

GRAINGER  
ENGINEERING

*Discover*  
**YOUR  
BRIGHTEST  
FUTURE**

UNIVERSITY OF ILLINOIS



A young man with brown hair and black-rimmed glasses is focused on adjusting a complex, multi-layered metal mechanical assembly. He is wearing a blue and white plaid shirt over a dark t-shirt. The background is a laboratory or workshop filled with various pieces of equipment, including a large white cabinet and a rack of electronic components. The lighting is warm and focused on the man and his work. The text "The Power of I" is overlaid in a white, handwritten-style font across the center of the image.

*The Power of I*

# Become a Grainger Engineer

At the University of Illinois Urbana-Champaign's Grainger College of Engineering you'll follow a curriculum that educates you to be one of the best engineers in the world: innovative, interdisciplinary, hardworking, and someone who makes a difference. We are a catalyst of people driven to change the world through learning, discovery and innovation.

You'll be enabled to craft your own experience with interesting and challenging electives and compelling student organizations. Plus, you'll engage with peers both nationally and internationally through research, conferences, and competitions. As a Grainger Engineer you'll start making your mark from day one.

## What Sets us Apart

- An elite engineering education with unique learning experiences in a Big Ten environment
- Dedicated resources and staff for engineering students that provides customized support for your academic and professional success.
- Personalized support from faculty, advisors, and staff in your department and the college
- Active, vibrant student communities for building your peer network
- A global, highly-respected community of 80,000+ alumni

# Support

## Discover Your Path to Success

Grainger Engineering is committed to helping you succeed. Our college has resources dedicated specifically to engineering students, meaning you're getting personalized assistance for academic, personal, and professional questions that are unique to your field.

You'll receive educational support for courses that prepare you to be a highly-recruited engineer, guidance using our state-of-the-art facilities, professional development to help you land your dream job, and dedicated resources for entrepreneurship and design.

### What This Looks Like

- Individualized advising available from the college, your department, and faculty mentors
- Professional development from Engineering Career Services (ECS), which helps connect you with internships, co-ops, and full-time jobs through workshops and two career fairs each year that attract 700+ companies

- Tutoring and academic support from the Center for Academic Resources in Engineering (CARE), a program in Grainger Engineering Library where you can get help from other engineering students and collaborate on class work in an environment rich with resources
- Immersive experiences with The Grainger Engineering First-Year Experience (GFX), a program that guides you through your transition to Illinois and allows you to work alongside your peers in interactive hands-on electives
- Access to an engineering-specific embedded counselor for resources and assistance focused on mental health

### Scholarships

Paying for college can be overwhelming and we do offer scholarships. The number available continues to grow. We offer approximately 500+ scholarships to newly admitted students. Plus, each year another 150+ scholarships are awarded to continuing students that apply for our college scholarships.

Additionally, we provide resources on finding external scholarship opportunities available to engineering students.









# Community

## The Place to Find Your People

Our people are the heart of Grainger Engineering. When students are asked why they chose Illinois, they often answer, "Because it felt like home." That feeling is intentional. You aren't a number here. You're an engineer with a hard work ethic, a driving desire to solve problems, and a commitment to making a difference. And you're surrounded by peers and educators who feel exactly the same.

It's easy to build your community by getting involved in 100+ engineering-specific student organizations and groups. They provide hands-on engineering experiences, collaboration with peers, leadership development, and community outreach opportunities. They give you the chance to explore your passions and make lifelong friends, while preparing for the future.

## Sample Student Organizations and Groups

- Meet friends and participate in projects like CubeSAT, Hyperloop, Formula SAE, or Alma's Talking Dogs where you partner with entities like NASA, Tesla, and Space X to improve current technology and build models for future use.

- Get involved with Engineering Council. You'll grow academically, professionally, and personally through leadership opportunities and interdisciplinary relationships by participating in activities like our popular Engineering Open House, student-led career fair, and recruitment activities.
- Develop your leadership skills in groups like Engineering Ambassadors and Worldwide Youth in Science and Engineering (WYSE) where you share your passion and knowledge of Grainger Engineering with younger students.
- Build a community of support by engaging with fellow students, alumni, and corporate partners through programming provided by Women in Engineering (WIE). WIE provides a welcoming and supportive environment for students in the college and helped increase the number of Grainger Engineering women by 60% in the past five years.
- Help empower and expand the Morrill Engineering Program (MEP). MEP focuses on providing a welcoming environment for underrepresented engineering students, supporting their success as scholars, and creating a friendly community of students, staff, and alumni. The percentage of underrepresented students has increased 55% in the past five years.

