

EAS 360 STEM Communication

Instructor Information

Kris O'Donnell

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Course Meeting Days, Times, and Locations

M-F, 9 am – 12:30 pm

Required Textbook & Other Materials:

- Tebeaux, E. & Dragga, S. (2015). *The Essentials of Technical Communication*. (4th ed.). New York, NY: Oxford University Press. [Copy available at the **Campus Bookstore**]
- Additional texts may be required and will be made available in PDF via UBlerns

Course Description

Prepares students to successfully communicate, across a range of professional genres and media, to technical, professional, and public audiences; to produce communications individually and as part of a team; and to produce communications which are consistent with ethical engineering practice.

Prerequisite: Communication Literacy 1

Course Requirements

The class will meet weekly for 3 ½ hours and class time will be a combination of lecture, individual and small group critiques (either peer or example materials) and presentations. Grading will be based on three types of assignments: short homework assignments and participation; an individual project where students will research and present a recommendation report; and a group project where students will work as a team to produce a written proposal.

Major Genres Covered

written communication	oral communication	procedures manual
career documents	instruction and procedure manual	web page, email
proposal	graphs and charts	technical reports
collaborative writing	graphic design of slides	presentation delivery

Requirements	Quantity	Topic Addressed	Date
Homework Assignments (HW)	4	1. Response to ethics case study 2. Revision of set of instructions 3. Redrafting of data presentation and non-verbal texts (diagrams, graphs, charts, equations, figures, etc.) 4. Career documents a. Resume b. Cover letter	Due each week
Tests (T)	2	1. Mid-term test 2. Final test	1. Week 1 2. Week 2
Individual Project (IP)	3	1. Elevator pitch 2. Recommendation report 3. Poster layout	1. Week 1 2. Week 3 3. Week 2
Team Project (TP)	2	1. Oral presentation 2. Written proposal	1. Week 2 2. Week 2 3. Week 2

Course Learning Outcomes

The following table lists learning outcomes for this course. The statements generally complete the sentence, "Upon completing this course, students will be able to..."

	Course Learning Outcome	Program Outcomes *	UB Gen Ed CL2 Outcomes **	Assessment Methods
1	recognize and produce professional communication in a range of relevant genres, including use of appropriate rhetorical strategies and formal elements.	3	1, 2	HW-4, T-1, IP-1, IP-3, TP-1, TP-2
2	communicate successfully to a variety of audiences including professional (peers, management) and public audiences, using style and tone appropriate for those audiences.	3	1, 2	HW-1, HW-6, T-1, T-2, IP-2, IP-3, TP-1, TP-2

3	use appropriate qualities of professional writing style, including sentence conciseness, readability, clarity, accuracy, honesty, avoidance of wordiness or ambiguity, previewing, using direct order organization, objectivity, unbiased analyzing, summarizing, coherence, and transitional devices	3	2	HW-4, T-1, T-2, IP-3, TP-2
4	present information through live presentations in a logical sequence and with appropriate use of verbal and visual cues so that audience can understand the structure and organization of the talk	3	1,2	IP-2, TP-1
5	organize and adjust content to meet time constraints without rushing, and use eye contact, examples, and directed, animated speech to engage audience	3	1,2	HW-1, HW-2, T-1, HW-3, IP-2, TP-1
6	use non-textual elements (graphs, charts, equations, figures, photos) that are necessary for clarity, are complete, are appropriately labeled, and are referred to and explained appropriately	3	1,2	HW-1, HW-2, T-1, T-2, HW-3, IP-3, TP-1, TP-2
7	recognize and practice professional formatting across all media, including print, html, multi-media, visual aids for oral presentations (posters, slides, etc.)	3	1,2	HW-1, HW-4, T-1, IP-3, TP-1
8	compose individually and in collaboration with peers, and utilize appropriate technologies and practices which support collaborative writing	3,5	2	T-1, TP-1
9	meet criteria for ethical communication in engineering practice including citing information sources and recognizing the contributions of others (including funding sources); providing legitimate interpretation of data; avoiding the use of selective results in order manipulate the reader; and explicitly acknowledging the data, assumptions, and limitations which challenge the stated conclusions	4	2	T-1

10	Locate via literature search and read scientific and technical documents produced by others closely and critically	7	2	T-1
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* The Student Outcomes from the Engineering Accreditation Commission of ABET have been adopted, see <http://www.abet.org/>

** UB General Education course learning outcomes for Communication Literacy 2, as documented within the *General Education Course Development Guidelines*.

1. Compose in academic, professional, and/or workplace genres related to a field of study.
2. Apply writing processes common to that field.
3. Compose and deliver a professional presentation.
4. Describe the conventions of genres within a field.
5. Make effective disciplinary and professional arguments.

