Professional Engineering Communication

CE 550-001/601 | Spring 2025 | 3 credits

001—Blended course: In-Person on Tuesdays 3:00—4:15pm in EB3 2220 & Online on Thursdays

601—Engineering Online section: Online asynchronous

Course Information

Course Description

Communicating effectively is central to the success of any engineering project and to advance in your engineering career. In this course you will learn principles of writing clearly and effectively for the wide range of communication activities professional engineers must do for a range of audiences. Topics covered include writing reports, writing proposals, delivering presentations, planning and revising writing, providing feedback, and more.

Note: This course is not intended to provide intensive language study for non-native speakers of English. Students interested in that are advised to speak to their DGP about WLEN 402.

Instructor Information

Professor: Dr. Meagan Kittle Autry (Dr. KA), Associate Teaching Professor & Director of Professional Development; Department of Civil, Construction, & Environmental Engineering, N.C. State University
Email: makittle@ncsu.edu
Office: Fitts-Woolard Hall 3225
Office hours: Mondays 2-3pm in-person; by appointment via Zoom during lunch or in evenings as needed for EOL students
TA information: Mr. Khawar Khan (kkhan3@ncsu.edu)
TA office hours: Tuesdays from 2-3pm in FWH 3237 or on Zoom (link in Moodle)
We aim to respond to your emails within 36 hours of receiving them (on business days), provided you follow professional email etiquette.

Learning Materials

No textbook is required for this course. All course readings, videos, activities, and assignments will be available through our course Moodle site. Please check the Moodle site and your NC State email regularly to stay up to date on the course.

Technology Requirements

Students must have reliable internet access, be familiar with Moodle, Zoom, and Panopto for video viewing, online office hours, and recording a presentation. EOL students are encouraged to review the minimum technology specifications recommended by Engineering Online.

Course Prerequisite

Graduate standing or permission of instructor.

Student Learning Outcomes

This course is designed to help you communicate effectively as an engineer. Our learning outcomes are:

1. Students will be able to produce engineering reports that clearly and concisely communicate results of engineering analyses to the intended audience(s) and achieve the intended goals of the project.
2. Students will be able to identify requests for proposals appropriate for their engineering work and write proposals that persuasively communicate project goals, team qualifications, and appropriate engineering techniques and analyses.
3. Students will be able to identify and implement appropriate visual design techniques for displaying results of engineering analyses.
4. Students will be able to lead teams through the process of producing professional engineering reports, including implementing tools and workflows appropriate to project goals.
5. Students will be able to design and deliver engineering presentations for technical and non-technical audiences.
6. Students will be able to analyze samples of professional engineering documents, critique their effectiveness, and revise to improve the documents.
7. Students will be able to adapt complex technical information and effectively design communication to inform diverse audiences.

Course Policies

Attendance Policy

Because 550-001 is a blended course, students are expected to attend the in-person sessions as they are designed to make the most out of our opportunity to be together. Student are permitted one (1) unexcused absence. Absences beyond the 1 unexcused will result in a 5% penalty per absence on your overall homework grade at the end of the course. Absences due to illness or representing the university will be considered excused if you notify us in advance.

AI Use Policy

In this course, you will learn effective writing principles, and how and when to use them. You will gain confidence as a writer through practice and feedback. You will also likely use several generative AI programs in your profession. In this course, **we expect the final products to be written by you**; using a generative AI program for brainstorming is permitted so long as the writing—the central learning goal of this course—is your own effort.

Grading Policies

All three major unit projects must be submitted to pass the course. This includes an in-person presentation for the on-campus section during our scheduled exam session. EOL students will submit a recording of a presentation. Final grades will be calculated using the following scale:

A+ = 97-100	B+ = 87-89.99	C+ = 77-79.99	D+ = 67-69.99	F = <59
A = 93-96.99	B = 83-86.99	C = 73-76.99	D = 63-66.99	
A- = 90-92.99	B- = 80-82.99	C- = 70-72.99	D- = 60-62.99	

Deadline/Late Work Policy

Homework assignments are due on Tuesdays by 3pm and major unit projects by the dates listed in the syllabus to the appropriate assignment dropbox in Moodle. Late homework and unit projects are penalized 10% per day late and are not accepted after the 5th late day. Exceptions will be permitted for illness; contact us as soon as possible to discuss if you need an extension due to illness.

