will improve students' capacity for effective writing and public speaking, while helping students learn the basic norms and standards for professional, technical communication. The course will help students improve their abilities to read and listen critically, to respond reflectively and reasonably to others, and to craft successful arguments, documents and other presentations of intellectual work. In addition, this course will also critically examine engineering issues. This reflects the Center for Engineering in Society's mission statement "to develop undergraduate and graduate students' communication skills, their moral imaginations, and understanding of the social foundations and impacts of technology."

Course Textbook – There is no set textbook for the course. Readings that support the lecture & tutorial materials will be posted on the Concordia Library web site in the Course Reserves section for students to download.

CEAB Graduate Attributes

ENCS 282 emphasizes and develops the CEAB graduate attributes of Communication skills. This graduate attribute is defined by the CEAB as: An ability to communicate complex engineering concepts within the profession and with society at large. Such abilities include reading, writing, speaking and listening, and the ability to comprehend and write effective reports and design documentation, and to give and effectively respond to clear instructions. Each assignment in this course evaluates this particular graduate attribute, including writing exercises and speaking exercises. The Communication Skills attribute, defined by the Canadian Engineering Accreditation Board (CEAB), is an ability to communicate complex engineering concepts within the profession and with society at large. Such ability includes reading, writing, speaking and listening, and the ability to comprehend and write effective reports and design documentation, and to give and effectively respond to clear instructions.

More specifically, students will be assessed on their abilities to:

- Identify audience needs, interests and level of knowledge
- Frame supportable, significant theses and arguments
- Develop appropriate expository and argumentative strategies
- Identify and utilize relevant, high quality resources
- Create drafts and revisions
- Respond to critical feedback
- Demonstrate understanding of cognitive and conceptual differences between oral and written presentation
- Create appropriate scope for treatment of topic in oral presentation
- Adapt written text to oral presentation
- Identify audience needs, interests and level of knowledge
- Plan, design and effectively utilize visual materials
- Utilize effective presentation techniques
- Identify strategies to overcome linguistic difference
- Adapt presentation to heterogeneous audiences

These attributes will be assessed in both the final proposal for the course as well as the oral presentations for the course.

CLASSROOM RULES It is expected that all students will contribute to a supportive and non-discriminatory learning environment by respecting basic classroom courtesy and displaying professional behavior. Late arrivals, disruptive behavior, early departures, ringing cell phones, text messaging and eating are all unacceptable activities that negatively affect classroom learning; they indicate disrespect and inattention to colleagues and the instructor. Students are expected to conduct themselves professionally, actively participate in class discussions, offer their considered, relevant observations, and listen respectfully to others' opinions, even if these are in disagreement with their own.

Also, please also be advised that it is FORBIDDEN to use any electronic devices such as cell phones, tablets, etc., unless you have explicit permission from your instructor. Any use of electronic devices during class time MUST be for course related activities. Any other uses are forbidden. Students who persist in inappropriate use of their electronic devices will be asked to leave class immediately; this will be considered an absence and the appropriate deduction will be made from the student's class participation mark. If you need to text or make phone calls or have a snack, do so during the break.

To ensure the privacy of your classmates and instructor, there is no recording, no taping, and no photos during class time. Therefore, the use of information technology and electronic communication by students without the lecturer's explicit permission is strictly prohibited. This prohibition applies to note taking, recording, audio or videotaping, as well as to communication or dissemination of course material. Please also note that dissemination of course material through third-party websites may constitute a breach of copyright, and students who post to such websites may be accountable for their actions according to copyright laws and legislation.

Tutorial – Your tutorial leader will conduct your tutorials. The same rules that apply to the lecture apply to the tutorial. In addition, please follow any other rules your tutorial leader may set in place to facilitate the conducting of the class. **Attendance and participation in Tutorials is mandatory** and constitutes a significant part of your participation grade. There are no tutorials in the first week of class.

