ENGINEERING COMMUNICATIONS (ENGRC)

ENGRC 3023 - Communication Intensive Opportunity: Practicum in Technical Writing (1 Credit)
One-credit attachment to an existing engineering course that is not one of the officially designated W-I courses. It may be taken more than once, with different courses by permission of a particular engineering faculty member.
Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023
Schedule of Classes (https://classes.cornell.edu/)

ENGRC 3025 - Creating and Communicating Your Digital Professionalism (1 Credit)
Senior-level course focuses on creating and communicating an online professional identity. The key learning outcome is to enable students to develop digital professionalism, defined as a multimodal communicative competence honed through the practice of creating, critiquing, and reflecting upon digital artifacts they use to build and present their professional and public identities. The course will focus students' attention on multiliteracies (functional, critical, and rhetorical) and multimodal communication."
Prerequisites: completed internship, professional experience, or significant undergraduate research; familiarity with HTML, CSS, and/or website development.
Enrollment Information: Enrollment limited to: juniors and seniors.
Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023
Schedule of Classes (https://classes.cornell.edu/)

ENGRC 3026 - Engineering Presentations and Expert Presence (1 Credit)
As a technical contributor or expert, engineers are called on frequently to give presentations (proposals, technical updates, progress reporting, client pitches, engineering advancements/information, and more). However, many presenters have not had specific training about planning, preparing, honing, executing, documenting, and archiving their presentation work; this course addresses those skills. As well, issues of cross-cultural communication, institutional need, audience assessment, and personal presence will be covered. Students should expect to align their work and presentations in this class with a major project in their field. Students will give both individual and team talks.
Prerequisites: two First-Year Writing Seminars and major affiliation.
Enrollment Information: Enrollment limited to: EN and BEE juniors and seniors or permission of instructor.
Last Four Terms Offered: Spring 2025, Fall 2024, Fall 2023
Learning Outcomes:

- Oral Communication/Presentations: Plan, devise, formulate, design, and report information via professional presentations for various technical and stakeholder needs.
- Written Communication: Identify, research, negotiate, and compose various texts to further a technical or engineering effort with consideration to context and audience; use writing and planning skills to support presentation work both for the talk itself and as archival legacy documentation.
- Visual and Multimodal Communication: Visualize, illustrate, and appropriately caption visuals; discriminate between methodologies for creating visuals other multimodal artifacts to support the technical endeavor; create visuals and multimodal artifacts that are accessible.

Schedule of Classes (https://classes.cornell.edu/)

ENGRC 3027 - Cross-cultural Communications and Ethics in the Workplace (1 Credit)
Engineering industries increasingly demand individual contributors and teams that can communicate and collaborate with professionals across diverse cultures. The purpose of this course is to increase students' cultural awareness and sensitivity and develop intercultural competence while engaging positively in technical work. Course topics will focus on engineering communication and practices of human-centered design, thereby exposing cultural dimensions and ethical consequences of human-engineered artifacts. Through various kinds of genre writing practice and a major teamwork project, students are expected to improve written, oral, visual and interpersonal communication skills as well.
Enrollment Information: Enrollment limited to: EN and BEE juniors and seniors or permission of instructor.
Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023
Learning Outcomes:

- Demonstrate cultural awareness and sensitivity, adapt themselves to audiences from other cultures in both written, visual, and oral communication.
- Demonstrate ethical awareness in technology design/development and create accessible communication artifacts.
- Effectively collaborate with teammates and professionally communicate with clients; increase presentation skills, including creating effective slides and professionally presenting information to clients.
- Effectively compose various kinds of workplace documents to further a technical or engineering effort with consideration to context and audience, especially different cultural contexts and audiences from other cultures.
- Visualize, illustrate, and appropriately caption visuals; create accessible multimodal artifacts to support the technical endeavor.
- Design and conduct engineering and cross-cultural communication research for professional goals; access library databases and use sources accurately.

Schedule of Classes (https://classes.cornell.edu/)

ENGRC 3111 - Communications for Junior Lab I (1 Credit)
This course prepares students for important science/engineering communication activities, e.g., introduction to Science/Engineering Communication, Visuals, Captions, Poster.
Corequisites: MSE 3110.
Last Four Terms Offered: Fall 2022, Fall 2021, Fall 2020
Schedule of Classes (https://classes.cornell.edu/)

ENGRC 3120 - Communications for Practical Tools for Operations Research, Machine Learning and Data Science (1 Credit)
This course prepares students for important ORIE engineering communication activities, e.g., introduction to engineering communication, presentations (proposal, progress, final), visuals and captions, technical reports, and teamwork.
Corequisites: ORIE 3120.
Enrollment Information: Enrollment limited to: ORIE and INFO Undergraduates during pre-enroll.
Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022
Learning Outcomes:

- Written Communication: Identify, research, negotiate, and compose various texts to further a technical or engineering effort with consideration to context and audience.
- Oral Communication/Presentations: Plan, devise, formulate, design, and report information via professional presentations for various technical and stakeholder needs.
- Visual & Multimodal Communication: Visualize, illustrate, and appropriately caption visuals; discriminate between methodologies for creating visuals other multimodal artifacts to support the technical endeavor; create visuals and multimodal artifacts that are accessible.
- Teamwork: Connect, appraise teammates' contributions, and collaborate in teams; identify, negotiate, assign roles for completing, draft, and finalize communication pieces.

