

ENGINEERING GENERAL INTEREST (ENGRG)

ENGRG 1002 - AEW Collaborative Workshop: ENGRD 2020 (1 Credit)

Peer-facilitated group sessions focused on problems at or above the level of course material, designed to enhance understanding of core concepts in ENGRD 2020/MAE 2020.

Corequisites: ENGRD 2020 or MAE 2020.

Enrollment Information: Enrollment limited to: undergraduates.

Last Four Terms Offered: Fall 2024

Learning Outcomes:

- Deepen understanding of material and process in learning communities where students are a subset of a larger core engineering course.
- Enhance student understanding beyond the level of course instruction, encouraging application of course content to novel and creative problems.
- Improve affective and cognitive learning outcomes for students in core engineering courses.
- Improve students' collaboration skills to accomplish shared learning goals.

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

ENGRG 1009 - AEW Collaborative Workshop: CHEM 2090 (1 Credit)

Academic Excellence Workshop for CHEM 2090. Weekly two-hour collaborative learning sessions. Peer-facilitated group works on problems at or above the level of course material, designed to enhance understanding of core concepts in CHEM 2090.

Corequisites: CHEM 2090.

Enrollment Information: Enrollment limited to: undergraduates.

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

ENGRG 1010 - AEW Collaborative Workshop: CS 1110 (1 Credit)

Academic Excellence Workshop for CS 1110. Weekly two-hour collaborative learning sessions. Peer-facilitated group works on problems at or above the level of course material, designed to enhance understanding of core concepts in CS 1110.

Corequisites: CS 1110.

Enrollment Information: Enrollment limited to: undergraduates.

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

ENGRG 1011 - AEW Collaborative Workshop: CS 2110 (1 Credit)

Academic Excellence Workshop for CS 2110. Weekly two-hour collaborative learning sessions. Peer-facilitated group works on problems at or above the level of course material, designed to enhance understanding of core concepts in CS 2110.

Corequisites: CS 2110.

Enrollment Information: Enrollment limited to: undergraduates.

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

ENGRG 1012 - AEW Collaborative Workshop: CS 1112 (1 Credit)

Academic Excellence Workshop for CS 1112. Weekly two-hour collaborative learning sessions. Peer-facilitated group works on problems at or above the level of course material, designed to enhance understanding of core concepts in CS 1112.

Corequisites: CS 1112.

Enrollment Information: Enrollment limited to: undergraduates.

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

ENGRG 1022 - Jiang Fellows Entrepreneurship Cohort Seminar (1 Credit)

The purpose of the course is to prepare Jiang Fellows for a summer internship at a startup. Course introduces Jiang Fellows to the startup culture, job skills, and methods to evaluate possible internship opportunities. Students will also be introduced to the entrepreneurship ecosystem at Cornell and the various entrepreneurship resources available. Topics to be discussed include: interview skills and expected questions, conducting research on private companies, employee roles and responsibilities at startups, role of a product manager, creating OKRs (Objectives and Key Results), venture financing, and the Business Model Canvas and critically thinking about startups. Will include guest speakers from current startups.

Prerequisites: Prerequisite or corequisite: AEM 2220, AEM 3249, AEM 3380, AEM 4200, ENGRG 2270, ENGRG 4610, NBA 3000 or NBA 5070.

Enrollment Information: Enrollment limited to: Jiang Fellows Program students.

Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022

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

ENGRG 1028 - AEW Collaborative Workshop: CS 2800 (1 Credit)

Academic Excellence Workshop for CS 2800. Weekly two-hour collaborative learning sessions. Peer-facilitated group works on problems at or above the level of course material, designed to enhance understanding of core concepts in CS 2800.

Corequisites: CS 2800.

Enrollment Information: Enrollment limited to: undergraduates.

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

ENGRG 1031 - AEW Collaborative Workshop: CS 3110 (1 Credit)

Academic Excellence Workshop for CS 3110. Weekly two-hour collaborative learning sessions. Peer-facilitated group works on problems at or above the level of course material, designed to enhance understanding of core concepts in CS 3110.

Corequisites: CS 3110.

Enrollment Information: Enrollment limited to: undergraduates.

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

ENGRG 1034 - AEW Collaborative Workshop: CS 3410 (1 Credit)

Academic Excellence Workshop for CS 3410. Weekly two-hour collaborative learning sessions. Peer-facilitated group works on problems at or above the level of course material, designed to enhance understanding of core concepts in CS 3410.

Corequisites: CS 3410.

Enrollment Information: Enrollment limited to: undergraduate students.

Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023

Learning Outcomes:

- Deepen understanding of material and process in learning communities where students are a subset of a larger core engineering or CS course.
- Enhance student understanding beyond the level of course instruction, encouraging application of course content to novel and creative problems.
- Improve affective and cognitive learning outcomes for students in core engineering and CS courses.
- Improve students' collaboration skills to accomplish shared learning goals.

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

ENGRG 1050 - Engineering Seminar (1 Credit)

First-year engineering students meet in groups weekly with their faculty advisors. Discussions may include the engineering curriculum and student programs, what engineers do, the character of engineering careers, active research areas in the college and in engineering in general, and study and examination skills useful for engineering students. Groups may visit campus academic, engineering, and research facilities.

Enrollment Information: Enrollment limited to: first-year students.

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2021

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

ENGRG 1060 - Exploration in Engineering (2-3 Credits)

Introduction to several engineering fields, such as bioengineering, chemical engineering, civil engineering, computer science, earth sciences, electrical and computer engineering, engineering physics, materials science, mechanical engineering, and operations research. Hands-on experience in weekly labs, as well as design projects to introduce concepts of the engineering design process.

Prerequisites: completion of a pre-calculus or calculus mathematics course as well as a course in chemistry or physics are strongly recommended.

Last Four Terms Offered: Summer 2022, Summer 2019, Summer 2018, Summer 2017

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

ENGRG 1070 - Spatial Visualization and Thinking for Engineers (2 Credits)

Mentally visualizing and manipulating three-dimensional objects are critical skills for engineers and scientists, as is the ability to represent three-dimensional objects with two-dimensional formats. In this active-learning style course, students will strengthen spatial reasoning and visualization skills through deliberate training and practice. Students will also gain exposure to CAD design and work as teams to identify and present on the use of visualization techniques in scientific publications.

Enrollment Information: Enrollment limited to: College of Engineering students participating in the Pre-collegiate Summer Scholars Program (PSSP).

Last Four Terms Offered: Summer 2025, Summer 2024, Summer 2023, Summer 2022

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

ENGRG 1091 - AEW Collaborative Workshop: MATH 1910 (1 Credit)

Academic Excellence Workshop for MATH 1910. Weekly two-hour collaborative learning sessions. Peer-facilitated group works on problems at or above the level of course material, designed to enhance understanding of core concepts in MATH 1910.

Corequisites: MATH 1910.

Enrollment Information: Enrollment limited to: undergraduates.

Last Four Terms Offered: Fall 2024, Spring 2024, Fall 2023, Spring 2023

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

ENGRG 1092 - AEW Collaborative Workshop: MATH 1920 (1 Credit)

Academic Excellence Workshop for MATH 1920. Weekly two-hour collaborative learning sessions. Peer-facilitated group works on problems at or above the level of course material, designed to enhance understanding of core concepts in MATH 1920.

Corequisites: MATH 1920.

Enrollment Information: Enrollment limited to: undergraduates.

Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023

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

ENGRG 1093 - AEW Collaborative Workshop: MATH 2930 (1 Credit)

Academic Excellence Workshop for MATH 2930. Weekly two-hour collaborative learning sessions. Peer-facilitated group works on problems at or above the level of course material, designed to enhance understanding of core concepts in MATH 2930.

Corequisites: MATH 2930.

Enrollment Information: Enrollment limited to: undergraduates.

Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023

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

ENGRG 1094 - AEW Collaborative Workshop: MATH 2940 (1 Credit)

Academic Excellence Workshop for MATH 2940. Weekly two-hour collaborative learning sessions. Peer-facilitated group works on problems at or above the level of course material, designed to enhance understanding of core concepts in MATH 2940.

Corequisites: MATH 2940.

Enrollment Information: Enrollment limited to: undergraduates.

Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023

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

ENGRG 1152 - Coaching and Mentoring for Professional and Student Success (2 Credits)

This class will help you engineer your life to get the most out of your undergraduate experience now while building foundational professional skills for the future. Meetings with an assigned engineering alumni mentor-coach will expand your network and give you a window into the non-technical aspects of the practice of engineering. Class sessions provide tools for strategic decision-making about the many opportunities you have at Cornell to develop teamwork, leadership, and related skills. Through COMPASS, you will gain a clear sense of your values, interests, strengths, and areas for development as well as a plan for the remainder of your Cornell experience.

Prerequisites: ENGRG 1050 or permission of instructor.

Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023

Learning Outcomes:

- Identify non-technical skills required of professional engineers and create a 2- to 3-year plan to develop them through curricular and co-curricular activities.
- Apply various decision tools to make intentional choices about which personal and professional activities to commit to.
- Develop professional skills of networking, timeliness, being accountable, and developing positive mentoring relationships.
- Demonstrate effective professional writing and self-presentation skills.