Program Outcome Support

0: No Coverage, 1: Introduced, 2: Practiced/Reinforced, 3: Mastered

Program Outcome	1	2	3	4	5	6	7
Support Level	0	0	2	2	2	0	2

Grading Policy

Grades will be based on points accumulated from the course requirements. The course requirements contribute to the final course letter grade as follows:

Course Requirement	Percent of Final Grade
Homework Assignments (4) and class participation	20%
Memos	15%
Individual Project (1)	25%
Tests (2)	20%
Team Project (1)	20%

Percentage	Final Grade
93-100	A
90-92	A-
87-89	B+
83-86	B
80-82	B-
76-79	C+
70-75	C
66-69	C-
62-65	D+
55-61	D
<55	F

In certain cases, students may be eligible to receive a temporary incomplete ('I') grade. Students may only be given an 'I' grade if they have a passing average in coursework that has been completed and establish well-defined parameters to complete course requirements. Prior to the end of the semester, students must initiate the request for an 'I' grade and receive the instructor's approval. Detailed information is available from the Undergraduate Course Catalog, <http://undergrad-catalog.buffalo.edu/policies/grading/explanation.shtml#incomplete>

Expectations of Students

- Students are expected to act in a professional manner. A student's grade may be reduced due to unprofessional or disruptive behavior. Examples include coming to class late, texting (or otherwise using your cell phone) during class, your cell phone ringing during class and/or exams, etc.
- Homework assignments will be graded and returned to students.
- **Late** homework assignments receive **a grade of zero**.

On the border:

- Borderline grades (defined as 59.5-59.9, 69.5-69.9, 79.5-79.9, etc.) will be decided by the student's attendance record and degree of class participation.
- Participation means consistently contributing to discussions and demonstrating that you are engaged in the subject matter.
- Students who attend all classes and consistently participate could receive a bump in their final course grade if they are borderline.

Class Participation and Attendance Policy:

Attendance and class participation account for **10%** of your final grade. You earn full points for a class period **ONLY** by being on time and actively engaged—not by merely being present. You can be in class and earn no participation credit if you don't complete work assigned for that class period, are disengaged, doing work for another class, using electronic devices such as cellphones or computers for non-class related purposes, or are rude or disruptive. This includes not turning in memos, quizzes, etc.

1. Absences

Because this is an intense, two week course, attendance is mandatory. Exceptions will be made for documented illnesses.

2. Lateness

If you arrive more than 5 minutes late to class, you will be marked **late** for class. Each time you are late, one point will be deducted from your final grade.

Assignment Policy:

All assignments should be submitted via UBLearn by the designated due dates unless you are told otherwise. Late submissions will not be accepted and any assignments **sent via email** are **not** taken into consideration. You cannot resubmit any assignments in UBLearn as you are allowed for one-time submission only. So, if you submit a wrong assignment, you will receive a zero for that assignment. Proof of inability to meet a due date might be required on a case by case basis. Technology issues and/or not having the current class plans are not taken into consideration for any late work submissions. All assignments must be submitted in either PDF or Word format ONLY. Failure to do so will result in a reduction in points.

Assignments are posted in three places: within the syllabus, in the weekly schedule in UBLearn and in the assignment section of UBLearn. While I will give reminders in class, it is your responsibility to keep track of due dates for all assignments.

As you are assigned to read a number of pages every day, you need to properly manage your time for reading assignments. Though I may periodically send out announcements and reminders to complete course activities through UBLearn, reading assignments will not be announced regularly. So, it is your responsibility to complete the reading assignments posted in UBLearn for each class.

UBLearn and Email Policy:

Assignments, schedules, course information, reading assignments and other announcements will be posted in UBLearn. To remain up-to-date, you **MUST** check both your email and UBLearn accounts regularly.

Please allow me at least 24 hours to respond to your emails. Emails sent after 6 pm on Friday will be answered the following Monday. As you compose your email, do not forget to use a clear subject line such as: **EAS 360 [purpose of writing]**. You may not get a response to your email if the purpose is not clearly stated. Before sending any emails related to our class and course, please first carefully check your syllabus and course information in UBLearn where you may find your answers. Doing so will save your time and my time.

Technology Use Policy:

Regarding electronic devices (such as laptops, cellphones, etc.), please be respectful of your peers and your instructor and do not engage in activities that are unrelated to class. These include email, instant messaging, surfing the web, using social media, reading the news or playing games. Such disruptions show a lack of professionalism and may affect your participation grade. If you are supposed to receive any emergency call, please let me know in advance or quietly leave class to receive your call.

Academic Integrity

This course will operate with a zero-tolerance policy regarding cheating and other forms of academic dishonesty. Any act of academic dishonesty will subject the student to penalty, including the high probability of failure of the course (i.e., assignment of a grade of 'F'). It is expected that you will behave in an honorable and respectful way as you learn and share ideas. Therefore, *recycled papers, work submitted to other courses, and major assistance in preparation of assignments without identifying and acknowledging such assistance* are not acceptable. All work for this course must be original for this course. Please be familiar with the University at Buffalo Academic Integrity Policy and Procedure outlined at <http://undergrad-catalog.buffalo.edu/policies/course/integrity.shtml>.