Attendance and Participation Policy

Prompt attendance and class preparation are basic expectations. You are required to attend all tutorial sessions, and tutorial participation is compulsory. Tutorials begin after the first week of classes. Students must only attend the tutorial for which they have enrolled. **If you attend other sessions, you will be marked absent, and this will negatively affect your grade.**

Each absence from tutorial will result in a reduction in the final course grade. Falsifying attendance sheets for yourself or another person is considered personation (see Academic misconduct below.) You will also be counted absent if you come to class but have not completed assigned work or do not complete in-class assignments. You will be counted absent if you come more than 15 minutes late to class, or if you leave more than 15 minutes before dismissal. Please be aware that simply attending tutorial is not enough to gain full marks. You must be **actively participating** in class discussions and activities (e.g. asking questions, contributing to discussions completing in-class assignments to a satisfactory level).

Absence for Medical Reasons

Understand that it is at the discretion of the course instructor to decide whether or not a medical note will be accepted. All medical documentation must indicate that a physician examined the student PRIOR to or on the same day as the missed class, assignment, test or exam. As well, the medical documentation must indicate how the student's illness prevented him or her from attending class and/or completing an assignment, test or exam. Please read the university's policy on Medical Notes here: <https://www.concordia.ca/students/health/medical-notes.html>

Travel During the Semester

DO NOT make any travel plans during the testing or exam periods. There will be NO accommodation for absences from quizzes, tests or exams due to travel plans. Please note there is a major test on **Feb. 18, 2020**.

Academic Integrity – The work students complete for this course will be their own, which is to say that cheating, plagiarism, and other forms of academic dishonesty will not be tolerated. Any written assignment that borrows from other sources without giving proper credit or that is plagiarized in whole or in part from another source (including other student's work) is grounds for an "F" on the assignment, or depending on the severity of the infraction, is grounds for an "F" in the course. Concordia University recognizes as a punishable offence "any form of cheating, plagiarism, personation, falsification of a document as well as any other form of dishonest behavior" (Academic Integrity and the Academic Code of Conduct, Section 17.10, Paragraph III). For questions about the University's policy on cheating and plagiarism, please consult the Undergraduate Calendar at <http://www.concordia.ca/academics/undergraduate/calendar/current/17-10.html>

In Simple Words: **Do not copy, paraphrase or translate anything from anywhere without indicating from where you obtained it using proper formatting style.** For more information about avoiding plagiarism, you can visit the Concordia's web site: <http://provost.concordia.ca/academicintegrity/plagiarism> or the Concordia Libraries web site for help with citations: <http://library.concordia.ca/help/citing/index.php>

Educational Support – The University acknowledges that students have diverse education needs. The university tries to accommodate a wide variety of such needs. Please do not hesitate to contact the following services if you think you have a special need:

- Student Advocacy Office - <https://www.concordia.ca/offices/advocacy.html>
- Concordia Counseling and Development - <http://www.concordia.ca/students/counselling.html>
- New Student Program - <http://newstudent.concordia.ca/>
- Access Center for Students with Disabilities - <http://www.concordia.ca/students/accessibility.html>
- Student Success Center - <http://www.concordia.ca/students/success.html>
- Concordia Health Services - <https://www.concordia.ca/students/health.html>

COURSE ASSIGNMENTS

All assignments written outside class are due before class begins on the day specified on the schedule. All course assignments written outside class must be handed in online via Moodle. **DO NOT email your assignment to your professor.** Emailed assignments will not be accepted. If you miss an in-class or homework assignment for a legitimate reason, you are responsible for making arrangements to complete it and submit it. Missing an assignment without legitimate (documented medical illness, etc.) reason will result in a failing grade for the assignment. Late assignments will be accepted, pending prior instructor approval, with a ten percent grade reduction per day late. No late assignments will be accepted without prior instructor approval. You will not be able to pass ENCS 282 without submitting all assignments. This includes late assignments. You can download handouts and assignments sheets from the ENCS 282 course Moodle site.

Assessed Course Assignments:

1. Short Assignments (30%)

- **Mechanism Description (10%)** – In this assignment, you will be asked to describe—for a specific audience—an assigned object according to criteria. The object for your assignment will be assigned to you in your tutorial. Your mechanism description will be 3-5 pages long. Further details and requirements will be provided on Moodle.
- **Process Description (10%)** – In this assignment, you will be asked to create a description of a process in accordance with the specifications discussed in during lecture. Your document will be for a specific audience that will be specified. The topic of for your mechanism description will be assigned during a tutorial session. Your process description will be 3-5 pages long. Further details and requirements will be provided on Moodle.
- **Quizzes (10%)** – Throughout the semester, there will be on-line quizzes derived from the course readings. These quizzes are time restricted and have limited availability. Please note: there is no opportunity to complete a quiz once it has closed.