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

ENGRG 1400 - Engineering Project Team Onboarding (1 Credit)

Students who are joining an Engineering Project Team for the first time will be introduced to the program and to information and skills needed for success as a project team member. Topics will include a broad orientation to the Engineering Project Teams, safety, communication, giving and accepting feedback, and expectations for culture and behavior. The course is a prerequisite for ENGRG 3400 and intended for and required of all new project team members.

Exploratory Studies: (CU-UG)

Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023

Learning Outcomes:

- Students will demonstrate an understanding of the project team program, guidelines and policies, expectations, and requirements.
- Students will be able to complete project team work safely and will be able to identify what creates a safe versus unsafe working environment.
- Students will learn skills to effectively work in teams, and how to identify their own strengths and those of their teammates.

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

ENGRG 2270 - Introduction to Entrepreneurship for Engineers (3 Credits)

Crosslisted with MAE 2270

This course is intended for first-year students. A solid introduction to the entrepreneurial process to students in engineering. The main objective is to identify and to begin to develop skills in the engineering work that occurs in high-growth, high-tech ventures. Basic engineering management issues, including the entrepreneurial perspective, opportunity recognition and evaluation, and gathering and managing resources are covered. The fundamentals of supply and demand and other basic microeconomic terms are covered. Technical topics such as the engineering design process, product realization, and technology forecasting are discussed.

Last Four Terms Offered: Fall 2023, Fall 2022, Fall 2021, Fall 2020

Learning Outcomes:

- Students will be able to explore a multi-disciplinary look at high-technology entrepreneurial businesses.
- Students will define terms and be familiar with the general attributes of various funding sources.
- Students will calculate the rate of growth for a business, profit and loss, earnings per share, cost of goods sold, stock valuation, breakeven, and technology substitution rates.
- Students will demonstrate familiarity with the basics of intellectual property terminology and laws in the USA.
- Students will be familiar with the basics of microeconomics, such as supply and demand, externalities, and competition.

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

ENGRG 2350 - Career Development in Engineering (2 Credits)

Prepare to engage, reflect, and explore! This discussion based course will consist of in-class activities, journaling exercises, and homework assignments for shaping your career goals, choices, and planning. Through this course, you will develop an awareness of and ability to manage the career development process. You will be able to communicate with confidence about your values, skills, and strengths. You will learn to make connections with others who can assist you in your career development and advancement. You will create your own personal mission and vision statements. And, you will apply engineering knowledge to product design. If you are looking for a challenging and thought-provoking experience that encourages asking question, being curious, and taking risks, you've found it!

Last Four Terms Offered: Fall 2022, Spring 2022, Spring 2021, Spring 2020

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

ENGRG 2750 - Robot Ethics (3 Credits)

Crosslisted with ECE 2750, STS 2751, INFO 2750

Last Four Terms Offered: Spring 2022, Fall 2020, Fall 2019, Fall 2018

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

ENGRG 2980 - Inventing an Information Society (3 Credits)

Crosslisted with INFO 2921, HIST 2920, AMST 2980, STS 2921

Provides an introduction to the role computing and information technologies played in political public life, from tabulating machines used to calculate the census to Big Tech's impact on democratic procedures, the future of labor, and the environment. Though organized around four thematic units (Recognizing and Representing, Knowing, Working, and Belonging), the course pays attention to the chronological trajectory of technologies and political practices and students will develop the skills necessary for historical analysis. While focusing on the US experience the course also highlights the international flow of labor, materials, and ideas. By studying the development of computing historically, we will grapple with the effects of computing and data sciences on society today, paying special attention to critiques of economic, racial, and gender injustice. The course will meet twice a week, and each meeting will include a lecture followed by a discussion.

Distribution Requirements: (HA-AG), (HST-AS)

Last Four Terms Offered: Spring 2023, Fall 2021, Fall 2019, Fall 2017

Learning Outcomes:

- Knowledge of ethical issues regarding political representation, workplace compensation, and access to information technology.
- Ability to make sound arguments about major themes in the history of information technology. Ability to discuss these themes orally with the professor and other students.
- Understanding of the complex, mutual relationship between technological changes introduced by engineers and their embeddedness in larger political movements.
- An appreciation of how the ways we tell histories of technological innovation shape political outcomes and the ability to critically evaluate such historical narratives.

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

ENGRG 3230 - Engineering Economics and Management (3 Credits)

Crosslisted with CEE 3230

Introduction to engineering and business economics investment alternatives and to project management. Intended to give students a working knowledge of money management and how to make economic comparisons of alternatives involving future benefits and cost. The impact of inflation, taxation, depreciation, financial planning, economic optimization, project scheduling, and legal and regulatory issues are introduced and applied to economic investment and planning and project-management problems.