Schedule of Classes (https://classes.cornell.edu/)

ENGRC 3152 - Communication for Game Development (1 Credit)
As students develop desktop video games in large teams, they will concurrently be writing documentation to a variety of audiences for a myriad of technical, business, and design needs. Together, students in their teams will write entry-level workflow documents, specifications, planning, marketing, and project management pieces that have the specific task of always moving the team's work forward. The communication tasks are not extras; rather, they are integral to the game dev process. Iterations and deep revising will be part of this process, with inputs from both the CS instructor and the communication instructor.
Corequisites: CS 3152, INFO 3152.
Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022
Schedule of Classes (https://classes.cornell.edu/)

ENGRC 3340 - Independent Study in Engineering Communications (1-3 Credits)
Members of the ECP occasionally give independent (also called directed) studies in engineering communications, typically with students who are ready for advanced work in technical communication. A student doing a directed study works one-on-one with an ECP instructor to pursue an aspect of professional communications in more depth than is possible in the ECP's regular courses. Various types of projects are possible, e.g., studying forms of technical documentation, creating user manuals, analyzing and producing technical visuals, reading and writing about problems in engineering performance, and communicating about technical topics for the public.
Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023
Schedule of Classes (https://classes.cornell.edu/)

ENGRC 3341 - Guided Fieldwork for Engineering Communications (1 Credit)
Provides individual students opportunity to pursue guided fieldwork in their major, and includes significant engineering communication opportunities. Success in the course relies on commitment from both the student and their College of Engineering mentoring faculty selected from within their major. This course requires students to go above and beyond regular coursework expectations and can take the form of undergraduate research, independent study, an honors project, or even an outreach activity.
Prerequisites: two (2) First-Year Writing Seminars and major affiliation.
Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023
Learning Outcomes:

- Oral Communication/Presentations: plan, devise, formulate, design, and report information via professional presentations for various technical and stakeholder needs.
- Written Communication: identify, research, negotiate, and compose various texts to further a technical or engineering effort with consideration to context and audience; use writing and planning skills to support presentation work both for the talk itself and as archival legacy documentation.
- Visual and Multimodal Communication: visualize, illustrate, and appropriately caption visuals; discriminate between methodologies for creating visuals other multimodal artifacts to support the technical endeavor; create visuals and multimodal artifacts that are accessible. Examples may include conference-style posters, informative videos, or other.

Schedule of Classes (https://classes.cornell.edu/)

ENGRC 3350 - Organizational Communications for Engineers (3 Credits)
Like ENGRC 3500 in that students write various types of documents (e.g., letters, memos, executive summaries, progress reports), give talks, and incorporate graphics in both their oral and written work. However, ENGRC 3350 focuses on understanding communication within engineering organizations and within student teams. Students work in project teams throughout the semester to write reports and deliver talks. The focus of the project teams depends on instructor, but might include analyzing case studies of engineering organizations, studying organizations on-site, and analyzing concepts in organizational communication and behavior.
Prerequisites: two First-Year Writing Seminars and major affiliation.
Enrollment Information: Enrollment limited to: EN and BEE juniors and seniors, or permission of instructor.
Distribution Requirements: (CE-EN)
Exploratory Studies: (CU-CEL)

Last Four Terms Offered: Spring 2025, Spring 2024, Fall 2023, Spring 2023
Schedule of Classes (https://classes.cornell.edu/)

ENGRC 3500 - Engineering Communications (3 Credits)
Prepares students for important communication activities. Students will communicate using various types of written communication which may include emails, memos, problem analyses, proposals, progress reports, or other genres. Students will give oral presentations and incorporate graphics in their oral and written work. Students learn how to communicate specialized information to different audiences (e.g., technical and nontechnical audiences, colleagues and clients, peers and supervisors, and in-house departments), work in teams, and address organizational and ethical issues including using GenAI, racism, equity, inclusiveness, and accessibility. The course material is drawn from professional contexts, principally engineering, and it generates lively discussion.
Prerequisites: two (2) First-Year Writing Seminars and major affiliation.
Enrollment Information: Enrollment limited to: EN and BEE juniors and seniors, or permission of instructor.
Distribution Requirements: (CE-EN)
Last Four Terms Offered: Summer 2025, Spring 2025, Fall 2024, Summer 2024
Schedule of Classes (https://classes.cornell.edu/)

ENGRC 3610 - Communication for Transportation Engineering (1 Credit)
This engineering communications course is linked with CEE 3610. This course prepares students for important engineering communication activities including presentations, visuals and captions, technical reports, white papers, public communication, feedback to colleagues, and teamwork.
Corequisites: CEE 3610.
Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022
Schedule of Classes (https://classes.cornell.edu/)