2. Test (20%)

– There will be a written test on the topics covered in the first half of the course. It will take place during class time. It will test your interpretation and critical thinking skills as well as your understanding of the key concepts and ideas of the course.

3. Oral Presentation (10%)

– Students will prepare and deliver a group presentation on an assigned topic. As a group, students will author a final report describing the project and summarizing results. Groups are assigned randomly. Further details and requirements will be provided on Moodle.

4. Formal Report (20%)

– As a group, students will author a final report describing the project and summarizing results. Further details and requirements will be provided on Moodle.

5. Tutorial Component (20%: Attendance & Active Participation)

– Attendance at tutorials is mandatory. You will have a series of class discussions and/or assignments to complete in tutorial time. If you do not complete these tutorial assignments when they are due, marks will be deducted from your class participation grade.

Grade Conversions

Final grades will be calculated according to the following rubric:

A+ = 100-90	B+ = 79-77	C+ = 69-68	D+ = 59-57
A = 89-85	B = 76-73	C = 67-63	D = 56-53
A- = 84-80	B- = 72-70	C- = 62-60	D- = 52-50
			F = less than 50

Assessment Particulars

Unlike essay writing, technical writing is defined by a set of standards that is often rendered as document templates. However, faithfully following prescriptions for documents will not automatically result in a high grade in the course, since proper formatting is not the exclusive goal of technical writing. Indeed, document templates will help you organize your ideas by offering a working outline, and these templates also provide for transitions between ideas. Yet, as you will see in the following grading criteria, emphasis is placed on the writer clearly defining the audience and developing the cogent ideas, purpose and presentation of each document. *Additional criteria, parameters, guidelines and due dates will be posted on Moodle when each assignment is introduced and discussed.*

- *A = Superior work in both content and presentation. This is a student who appears, even at an early stage, to be a potential honours student. The work answers all components of a question. It demonstrates clear and persuasive argument, a well-structured text that features solid introductory and concluding arguments, and pertinent examples to illustrate the argument. Few, if any presentation, grammar or spelling errors appear.*
- *B = Better than average in both content and presentation. This student has the potential for honours, though it is less evident than for the A student. Student's work is clear and well structured. Minor components of an answer might be missing, and there may be fewer illustrations for the argument. Some minor but noticeable errors in presentation may have interfered with the general quality of the work.*
- *C = Student demonstrates a satisfactory understanding of the material. Ideas are presented in a style that is at least somewhat coherent and orderly. Occasional examples are provided to support arguments. Presentation errors that affect the quality of the work are more apparent than in B work. Some components of the assignment requirements may have been omitted, underdeveloped or neglected in the response.*
- *D = Student has only a basic grasp of the material. The sense of organization and development is often not demonstrated in the response. Few, if any, examples are provided to illustrate argument. Major components of a question might have been neglected; and major presentation errors hamper the work.*
- *F = Shows an inadequate grasp of the material. Work has major errors of style; and provides no supporting illustration for argument. Ideas are not clear to the reader. Work lacks a sense of structure. The student has either neglected or omitted the major requirements of the assignment, or the student may have not submitted any work at all in a timely fashion.*

OFFICE HOURS (By Appointment Only)

How to make an appointment - To make an appointment to see your professor, send an email indicating your full name, student ID number, the name of the course you are enrolled in, and 3 possible times that you are available to meet. Be sure to include the reason for the proposed

meeting (be as detailed as possible). Your professor will respond to your message promptly if you follow these instructions. Requests that do not follow these instructions will be ignored.

Why make an appointment? - If you have questions that were not addressed during class, please make an appointment to see the instructor outside of class. Your professor will not answer questions that were addressed during lecture or questions whose answers are clearly stated in the course syllabus. If you cannot keep your appointment, please email your cancellation at least 2 hours in advance. Failure to do so will result in a 5% penalty against your final mark.