# Experience

## Connect Your Passion with Unlimited Opportunity

In The Grainger College of Engineering, we believe some of the best learning happens outside the traditional classroom. So we've dedicated ourselves to giving you access to hands-on experiences and helping you use your engineering skills out in the real world, well before graduation.

### Possible Opportunities

- Study abroad through International Programs in Engineering (IPENG) to live and learn in locations around the world while enhancing your engineering education.
- Research as early as freshman year in groundbreaking labs like those affiliated with the Cancer Center at Illinois. The Illinois Scholars Undergraduate Research (ISUR) program can help you find these opportunities.
- Get hands-on experiences with modern fabrication techniques and services in cutting edge classrooms and educational labs like the Engineering Student Projects Laboratory and the Innovation Studio.

- Spend a semester in Chicago through our City Scholars Program to intern for a tech company and take classes with our faculty.
- Access our leadership and business training workshops, trips, and competitions to propel you forward as an engineer entrepreneur.
- Experience unique learning through senior design projects completed for real clients and courses.

### Entrepreneurship

PayPal. YouTube. Yelp. Affirm. Cast 21. All of these companies came from ideas cultivated in Grainger Engineers. The Technology Entrepreneurship Center (TEC) and many other campus resources are here to help foster your ideas and ambitions.

Once in Grainger Engineering, you can also double-major in Innovation, Leadership and Engineering Entrepreneurship (ILEE). It's created to help you better understand the innovative processes involved in identifying complex technical problems and creating, developing, and leading efforts to provide engineering solutions.



# Involvement



## We Have the Numbers

You will be successful at Grainger Engineering due to your hard work. But we like to think our size and resources for an elite, well-rounded education play a part as well. Our excellence is as broad as it is deep. You will be among ambitious yet helpful peers, esteemed faculty, and knowledgeable advisors. You'll have access to unbelievable research opportunities and labs. And you'll be rewarded for your studies upon graduation. Your future starts here at Illinois.

**#6** Overall ranking among undergraduate programs in the U.S.

**#10** Overall ranking among graduate programs in the U.S.

**15** Top-ranked undergraduate degree programs

**400+** World-class faculty

**100+** Engineering-based student organizations

**50%** Undergraduate participate in research

**9** Multidisciplinary research centers

**60+** Laboratories, research centers, and institutes

**12** Engineering Departments

**2,000+** Research projects each semester

**2+** Job offers on average per student

**\$86,150** Average BS starting salary

**80,000** Alumni worldwide







# Reputation

## Unrivaled Strength Across Every Discipline

Grainger Engineering is unmatched in its size and resources to provide an elite education to every student. We are consistently ranked among the top engineering programs in the world, with a reputation for excellence in education and research.

What also makes us stand out is the environment we create while maintaining our prestigious rankings. Our world-class and passionate faculty, paired with our state-of-the-art facilities and innovative programs will help you grow from a new engineering student into a highly respected and recruited engineer.

## Rankings

- **#15** top-ranked undergraduate degree programs
- **#6** undergraduate engineering program in US News and World Report
- **#10** graduate engineering program in US News and World Report

- **#2** on American Institute of Economic Research's Best College Towns based on demographics, quality of life, and economics
- **#7** on Forbes' Top 10 Best Value Schools, based on tuition costs, school quality, graduation success, and post-grad earnings
- **#7** in number of most undergraduate and graduate alumni hired by the 25 biggest Silicon Valley employers

## Engineering Career Services

Our Grainger Engineering grads are set up for success. We offer an entire office of professional staff focused on preparing you for a career in engineering. With Engineering Career Services you have access to workshops, mock interviews, résumé reviews, two engineering-specific career fairs annually, and so much more. They work to help you find internships, co-ops, and full-time positions.

With a bachelor's degree, our students receive an average 2+ job offers and earn an average starting salary of \$86,150 a year.