ENGRC 3640 - Technical Communication for Applied Engineering Physics (1 Credit)
This course is partnered with AEP 3640; students must enroll in both courses. This course will fulfill the Engineering Communication Requirement when taken with AEP 3640 successfully. Students will focus on fundamentals, theory, and practice of computer-aided control of equipment and data acquisition in an applied physics laboratory. Students will also be introduced to the ways in which that work is communicated in lab notebooks; methods for communicating with team members using project management strategies and channels; and genre-focused structures for reaching other experts in the field using both primary and secondary materials, data, visualizations, and sources. Students will engage in the practice of scientific and engineering research and development, along with the articulation of that work. Students will develop effective writing and communication skills both as a tool for practicing engineering design and for the recording, assessing, analyzing, and sharing of knowledge through lab notebooks, team communication structures, drafting, revisioning, and editing. There is a final formal scientific article written by the students in teams based on the content and lab work from AEP 3640.
Corequisites: AEP 3640.
Last Four Terms Offered: Fall 2022, Fall 2021, Fall 2020, Fall 2019
Schedule of Classes (https://classes.cornell.edu/)

ENGRC 3700 - Communications Consulting for Engineers (3 Credits)
Upon successful completion of this course, students will be well prepared to assist instructors as teaching assistants or other similar position. Enrolled students will support an Engineering Communications Program faculty member in creating course learning materials and holding regular meetings with student teams to consult on their communication work. Students will engage in reading concepts, theories, and pedagogical pieces and applying them to their projects. As well, students will hone their abilities to consult with teams as well as methodologies for tutoring in the university space. Students who took ORIE 3120 are eligible to take this course to become ENGRC 3120 consultants.
Enrollment Information: TA experience or desire to become a TA recommended.
Distribution Requirements: (CE-EN)
Last Four Terms Offered: Fall 2024, Fall 2022
Learning Outcomes:

- Students will learn Engineering communications concepts, theories, and pedagogy.
- Students will learn consulting practices, including team consultations.
- Students will learn specialist and generalist tutoring approaches.

Schedule of Classes (https://classes.cornell.edu/)

ENGRC 4152 - Communication for Advanced Game Development (1 Credit)
As students develop mobile video games in large teams, they will concurrently be writing documentation to a variety of audiences for a myriad of technical, business, and design needs. Together, students in their teams will write workflow documents, specifications, planning, marketing, video scripting, and project management pieces that have the specific task of always moving the team's work forward. The communication tasks are not extras; rather, they are integral to the game dev process. Iterations and deep revising will be part of this process, with inputs from both the CS instructor and the communication instructor. As well, students will hone their skills for team stand-up presentations.
Corequisites: CS 4152 or INFO 4152.
Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022
Schedule of Classes (https://classes.cornell.edu/)

ENGRC 4590 - Communications for Physical Design in Biological Engineering (1 Credit)
This course prepares students for important biological engineering communication activities, e.g., introduction to science/biological engineering communication, laboratory notebooks, presentations (proposal, progress final), visuals and captions, technical report and teamwork.
Corequisites: BEE 4590.
Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2021
Schedule of Classes (https://classes.cornell.edu/)

ENGRC 5026 - Advanced Presentation Skills (1 Credit)
Schedule of Classes (https://classes.cornell.edu/)

ENGRC 5340 - Independent Study (1 Credit)
The independent study offering is a very limited offering for graduate students in a College of Engineering Master's program who propose a deep-dive, specific project that focuses on a narrowly defined communication topic (engineering, technical, science, or business/management adjacent). Students may request consideration for an Ind Study if they have an issue, research avenue, or sharply defined topic to explore that is not already settled within their fields. Students will work with faculty who have agreed in advance on the topic, the need, and the unique value-add that such a project would bring. Students, within their particular Master's program, will have to get approvals of this coursework to count towards their graduate degree; it is not the responsibility of the Engineering Communication Program to secure these approvals. Projects must be completed within the semester offered.
Enrollment Information: Enrollment limited to: early admit status in a Master's Program in the College of Engineering.
Last Four Terms Offered: Spring 2022
Learning Outcomes:

- Identify, research, negotiate, and compose differing forms of communication to further a technical or engineering effort within its diverse and organizational context.
- Plan, devise, formulate, design, and report information via professional presentations or short talks for a variety of diverse technical and stakeholder needs.
- Visualize, illustrate, and appropriately caption visuals; discriminate between methodologies for creating visuals other multimodal artifacts to support the technical endeavor; create visuals and multimodal artifacts that are accessible.
- Identify, research, negotiate, and produce communication artifacts that recognize and are respectful of diverse expertise and experiences pertaining to that may include perspectives grounded in training, gender, race, disability, and preconceived notions of professionalism.
- Perform, collect, analyze, evaluate, and integrate deep-dive research that includes database searches, primary sources, and original (primary) research.

Schedule of Classes (https://classes.cornell.edu/)