Prerequisites: Prerequisite or corequisite: CEE 3040 or ENGRD 2700 or ILRST 2100 or BTRY 3010 or AEM 2100 or by permission of the instructor.

Course Fee: Course Fee, TBA. Students enrolling in this course are required to purchase access to software to have the capacity to turn in assignments during the semester.

Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022

Learning Outcomes:

- Gain a working knowledge of money management and how to make economic comparisons of alternative engineering designs or projects.
- Understand the impact of inflation, taxation, depreciation. Financial planning, economic basis for replacement, project scheduling, and legal and regulatory issues are introduced and applied to economic investment and project-management problems.
- Appreciation of ethical and other non-economic issues related to professional and personal financial and economic decisions.

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

ENGRG 3400 - Engineering Student Project Teams (1-3 Credits)

Intended for student members of Engineering Student Project Teams.

Project Team students work in an applied setting that fosters knowledge transfer from the classroom to practice and development of professional skills necessary to work in multidisciplinary teams.

Prerequisites: ENGRG 1400.

Exploratory Studies: (CU-UG)

Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023

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

ENGRG 3600 - Ethical Issues in Engineering Practice (3 Credits)

Crosslisted with STS 3601, PHIL 2471

This course surveys a range of ethical issues that arise in professional engineering, and provides discussion-based practice in analyzing and addressing them. Using normative frameworks from professional codes, philosophical ethics, value-sensitive design, feminist theory, and science & technology studies, the course engages with a series of historical, current, and fictional case studies, across a wide variety of engineering disciplines. Specific topics to be discussed may include: privacy, consumer rights, smart cities, geoengineering, artificial intelligence, and cloning. Instruction is through a mix of lectures and discussions.

Prerequisites: For engineering students, completion of one First-Year Writing Seminar (FWS).

Enrollment Information: For engineering students, enrollment limited to: sophomores, juniors, and seniors.

Distribution Requirements: (KCM-AG, SBA-AG)

Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022

Learning Outcomes:

- Be familiar with and able to identify a range of ethical and social issues in professional and academic engineering practice.
- Understand some of the major normative theories in philosophy, science and technology studies, feminist theory, and other approaches.
- Be able to apply normative theories to specific cases in engineering, from a variety of different stakeholder perspectives, including the perspectives of historically marginalized social groups.
- Be able to analyze, evaluate, and produce normative arguments using evidence and techniques of philosophical argument.
- Have improved their research skills and written communication skills, particularly in argumentative writing.

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

ENGRG 3605 - Ethics of Computing and Artificial Intelligence Technologies (3 Credits)

Crosslisted with PHIL 2473, STS 3605

Computing is ubiquitous in modern life, and essential to professional work in engineering and many other disciplines. However, computing technologies, especially artificial intelligence, raise distinctive normative issues. This course surveys a variety of social, ethical, and political issues that arise in connection with computing technologies, including artificial intelligence, from a philosophical perspective. Specific topics may include: hacking, privacy, intellectual property, forms of deception and manipulation enabled by computing technologies, social injustices that are reinforced by algorithmic systems, machine ethics, and science fiction issues such as robot rights or existential risks posed by superintelligent computer systems. Content delivery will be through a mix of lectures, readings, and in-class discussion.

Enrollment Information: Enrollment limited to: sophomores, juniors, and seniors.

Distribution Requirements: (ETM-AS)

Last Four Terms Offered: Fall 2024

Learning Outcomes:

- Students will be able to identify and describe a variety of social, ethical, and political issues that arise distinctively from the use and development of computing technologies.
- Students will be able to use normative theories from the humanities and social sciences to make sense of ethical issues in computing.
- Students will be able to reason about, critique, defend, and develop specific opinions on social, ethical, and political issues that arise in connection to computing technologies.
- Students will have improved their written and oral communication skills and academic research skills.

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

ENGRG 3900 - Foundations of Engineering Leadership (2 Credits)

This is the first of two required classes in the Engineering Leadership Certification Program. The focus is on the self and team competencies covered in the certification program. Students gain knowledge about their own strengths, values, purpose, goals, and derailers. Further topics include project management basics, presentation skills, communication and team dynamics. Working from this foundation, students propose and form teams to enact a Leadership Project that has meaning and impact. Note that this class includes two required weekend retreats in addition to the regularly scheduled class: one during the first week of classes in January and the other in April.

Enrollment Information: Enrollment limited to: Leadership Certification Program students.

