

COLLEGE OF ENGINEERING

Carnegie Mellon University's College of Engineering attracts creative explorers and curious problem solvers who are seeking a unique educational experience where technology, creativity and innovation intersect. As engineering students here, you will encounter our unique culture of Advanced Collaboration® and discover our distinctive approach to problem solving. At Carnegie Mellon, you'll learn to ask different questions — better questions.

— Chart Your Course to Engineering Success

Technical skills and methods are the foundation of successful engineering. At Carnegie Mellon, you'll apply fundamental knowledge to real-world problems. You'll learn inside classrooms, labs and maker spaces. You'll work with cutting-edge technology and hands-on tools. You'll collaborate with pioneering faculty, industry partners and government leaders.

And you'll be challenged to work in teams, think critically and act decisively. You'll define problems, design within technical and socioeconomic constraints, compare innovative alternatives with conventional solutions, predict results and measure outcomes.

With so many possibilities, your journey will lead you in new and unexpected directions. But you won't have to find your path alone.

Academic advisors guide you through the curriculum, and Carnegie Mellon's inclusive and welcoming community will support you along the way.

While exploring engineering majors and minors, electives offered across campus and integrated master's programs in engineering, business and science, you'll find your way to a fulfilling career, exciting endeavors and unlimited leadership potential.

Your journey starts here, but you decide where it will take you.

FIRST-YEAR CLASS
—
FALL 2023 433

Programs

Biomedical Engineering*

Chemical Engineering (BS)

Civil Engineering (BS)

**Electrical and Computer
Engineering (BS)**

**Engineering Design, Innovation
and Entrepreneurship***

Engineering and Public Policy*

Environmental Engineering (BS)

Materials Science and Engineering (BS)

Mechanical Engineering (BS)

* May be taken as an additional major only by engineering students

— Did you know?

Carnegie Mellon's College of Engineering is ranked **#8 BEST ENGINEERING** by *U.S. News & World Report*, and the university is **RANKED #4 MOST INNOVATIVE SCHOOLS**.

There are more than **400 STUDENT ORGANIZATIONS** at Carnegie Mellon, and more than 30 of them are primarily for **engineering students**.

The Society of Women Engineers (SWE) student chapter is **CONSISTENTLY RECOGNIZED NATIONALLY** for its efforts to provide social and **professional development opportunities** on campus and outreach to the local Pittsburgh community.

The **INCOMING CLASS** for fall 2023 is **46% women, 52% men and 2% non-binary**.

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– Curriculum Overview

At the College of Engineering, you'll integrate coursework in engineering, sciences, arts, business and other disciplines. You'll begin with two introductory engineering courses and co-requisite science courses that introduce you to basic engineering principles and inform which majors you want to pursue.

From there, your options expand across an extraordinary selection of courses throughout the university, while at the same time focus on the engineering disciplines that best match your interests and skills.

Whether you want to examine the tiny lipid nanoparticles revolutionizing mRNA therapies that treat deadly disease or explore the ways electric cars, smart cities and clean energy will impact our earth and its climate, you can study it here.

You'll learn to apply exciting new tools and technologies — artificial intelligence, robotics, 3D printing — to solving both traditional engineering challenges as well as problems once thought to be unsolvable.

You'll also be able to participate in interdisciplinary research, service-learning, study abroad programs and internships that allow you to experience first-hand the benefits of inclusion and collaboration.

– Student Research

Using powerful tools to find productive solutions – Terry Feng (MSE, SCS 2023)

Terry Feng's research experience studying the material properties of gallium oxide gave him an edge in working with the tools and equipment he used in his material science courses — particularly the high-powered scanning electron microscope.

Gallium oxide is an emerging ultra-wide bandgap semiconductor material that has potential uses in high-power and high-temperature devices. His research was conducted under the direction of Material Science and Engineering Professor Lisa Porter, who studies advanced electronic materials for future energy applications, semiconductor materials and devices for extreme environments, high-efficiency electronics and nanotechnology.

Feng's work focused on the effects of different surface treatments on 3D printed aluminum parts that Boeing hopes to be able to adhere with epoxy bonds in house instead of having to send them out for costly external processing.

Rewarding Energy Research – Lauren Janicke (CEE 2023)

Lauren Janicke's research with Professor Destenie Nock led to a scientific journal publication, prestigious internships and multiple awards, including a Graduate Research Fellowship from the National Science Foundation and the Judith Resnik Award, which recognizes an exceptional senior woman.

Janicke conducted a study which found that investments in renewable energy could significantly reduce air pollution generated through inefficiencies in transmission and distribution networks. It was published in the international journal Energy.

That work taught her how to analyze and transform data into interactive web maps, which she used to create visualizations of how snowfall affects Uber and Lyft usage in Chicago.

She spent one summer working on research at the National Renewable Energy Laboratory (NREL) in Colorado and the following summer, she had a full-time paid internship with the National Oceanic and Atmospheric Administration through the Ernest F. Hollings scholarship that she received.

AVG STARTING SALARY

\$99,311

GRADUATE SUCCESS

97%

Employed or in grad school (2023 graduates)

99% OF GRADUATES RESPONDING





RECENT EMPLOYERS

Boeing	Exxon
Clark Construction	Google
Deloitte	Proctor and Gamble

*OUR ENGINEERING STUDENTS
HAVE READY ACCESS TO
PROFESSORS IN SMALL-SIZED
CLASSES AT ONE OF THE NATION'S
TOP 20 ENGINEERING SCHOOLS.*

Carnegie Mellon University

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