# Academic Programs

## Grainger Engineering Majors

- Aerospace Engineering
- Agricultural and Biological Engineering<sup>1</sup>
- Bioengineering
- Chemical and Biomolecular Engineering<sup>2</sup>
- Civil and Environmental Engineering
- Computer Engineering
- Computer Science<sup>3</sup>
- Electrical Engineering
- Engineering Mechanics
- Physics
- Industrial Engineering
- Materials Science and Engineering
- Mechanical Engineering
- Nuclear, Plasma, and Radiological Engineering
- Systems Engineering and Design

*As a first-year student you may apply to **Engineering Undeclared** to spend more time exploring which major fits you best.*

## Grainger Engineering Minors

- Bioengineering
- Biomolecular Engineering
- Computational Science & Engineering
- Computer Science<sup>3</sup>
- Electrical and Computer Engineering
- International Engineering
- Materials Science and Engineering
- Physics
- Polymer Science and Engineering
- Hoeft Technology and Management

*1 The College of Agricultural, Consumer, and Environmental Sciences admits students to the Agricultural and Biological Engineering major but the degree is granted from The Grainger College of Engineering. 2 The College of Liberal Arts & Sciences administers the Chemical and Biomolecular Engineering major. 3 Students that complete CS, CS+X, or CS minor at IL with GPA 3.0+ in last 2 years and GPA 3.2+ in CS classes are guaranteed admission to our Online MCS or MCS in Data Science programs.*



A woman with dark curly hair, wearing a white lab coat, safety glasses, and purple nitrile gloves, is focused on adjusting a microscope. The microscope is mounted on a metal stand and is positioned over a petri dish containing a yellowish substance. In the background, there is a computer monitor displaying a green image, a keyboard, and various laboratory equipment. The scene is lit with a mix of cool blue tones and warm orange/red tones, creating a professional and scientific atmosphere.

*Individuality*

A photograph of two men in a laboratory setting. The man on the left, wearing a blue button-down shirt, is looking down at a small electronic component he is holding. The man on the right, wearing a grey polo shirt, is looking at a robotic arm that is orange and black with white joints. The background is filled with various electronic equipment and shelves. The word "Innovation" is written in a white, cursive font across the center of the image.

*Innovation*

# Engineering Majors

## Aerospace Engineering

Aerospace Engineering major may interest you if you enjoy working in teams to create systems that include mechanical, electrical, computer, material, and aerospace engineering applications. You may learn about aerodynamics, design, and performance of air and spacecraft and their propulsion systems.

## Agricultural & Biological Engineering

Agricultural & Biological Engineering applies science and engineering to agriculture, food, environment, and energy production systems. This major may be for you if you're interested in sustainability or renewable fuel sources.

## Bioengineering

Bioengineering will help you understand how human biological systems function and how to develop technology-based solutions to societal needs in human development and disease diagnosis, treatment, and prevention.

## Chemical & Biomolecular Engineering

Chemical & Biomolecular Engineering major focuses on the chemical transformation of substances to products and energy for society. You'll learn about momentum transfer, separations, and reactor design; as well as how to apply this knowledge to real-world projects in lab and design classes.

## Civil & Environmental Engineering

Civil & Environmental Engineers focus on matters such as clean air, safe drinking water, sanitation, addressing our changing environment, protection from natural and man-made hazards, designing a sustainable infrastructure that serves everyone, and more.

## Computer Engineering

Computer Engineering is the design and use of computing systems at all levels. This major may interest you if you enjoy understanding, designing, and working with computers.

## Computer Science

Computer Science is the study of theory, design, and applications of digital computers. You will also learn software design and informational processing techniques. If you're creative, logical, and a good problem solver, this major may be for you.



## **Electrical Engineering**

Electrical Engineering is a major that involves technology in all aspects of life, whether it's wires, devices, space, the human body, or other mediums. It has applications in electrical power, communications, information technology, nanotechnology, and biotechnology. This major may be for you if you enjoy tinkering and dream of making something new.

## **Engineering Mechanics**

Engineering Mechanics major focuses on solving mechanics problems and learning the physical principles necessary to modern engineering design. You will learn the building blocks of statics, dynamics, strength of materials, and fluid dynamics. This may be the major for you if you're interested in a program that emphasizes analysis and research preparedness.

## **Industrial Engineering**

Industrial Engineering major may be for you if you're interested in streamlining processes, evaluating and reducing strain on workers and the environment, saving companies money, and eliminating waste of time, money, materials, energy, and other commodities. This major creates leaders who often serve as a link between engineering and management.

## **Materials Science & Engineering**

Materials Science & Engineering major you'll learn how to tailor the structure, properties, and performance of existing materials. You will also develop and synthesize new materials with unique properties. If you want to make things smaller, faster, stronger, and smarter, this major might be for you.

## **Mechanical Engineering**

Mechanical Engineering applies mathematical, scientific, and engineering principles to design and control machines and systems. Students study forces acting on bodies of solids or fluids as well as the resulting dynamic motion of those bodies. If you're interested in how the world around you moves and changes, this major might be for you.