Last Four Terms Offered: Fall 2024, Spring 2023, Spring 2022, Spring 2020

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

ENGRG 3910 - Applied Engineering Leadership (3 Credits)

Weekly experiential learning about different aspects of leadership and teamwork. Exercises are fun and engaging, sometimes taking students outside of the lab to experiment with different people skills. Topics include communication, decision-making for leaders, managing conflict, ethics, influence and persuasion, organizational culture, and others.

Prerequisites: ENGRG 3900.

Enrollment Information: Enrollment limited to: Leadership Certification Program students.

Exploratory Studies: (CU-CEL)

Last Four Terms Offered: Spring 2025, Fall 2023, Fall 2022, Fall 2020
Schedule of Classes (<https://classes.cornell.edu/>)

ENGRG 4010 - Engineering Exchange Program (15 Credits)

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

ENGRG 4400 - Engineering Student Project Team Leadership (1 Credit)

This skills-based, experiential learning course will use students' project team experiences as a vehicle to learn about, practice, and refine critical leadership skills. Students will have access to one on one and small group coaching throughout their enrollment in the course.

Prerequisites: ENGRG 1400, ENGRG 3400.

Enrollment Information: Primarily for: Engineering Student Project team leads, sub-team leads, and experienced content experts with mentorship roles.

Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023

Learning Outcomes:

- Collaborate with fellow student project team leads to foster teamwork, cooperation, collaboration, and knowledge sharing, to enhance learning and empower peers and teammates, through participation in meetings, workshops, and activities each semester.
- Apply and integrate programmatic policies, expectations, and resources to team-specific project management, priorities, and initiatives, to create consistency and equity across and between teams, through engagement in core content offered each semester.
- Demonstrate growth and proficiency in one advanced leadership topic per semester.

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

ENGRG 4610 - Entrepreneurship for Engineers (3 Credits)

Crosslisted with MAE 4610, ORIE 4152

Last Four Terms Offered: Spring 2025, Spring 2023, Spring 2022, Spring 2021

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

ENGRG 4800 - Eng Leader Skill Clinic: Listening Skills (0.5 Credits)

LSC: Listening Skills for Leaders is your opportunity to master one of the most powerful skills in transformational leadership-effective communication through listening. In this course, you'll uncover a simple yet highly effective approach to gathering better information, building empathy, and strengthening relationships. Through hands-on, real-world practice, you'll apply these techniques in dynamic situations, reflecting on your personal growth and leadership journey. The final workshop focuses on sharing your insights, reflecting on your progress, and creating a personalized plan to continue developing your listening abilities as a leader. Whether you're already leading teams or preparing to step into leadership roles, this course will help you refine a crucial skill that distinguishes exceptional leaders.

Enrollment Information: Priority given to: COE/CI students, other students by department approval.

Last Four Terms Offered: Spring 2025, Fall 2024, Fall 2022
Schedule of Classes (<https://classes.cornell.edu/>)

ENGRG 4805 - Eng Leader Skill Clinic: Positive Team Culture (0.5 Credits)

LSC: Positive Team Culture teaches any team member how to shape norms, expectations, and behaviors to support the team's goals. You'll learn tools to align members with the mission of the team. During the action interval, you'll apply these skills in real-world situations and reflect on your experience. The second and final workshop is dedicated to sharing your 'lessons learned' and forming a plan to continue to practice the skills of building positive team culture.

Enrollment Information: Priority given to: COE/CIS; open to students in other colleges by department permission only.

Last Four Terms Offered: Fall 2023, Fall 2022
Schedule of Classes (<https://classes.cornell.edu/>)

ENGRG 4810 - Eng Leader Skill Clinic: Inclusive Teams (0.5 Credits)

LSC: Leading Inclusive Teams equips you with the skills to build stronger, more unified teams by embracing different perspectives and experiences. In this course, you'll learn how to create an environment where every team member-regardless of background or identity-feels valued and motivated. You'll explore how welcoming a variety of viewpoints drives team performance, creativity, and collaboration. Through hands-on application in real-world settings, you'll practice these strategies and reflect on your experiences as both a leader and a team member. The final workshop is a chance to share your insights, set goals for your ongoing development, and leave with a concrete plan for fostering a culture of respect and connection wherever you lead. Whether you're leading a group project or preparing for future leadership roles, this course will help you harness the full potential of a team with varied strengths and perspectives.

Enrollment Information: Priority is given to: COE/CI students and others by department approval.

