

Professional Engineering Communication

CE 550-651 | Summer 2024 | Online | 3 credits

Course Information

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 enrolling in FLE 402.

Instructional Team Information

Professor: Dr. Meagan Kittle Autry (Dr. KA), Associate Teaching Professor, CCEE

Email: makittle@ncsu.edu | Office hours: By appointment via Zoom; evening hours also available upon request (link in Moodle)

TA: Mr. Khawar Khan, Ph.D. candidate, Communication, Rhetoric, & Digital Media

Email: kkhan3@ncsu.edu | Office hours: Wednesdays 3-4pm EDT via Zoom (link in Moodle)

Learning Materials

No textbook purchase 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 regularly to stay up to date on the course.

Technology Requirements

We run our course fully through Moodle at wolfware.ncsu.edu. Always check there first! Students must have reliable internet access and download Zoom for online office hours and recording a video presentation. Students should also review the minimum technology recommended by EOL.

Course Prerequisite

Graduate standing or permission of instructor.

Online Discussion Etiquette

Please use kind, courteous language in your discussion posts. Be sure your posts contribute new ideas to the discussion; “I agree” or “Me too” does not add depth to our learning. Practice disagreeing or correcting each other in a professional, supportive way. Be sure to stay on topic! Students may be required to disclose personally identifiable information to other students in the course, via tools in Moodle. All students are expected to respect the privacy of each other by not sharing or using such information outside the course.

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.



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 AI programs in your profession. In this course, **we expect the final products to be written by you**; using an AI text generator program like ChatGPT for brainstorming is permitted so long as the writing—the central learning goal of this course—is your own effort.

Grading Policies

All major unit projects must be submitted to pass the course. Final grades will be calculated using the following scale:

Please let us know right away if you believe we have miscalculated a grade. We welcome questions if you believe an error has been made, but queries about rounding up grades are not appropriate.

A+ = 97-100	B+ = 87-89.99	C+ = 77-79.99	D+ = 67-69.99	F = <59.99
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	

Attendance Policy

Because this course is online, there is no formal attendance policy. However, we recommend you “check in” to the Moodle site to work on class readings and assignments throughout the week, rather than trying to accomplish everything in one block on a single day. This way, if questions arise, there is time to address them prior to the work being due.

Deadline/Late Work Policy

All deadlines for homework & projects are clearly stated in Moodle. Homework assignments or projects are due on Sunday nights by 11:59pm before a new module begins on Monday. 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.

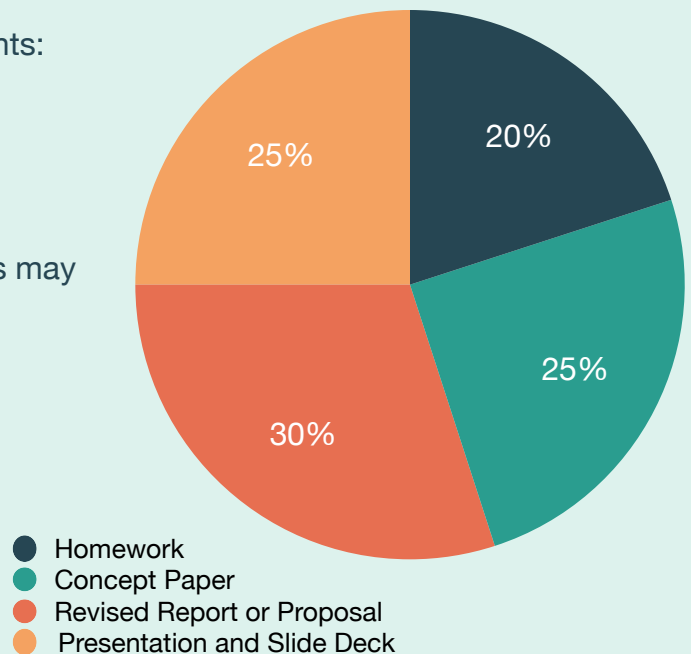
Course Projects and Grading

CE 550-651 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.

You will have one opportunity for extra credit toward your total Homework Assignment grade. See our course Moodle site for more information.



Course Schedule

Weekly modules begin on Mondays and end on Sunday nights, with the exception of Module 0. All work in a module should be completed by the Sunday at 11:59pm of that module.

Unit 0: Course Introduction

Module 0: May 15-May 19

Unit 1: Principles of Effective Writing

Module 1: May 20-May 26: The Writing Process

Module 2: May 27-June 2: Writing Clearly

Module 3: June 3-June 9: Visuals and Document Design

Module 4: June 10-June 16: Revising and Editing

June 16 at 11:59pm: Unit 1 Project - Concept Paper due

Unit 2: Key Engineering Documents

Module 5: June 17-23: Persuasive Communication & Writing Reports

Module 6: June 24-June 30: Writing Proposals

Module 7: July 1-July 7: Feedback & Workplace Communication

Module 8: July 8-July 14: AI Text Generators

July 14 at 11:59pm: Unit 2 Project - Revised Report or Proposal with Reflection due

Unit 3: Delivering Presentations

Module 9: July 15-21: Presentation Design

Module 10: July 22-July 28: Presentation Delivery

July 28 at 11:59pm: Unit 3 Project - Presentation and Slide Deck due

Note: Dates listed here are tentative; the schedule on Moodle is considered official.

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).

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).

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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. We too are 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 summer
term together!