Correspondence Etiquette - IMPORTANT

Please keep in mind that messages sent to your professor that are unprofessional in tone, diction or content are annoying and don't reflect very well upon the sender. Take the time to properly compose your messages to your professor before you send an email. As well, be sure to include your full name, student number and the course number in all of your messages. If you are unsure about how to write an email to your professor, please read this document by Laura Portwood-Stacer, found at the web link below.

<https://medium.com/@lportwoodstacer/how-to-email-your-professor-without-being-annoying-afcf64ae0e4087>

No Grade-Grubbing - N.B. Office hours are for questions about the course and course material, NOT negotiating your grades.

If you feel there is a legitimate problem with your grade on a test or assignment (e.g., a calculation error, etc.), please write your instructor a formal letter outlining your reasoning, citing the specific areas (be as detailed as possible) that you wish to question. This formal letter should be sent via email **no later than one week** after the assignment grade is posted.

ENCS 282 COURSE Schedule

Week 1

Class 1: Introduction: Defining Technical Communication - Tuesday, Jan. 7

Reading:

Markel, Mike. "What Is Technical Communication?" in *Technical Communication*, 11th ed. Boston, MA: Bedford/St. Martin's Press, 2015, 3-15.

Week 2

Class 2: Ideas about Audience/Technical Definitions - Tuesday, Jan. 14

Reading:

Finkelstein, Leo. "Technical Definitions" in *Pocket Book of Technical Writing*. Boston: McGraw-Hill, 2000, 11-23.

Week 3

Class 3: Science Communication - Tuesday, Jan. 21

Reading:

Irwin, Alan. "Moving Forward or in Circles? Science Communication and Governance in an Age of Innovation" in *Investigating Science Communication in the Information Age*. Oxford: OUP, 2008.

Week 4

Class 4: Engineers and Engineering in the Future - Tuesday, Jan. 28

Reading:

"Societal, Global, and Professional Contexts of Engineering Practice" in *The Engineer of 2020: Visions of Engineering in the New Century*. Washington, DC: National Academy of Engineering, 2004, 27-46.

Week 5

Class 5: Mechanism Descriptions - Tuesday, Feb. 4

Reading:

Finkelstein, Leo. "Description of a Mechanism" in *Pocket Book of Technical Writing*. Boston: McGraw-Hill, 2000, 25-39.

Week 6

Class 6: Visual Conventions in Technical Documents - Tuesday, Feb. 11

Reading:

Bertoline, Gary R. et al. "Design Visualization" in *Technical Graphics Communication*, 4th ed. Boston: McGraw-Hill, 2003, 135-165.

Week 7

Class 8: In-Class Test - Tuesday, Feb. 18

Reading:

No Readings for this week. Review the course materials for classes 1-6 to prepare for the test.

Midterm Break

Feb. 24-March 1 (No Classes)

Week 8

Class 7: Process Descriptions and Procedures - Tuesday, March 3

Reading:

Lannon & Gurak. "Procedures" in *Technical Communication*, 13th ed., 2014, 480-488.

Week 9

Class 9: Instructions - Tuesday, March 10

Reading:

Markel, Mike. "Writing Instructions" in *Technical Communication*, 11th ed. Boston, MA: Bedford/St. Martin's Press, 2015, 551-567.

Week 10

Class 10: Correspondence and Professional Documents - Tuesday, March 17

Reading:

Markel, Mike. "Writing Memos" in *Technical Communication*. 10th ed. Boston, MA:

Bedford/St. Martin's Press, 2012, 385-390.

Week 11

Class 11: Oral Presentations - Tuesday, March 24

Reading:

Silyn-Roberts, Heather. "A Presentation to a Small Group" in *Writing For Science and Engineering*, 2nd ed. London: Elsevier Ltd., 2013, 251-254.

Week 12

Class 12: Oral Presentations - Tuesday, March 31

Reading:

No Readings for this week. Prepare oral presentations.

Week 13

Class 13: Oral Presentations - Tuesday, April 7. 26

Reading:

No Readings for this week. Prepare oral presentations.