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

ENGRG 4815 - Eng Leader Skill Clinic: Performance and Accountability (0.5 Credits)

LSC: Performance & Accountability is the course you didn't know you needed. You're juggling a million things, but guess what? If you can't get your team to actually do things without constant drama or finger-pointing, you're wasting precious time. This course will teach you how to hold your peers accountable, without the whole "awkward silence after someone drops the ball" thing. Spoiler: your group project will finally work like a well-oiled machine. Plus, you'll learn how to actually follow through on your own commitments (don't act like you've never said "I'll do it later" before). And no, you're not just sitting there reading case studies like a boring lecture—you'll apply everything to real-life situations. The final workshop? It's all about sharing your "Aha!" moments, setting fresh goals, and keeping your skills sharp. This is your chance to level up. Don't miss it.

Enrollment Information: Priority given to: COE/CIS; open to students in other colleges by department permission only.
Schedule of Classes (<https://classes.cornell.edu/>)

ENGRG 4820 - Eng Leader Skill Clinic: Difficult Conversations (0.5 Credits)

LSC: Difficult Conversations is here to help you survive those awkward, uncomfortable moments that are actually crucial to team success. Whether it's giving feedback, addressing conflict, or navigating sensitive topics, this workshop will give you the tools and language you need to communicate confidently, even in challenging situations. You'll get hands-on experience during the action intervals, applying these skills to real-world scenarios and reflecting on how you handled them. By the end of this course, you'll feel more comfortable tackling difficult conversations and have a practical plan for continuous improvement—skills that will make you an even stronger leader and teammate. Plus, this is an excellent addition to your resume, showing you have the communication skills employers look for. Sign up today and get ready to take on any conversation with confidence!

Enrollment Information: Priority given to: COE/CIS; open to students in other colleges by department permission only.

Last Four Terms Offered: Spring 2024, Spring 2023, Fall 2022
Schedule of Classes (<https://classes.cornell.edu/>)

ENGRG 4825 - Eng Leader Skill Clinic: Managing Conflict (0.5 Credits)

Engineering Leadership Skills Clinics are action-oriented, short-term classes that build your confidence and capabilities in engineering teamwork and leadership. Each Clinic comprises two interactive workshops separated by an Action Interval in which you will experiment with new skills and analyze the results. The time commitment is about ten hours over three weeks. LSC: Managing Conflict will teach you how to surface and productively address the inevitable disagreements and tensions that arise whenever people work together on something of importance. You'll receive feedback about your own preferred conflict style and learn specific tools to apply to deal most productively with different kinds of conflict. During the action interval, you will apply these skills in a real-world situation and reflect on your experience. The second and final workshop is dedicated to sharing your 'lessons learned' and creating a development plan to continue to build competencies and comfort around managing conflict. This Clinic carries a digital microcredential in Engineering Leadership Skills: Managing Conflict, and can be counted toward a Digital Mastery Badge in Engineering Leadership Fundamentals.

Enrollment Information: Enrollment preference given to: Engineering and CIS students.

Last Four Terms Offered: Fall 2023

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

ENGRG 4830 - Eng Leader Skill Clinic: Giving Feedback (0.5 Credits)

LSC: Leadership Skills Clinics Giving Feedback, develops the tools and language needed to offer feedback that drives growth and success—without the discomfort. In this course, you'll learn a proven framework for giving constructive feedback that's clear, supportive, and motivating, helping both you and your peers perform at your best. Whether it's offering praise or addressing areas for improvement, you'll gain the confidence to provide feedback that fuels team progress and individual development. Through real-world practice and reflection, you'll refine your approach, and in the final workshop, you'll share insights, discuss challenges, and create a personalized plan to continue honing this essential leadership skill. This course will equip you with a key tool for fostering trust, collaboration, and high performance—skills that will set you apart in any future leadership role.

Enrollment Information: Priority given to: COE/CIS students, others by department approval.

Last Four Terms Offered: Spring 2025, Spring 2024, Fall 2022
Schedule of Classes (<https://classes.cornell.edu/>)

ENGRG 4835 - Eng Leader Skill Clinic: Receiving Feedback (0.5 Credits)

LSC: Receiving Feedback is a skill that can set you apart in any team environment, both now and throughout your career. In this course you'll learn how to shift your mindset from seeing feedback as something to fear to viewing it as a powerful tool for growth. You'll discover strategies for asking for feedback effectively, managing your emotional reactions to criticism, and thoughtfully analyzing the input you receive to continuously improve your performance. You'll have the opportunity to apply these skills in a real-world situation, gaining firsthand experience in turning feedback into action. Whether you're working on group projects, internships, or preparing for future professional teams, mastering the art of receiving feedback will help you stand out, strengthen your collaboration skills, and accelerate your personal and professional growth.

Enrollment Information: Priority given to: COE/CIS; open to students in other colleges by department permission only.