UB Portfolio

As you are completing this course as part of your UB Curriculum requirements, please select an 'artifact' from this course that is representative of your learning and upload it to your UBPortfolio account. Templates have been created for this purpose. Artifacts include homework assignments, exams, research papers, projects, lab reports, presentations, and other course materials. Your final UB Curriculum requirement, UBC 399: UB Curriculum Capstone, will require you to submit these 'artifacts' as you process and reflect on your achievement and growth through the UB Curriculum. For more information, see the UB Curriculum Capstone website: <https://www.buffalo.edu/ubcurriculum/capstone.html>.

Helpful Resources

UB Library

Need help with research? Not finding the information you need? Don't hesitate to speak to a librarian. There is an "ask a librarian" feature on the library website (library.buffalo.edu), or you can contact either of the following librarians to help you:

Erin Rowley, Engineering Librarian, 119 Lockwood Memorial Library, Phone: 645-1369, Email: epautler@buffalo.edu

Jill Hackenberg, Computer Science Librarian, 117 Lockwood Memorial Library, Phone: 645-1339, Email: jmh7@buffalo.edu

Free Software

UB offers software for students for free. Use the link below to get Microsoft Office, MATLAB, and others.

<http://www.buffalo.edu/ubit/service-guides/software.html>

DAILY SCHEDULE AND DUE DATES

**I reserve the right to make changes and adjustments to the syllabus and course calendar as course needs arise. All changes will be announced in class and through UBLearns.*

MONDAY 7/8 (WEEK 1)

Course Introduction and policy statement

- Introduction to STEM communication
- White paper (recommendation report) introduction

Effective STEM communication – characteristics

- Read **Chapter 1** *Essentials of Technical Communication* (hereafter, ETC)
- Small group activities

Know your audience

- Read **Chapter 2** – ETC
- Audience analysis in-class activity - compare and contrast documents

TUESDAY 7/9 (WEEK 1)

Writing/speaking/thinking ethically

- Read **Chapter 3** (ETC)

Good design matters

- Read **Chapter 5** (ETC)
- Healthy Foods team document design

Workplace documents – reports, emails, letters, memos

- Read informal reports – Gerson PDF in UBLearns
- Read **Chapter 7** (ETC)
- Chapter 7 quiz in class

WEDNESDAY 7/10 (WEEK 1)

Career Documents

- Read **Chapter 12** (ETC)
- Chapter 12 quiz in class
- Resume sample and cover letter format/organization

Mock interviews

Elevator pitch

- Preparing script for elevator pitch

DUE TODAY: Ethical issue homework DUE Wednesday 7/10 via UBLearn

THURSDAY 7/11 (WEEK 1)

Resume and cover letter due for peer review

Present elevator pitch in class

Social media, wikis, blogs and web pages

- Read “Blogs, Wikis and Webpages,” by Gurak and Lannon (PDF in UBLearn)
- Small group activities: composing tweets

DUE TODAY: Revised memo assignment DUE Thursday 7/11 via UBLearn

DUE TODAY: Elevator pitch script DUE Thursday 7/11 via UBLearn

FRIDAY 7/12 (WEEK 1)

Research methods in STEM

- Finding and evaluating research sources
- In class exercises

What is an abstract?

- Abstract in-class activity

Instructions, Procedures and Policies

- Read **Chapter 10** ETC
- Chapter 10 quiz
- Instructions in-class activity

DUE TODAY: Resume and cover letter homework DUE 7/12 via UBlearns

DUE TODAY: Trip report memo DUE 7/12 via UBlearns

MONDAY 7/15 (WEEK 2)

Midterm Test

Oral reports

- Read **Chapter 11** (ETC)

Poster design

- Poster in class activity

Data visualization/design – diagrams, equations, figures, tables. Etc.

- Read **Chapter 6** ETC
- Chapter 6 quiz in class

DUE TODAY: Revised set of instructions homework DUE 7/15 via UBlearns

TUESDAY 7/16 (WEEK 2)

Poster presentations in class

Collaborative writing

- Read collaborative writing PDF by Markel
- In-class group activities

Writing proposals

- Read **CHAPTER 9** (ETC)
- Small group activities: proposal writing

DUE TODAY: Data visualization homework DUE 7/16 via UBLearn

WEDNESDAY 7/17 (WEEK 2)

In-class proposal presentations

Designing effective presentations

- PP in-class activity

THURSDAY 7/18 (WEEK 2)

Writing for audiences across cultures

- Read Markel PDF in UBLearn.

Work on proposals in class

FRIDAY 7/19 (WEEK 2)

Final Test

Proposal Presentations

DUE TODAY: Proposal, Oral presentation PowerPoint due 7/19 via UBLearn.

DUE TODAY: Progress report memo 7/19 via UBLearn

POST TRIP*****

Rough draft of recommendation report **DUE July 27 via UBLearn**

Final report **DUE August 3rd via UBLearn**