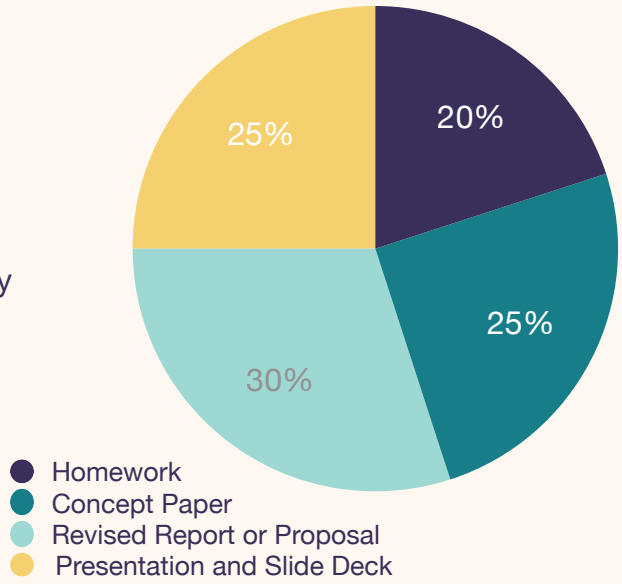
Course Projects and Grading

CE 550 includes the following graded components:

- ✓ Homework Assignments
- ✓ Unit 1 Project: Concept Paper
- ✓ Unit 2 Project: Revised Report or Proposal
- ✓ Unit 3 Project: Presentation and Slide Deck

Note: There are no exams for this course. All projects may (and should!) be completed with the help of learning materials and notes; however, all work should be completed individually and without unauthorized aid.

There is one opportunity for extra credit toward your total Homework Assignment grade. You will be notified in class and via email about the extra credit opportunity.



Course Schedule

Unit 0: Course Introduction
Tuesday, January 7, 2024

Unit 1: Principles of Effective Writing
Thursday, January 9—Tuesday, February 18

Unit 1 Major Project: Concept Paper due Tuesday, February 18 at 11:59pm

Unit 2: Key Engineering Documents
Thursday, February 20—Thursday, March 27

Unit 2 Major Project: Revised Report or Proposal due Thursday, March 27 at 11:59pm

Unit 3: Engineering Presentations
Tuesday, April 1—Tuesday, April 22

Unit 3 Major Project: Engineering Presentation & Slide Deck due Tuesday, April 22 & Thursday, April 24

- In-person students present during final class meeting 4/22 & exam session 4/24 (3:30-6pm)
- EOL students: Upload recording & slides to dropbox by 4/24 at 6pm

Dates subject to change. All dates listed in Moodle are considered official and students will be given sufficient notice in the event of a change.

Other Important Syllabus Information

Academic Integrity
We will uphold the highest standards of academic integrity in this course. Please be familiar with the NC State Student Code of Conduct and the consequences for violating academic integrity: http://policies.ncsu.edu/policy/pol-11-35-01.

Accommodations for Disabilities
Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, students must register with the Disability Resource Office at Holmes Hall, Suite 304, Campus Box 7509, 919-515-7653. For more information on NC State's policy on working with students with disabilities, please see the Academic Accommodations for Students with Disabilities Regulation (REG02.20.01).

Classroom Recordings
In-person class sessions may be recorded for EOL students; the instructor will notify students at the beginning of a class session if it will be recorded. Students are not permitted to record any part of a class session unless they have a written accommodation to do so.

Class Eval
NC State's online class evaluations will be available for students to complete during the last two weeks of class. All evaluations are confidential. I will not know who provided what feedback, nor will I receive any of the feedback until well after final grades are submitted. Your time and effort in completing course evaluations is valued and appreciated.

NC State University Policies, Regulations, and Rules
Students are responsible for reviewing the PRRs which pertain to their course rights and responsibilities. These include: http://policies.ncsu.edu/policy/pol-04-25-05 (Equal Opportunity and Non-Discrimination Policy Statement), http://oied.ncsu.edu/oied/policies.php (Office for Institutional Equity and Diversity), http:// policies.ncsu.edu/policy/pol-11- 35-01 (Code of Student Conduct), and http://policies.ncsu.edu/ regulation/reg-02-50-03 (Grades and Grade Point Average).

Incomplete Grades
Incomplete grades will be given only under extenuating circumstances, in accordance with NCSU policy as described at the website below. If an extended deadline is not authorized by the instructor or department, an unfinished incomplete grade will automatically change to an F after either (a) the end of the next regular semester in which the student is enrolled (not including summer sessions), or (b) by the end of 12 months if the student is not enrolled, whichever is shorter. Incompletes that change to F will count as an attempted course on transcripts. The burden of fulfilling an incomplete grade is the responsibility of the student. For more details refer to: http://policies.ncsu.edu/regulation/reg02-50-03.

Our Contract Together
This syllabus is our contract. By reading it and opting to remain in the class, you are agreeing to the contents therein and are bound to the requirements set for the course. I too am obligated to this contract and will work hard to create a course that helps to improve your skills in engineering communication.

Here's to a great term together!