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

ENGRG 4840 - Eng Leader Skill Clinic: Effective Followership (0.5 Credits)

LSC: Effective Followership or Leading without Title will redefine how you think about leadership—and your role in it. In this course, you'll discover that great leaders are also exceptional followers. You'll learn the mindset and behaviors that allow you to add value to a team, influence outcomes, and contribute meaningfully—whether or not you hold the title. By mastering the art of active followership, you'll understand how to support your leaders, shape team dynamics, and drive success from any position. Through real-world application and reflection, you'll develop these skills in practical situations. The final workshop is your opportunity to share your key takeaways, reflect on your growth, and create a plan to continue cultivating this essential skill. This course will help you become a more effective, impactful team member—preparing you to excel in any future leadership role.

Enrollment Information: Priority given to: COE/CIS students, others by department approval.

Last Four Terms Offered: Spring 2025, Spring 2023, Fall 2022
Schedule of Classes (<https://classes.cornell.edu/>)

ENGRG 4845 - Eng Leader Skill Clinic: Leading from Strength (0.5 Credits)

LSC: Leading from Strengths offers a personalized and research-based approach to leadership development, grounded in the CliftonStrengths framework. Through this interactive workshop, you'll identify your core talents and learn how to leverage them to lead with authenticity, clarity, and impact. Designed for students committed to personal growth and meaningful leadership, this course blends theory with application. You'll explore how individual strengths shape leadership styles, enhance team dynamics, and drive collaboration. Throughout the program, you'll engage in reflective exercises, case-based discussions, and hands-on activities that translate insight into action. The final session culminates in the creation of a tailored leadership development plan—one that aligns your strengths with your goals, and equips you to lead confidently in academic, professional, and community settings.

Enrollment Information: Enrollment preference given to: Engineering and CIS students.

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

ENGRG 4850 - Time Management for Leaders (0.5 Credits)

Time Management will teach you how to manage your time well, by shifting your mindset around how you spend your time and make decisions. We'll explore strategies for setting priorities, overcoming procrastination, and balancing competing demands. During the action intervals you will apply these skills in real-world situations and reflect on your experience. The final workshop is dedicated to sharing your 'lessons learned' and setting goals for continued experimentation and development.

Last Four Terms Offered: Fall 2024

Learning Outcomes:

- Describe and apply the four components of good time management.
- Demonstrate proficiency in analyzing commitments using the Eisenhower Matrix.

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

ENGRG 4900 - Independent Study in Engineering (1-3 Credits)

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

ENGRG 4901 - Summer Undergraduate Research Experience in Engineering (1-6 Credits)

Last Four Terms Offered: Summer 2025

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

ENGRG 4960 - Entrepreneurial Practicum in Engineering (1-4 Credits)

This course provides a means by which engineering students can develop and refine their innovative technical ideas. The course is tailored to individual student or student group needs, linking them with mentors and resources, including prototyping facilities, to help enable them to move their innovative ideas forward.

Exploratory Studies: (CU-UG)

Last Four Terms Offered: Spring 2024, Fall 2023, Spring 2023, Fall 2022

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

ENGRG 4980 - Undergraduate Teaching and Learning in Engineering: AEW Facilitation (2 Credits)

This course provides selected undergraduate students with hands-on teaching experience by involving them in planning and leading Academic Excellence Workshop (AEW) courses. AEW facilitators work closely with a co-facilitator and communicate weekly with the associated course team to plan and deliver their sessions. Throughout the semester, facilitators receive thorough training on teaching math, chemistry, computer science, or engineering. They will read and discuss articles and videos, reflect on their own experiences, and engage in activities to improve their teaching and learning skills. The training covers topics such as building community, creating inclusion, how people learn, asking effective questions, structuring collaboration, and various student-centered teaching strategies. Trainings also include a focus on developing facilitators as leaders and professionals.

Last Four Terms Offered: Fall 2024

Learning Outcomes:

- Implement strategies that create an inclusive learning environment
- Create and maintain a student-centered, active learning environment
- Implement improvements and reflect on practices throughout the semester in which you are facilitating learning
- Describe the role of facilitator as leaders and mentors amongst peers
- Demonstrate teamwork and leadership skills with co-facilitator

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

ENGRG 4990 - Teaching in Engineering Leadership (1-4 Credits)

Teaching assistant responsibilities include class preparation, grading, and assisting students with class logistics. Regular class duties includes monitoring student class participation and facilitating exercises and discussions. Teaching assistants will help facilitate two outside-of-class retreats in the spring semester.

Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023

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

ENGRG 4998 - Engineering Practical Training (0.25 Credits)

This independent study course offers engineering students an opportunity to reflect on professional and personal growth, challenges, and opportunities resulting from a recent internship in the USA (Curricular Practical Training, CPT). Typically, these internships take place in the summer and students, in the semester they return to campus, write a short paper describing their work experience and how it connects to the educational objectives of their major. The value of the course is in the reflection on expectations, successes, challenges and skills and knowledge gained during the internship in the United States.