## **Nuclear, Plasma & Radiological Engineering**

Nuclear, Plasma & Radiological Engineering focuses on how sources of nuclear energy and radiation are developed and used in energy production, materials processing, and science. This major is a good fit for students interested in fission and fusion technology, and how to make computers, cell phones, and game consoles better, cheaper, and faster.

## Physics

In Physics you'll study, measure, and manipulate the fundamental interactions of matter, energy, space, and time. This will give you the tools to solve scientific mysteries and reveal the workings of nature. Physics has produced the science behind many technologies like superconducting magnets for MRI machines, cell phones, supermarket scanners, fiber-optic communications, and more.

## Systems Engineering & Design

Systems Engineering & Design major may interest you if you like multiple engineering disciplines, to lead others, and make decisions. The curriculum integrates principles of business, new technology, and entrepreneurship.

## Engineering Undeclared

The Grainger College of Engineering's Engineering Undeclared program provides Undeclared Engineering program provides a select group of students with the opportunity to explore major options during a part of their first-year of undergraduate study. Students within this program are eligible to pick any of our top-ranked engineering majors, except Computer Science.

## CS + X Degree Programs<sup>4</sup>

Illinois has designed an innovative degree option, called CS + X, that allows students to pursue a flexible program of study incorporating a strong grounding in computer science with technical or professional training in the arts and sciences.

- CS + Advertising
- CS + Animal Sciences
- CS + Anthropology
- CS + Astronomy
- CS + Chemistry
- CS + Crop Sciences
- CS + Economics
- CS + Geography and Geographic Information Science
- CS + Linguistics
- CS + Music
- CS + Philosophy
- Mathematics & Computer Science
- Statistics & Computer Science

*<sup>4</sup> All degrees are conferred through the college housing the +X major.*

# First-Year Applicants

In Grainger Engineering, you apply directly to your major of interest. This enables you to begin immediately in your field and start building your network of peers from day one. When selecting your major, consider what you enjoy doing now and the difference you want to make in the future. We highly encourage you to select a first and second choice majors on your application.

We consider many factors when making an admission decision. Most applications receive at least two readings, and we double-check all preliminary decisions.

**To start the application process visit:**  
**[apply.illinois.edu](https://apply.illinois.edu)**

*First-year applicants can also apply through the Coalition Application and the Common App.*

## What's Considered

- Strength of your academic record
- Highest ACT or SAT scores and subscores (if provided)
- Achievements outside of the classroom, including exposure to major of interest, like self-exploration and attending camps
- Opportunities available to you, like high school curriculum, AP and honors courses, and extracurricular activities
- Essays

## Writing Prompts

We give strong consideration to your written responses in relation to the major(s) you select. There are two writing prompts, short answers and an essay question.

For your short answers, you will answer two to three prompts based on how many majors you apply to. You'll answer two questions for the first choice major you selected (including if you choose the campus-level Undeclared program). Then, if you select a second choice major you'll answer a third question about that major. Response should be no more than 150 words.

For your essay, you will answer one of the prompts based on which application you chose to apply through. Response should be 250 to 650 words.



## Early Action Filing Period

- September 1 – November 1
- Final Deadline to Apply – January 5

Applying before November 1 may give you the best chance for being admitted to our most selective programs, as well as special attention for admission to honors programs and for merit awards.

*If you are applying through Common App you are only able to select "Regular Decision" as your preferred admission plan. However, you'll be eligible for priority admission if you submit the application by the Nov 1st deadline (and any outstanding materials by Nov 10th).*

## Admission Notification

- Decision Date – Mid February

## Transfer Applicants

Qualified students are invited to apply for transfer admission to The Grainger College of Engineering. For complete application requirements, review the Transfer Handbook at: [admissions.illinois.edu/apply/Transfer/handbook](https://admissions.illinois.edu/apply/Transfer/handbook)

## What's Considered

Each application is evaluated utilizing a holistic review process with consideration given to:

- Overall and technical GPA
- Technical coursework
- Academic rigor
- Essay(s)
- Activities and work experience
- High school transcripts and ACT/SAT scores, if applicable

## Filing Period

December 15 – March 1

## Admission Notification

Decisions will be made from February to mid-April.

# Which Major is Right for You?

Your path to Grainger Engineering starts with connecting your passion and interests with the opportunities available in one of our 15 top-ranked major programs. Take our majors quiz to discover which programs are a good fit for you, gather the information you need to take the next step and apply.

## Take Our Majors Quiz

[go.grainger.illinois.edu/majorsquiz](https://go.grainger.illinois.edu/majorsquiz)









## The Grainger College of Engineering

UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

### **Undergraduate Programs**

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