Prerequisites: intended for undergraduates in engineering majors who require work authorization for an employer other than Cornell.

Enrollment Information: Not open to: CS students.

Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023

Learning Outcomes:

- Examine the ways in which the internship experience met, exceeded, or did not meet the students' expectations at the outset. This includes the experience alignment with the employer's description as well as the students personal and professional set of values and ethics.
- Identify knowledge, skills, or other experiences (in the conceptual, technical and social realm) that would be beneficial going forward in preparation for successful future in a chosen career based on the internship experience.
- Weigh the benefits and the challenges of working in an environment that is culturally unfamiliar (an international setting).
- Synthesize the component reflections on strengths, challenges, expectations, and personal values into an exploration of potential career paths going forward.

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

ENGRG 5001 - Engineering Professional Master's Summer Research (0 Credits)

Last Four Terms Offered: Summer 2025, Summer 2024, Summer 2023, Summer 2022

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

ENGRG 5330 - Engineering Professionalism (1 Credit)

Crosslisted with BEE 5330

The primary focus is to prepare students for the Fundamentals of Engineering (FE) exam, which is the first step in obtaining a Professional Engineering license. Students complete a formal comprehensive review of engineering subjects associated with the FE exam. Engineering professionalism topics will be covered in some of the lectures or asynchronous videos. Students are advised to sign up to take the Fundamental of Engineering (FE) exam during the semester. Students sign up directly with the NCEES site. Once the nationally conducted FE exam is passed, it is valid forever in any state as part of Professional Engineering registration. Course grading is based upon weekly quizzes, assignments within the asynchronous videos, attendance, and a comprehensive online final that is similar to the FE exam. Alternatively, the quizzes and final portion of the grade can be covered by passing of the FE Exam during the semester.

Enrollment Information: Enrollment limited to: seniors who will graduate with an accredited engineering degree and graduate students with accredited engineering degree.

Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022

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

ENGRG 5350 - Career Search and Exploration for Engineers (1 Credit)

This course delves into the essential elements of career planning and job search strategies. Through interactive discussions and practical exercises, students will identify their strengths, skills, and values, honing their ability to articulate these effectively in professional contexts. They will gain comprehensive insights into the complete job search process, including learning how to craft compelling application materials, cultivate their professional network, communicate with confidence during interviews, and negotiate offers effectively.

Enrollment Information: Enrollment limited to: M.Eng. students.

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2021
Schedule of Classes (<https://classes.cornell.edu/>)

ENGRG 5351 - Professional Development for Engineers (1 Credit)

This course is dedicated to fostering overall professional growth and enhancement. Students will explore advanced techniques for leveraging their strengths and experiences to advance their careers. Through engaging discussions and immersive activities, they will refine their communication skills, leadership abilities, and emotional intelligence. Topics include personal branding, navigating team dynamics in the workplace, and career goal setting. Students will also delve into strategies for continuous learning and adaptation in an ever-evolving professional landscape.

Enrollment Information: Enrollment limited to: M.Eng. students.

Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022

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

ENGRG 6780 - Teaching Seminar (1 Credit)

Independent study promoting reflection on teaching styles and experiences for graduate student teaching assistants in the College of Engineering. Participants may be concurrently fulfilling a TA assignment or must have done so in the past. Requirements include participation and completion of the College of Engineering's TA Development Program. This course is designed to provide Cornell Engineering TAs with the opportunity to process their understanding of teaching and learning through the formulation of questions, concepts, and theories related to their experiences.

Prerequisites: Prerequisite or corequisite: completion of engineering TA development program.

Enrollment Information: Enrollment limited to: graduate students who have completed the ELI TA development program training.

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

ENGRG 7930 - Peer Mentoring and Leadership Essentials (1 Credit)

Crosslisted with CHEME 6930, MSE 7930

This course develops fundamental communication, coaching, mentorship and leadership skills for PhD students. It is designed specifically for PhD mentors in the Ezra's Bridge program; however, the course is appropriate for all PhD students who wish to be more effective lab members and leaders.

Enrollment Information: Enrollment limited to: PhD students in Ezra's Bridge Program. Additional seats open to PhD students in any STEM field.

Last Four Terms Offered: Spring 2024, Spring 2023, Spring 2022

Learning Outcomes:

- Demonstrate competence in core skills of peer coaching and mentoring.
- Demonstrate competence in creating an inclusive and psychologically safe academic work environment.
- Demonstrate competence in proactive leadership communication skills.

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