

UNIVERSITY OF SAN DIEGO

Engineering





We measure our success by our students' success.



“USD is the only school in the country where all engineering graduates earn both a Bachelor of Arts and a Bachelor of Science degree in an accredited engineering program.”

Your typical, ‘plain vanilla’ engineers are wonderful technical problem-solvers, but they don’t have all of the abilities that come with the BA side of the degree.”

KATHLEEN KRAMER, PhD
Director of Engineering Programs
Professor of Electrical Engineering

We're on a mission:

To advance knowledge and provide student-centered education. To emphasize modern engineering skills that will make the nation and the world a better place in the 21st century. To develop the whole person by focusing on innovative teaching, meaningful scholarship and social awareness.

The University of San Diego's engineering program is nationally renowned. Here, students gain the skills and experience needed to become world-class engineers. They emerge from our program able to take charge while remaining mindful of the need for a global perspective.



Contents

- 4 Be the Solution
- 5 Let's Get Specific
- 7 Electrical Engineering
- 7 Industrial and Systems Engineering
- 7 Mechanical Engineering
- 9 Internships and Job Opportunities
- 9 Senior Projects
- 10 Excellent Results
- 10 How to Apply
- 12 Financial Aid
- 12 Contact Information



Be the Solution

Why should you become an engineer?

If you are considering an engineering career, you probably have a broad interest in science and mathematics and want to channel that into the right course of study to reach your goal. First-rate problem solvers, engineers have the satisfaction of making a true impact with their work. They put their practical skills to the test and provide solutions to the ever-evolving demands of today's fast-paced world. When you become an engineer, you haven't just joined the nation's second largest profession; you've become a member of a group of independent thinkers.

There's also the bottom line to consider: Engineering majors have the highest starting salary of any undergraduate major. And engineers aren't just highly paid; they're in high demand. The truth is, industries like technology, healthcare, business, law, construction and government are just a few of the sectors that require workers with specialized engineering skills.



Let's Get Specific

Why study engineering at the University of San Diego?

The quality of campus life, coupled with academic rigor and dedication to preparing students to excel in their profession distinguishes USD from other universities. Here, engineering studies are complemented by an integrated, values-based education, rooted firmly in the liberal arts. And as a Catholic university, USD aims to not only give students the knowledge and skills they need to be successful, but to also inspire a lifetime of giving back to their community. Highlights of the USD advantage include:

Dual Degree Program

The University of San Diego has the only program in the country that ensures a dual BA/BS degree. This tells employers that our engineers are not just technically skilled, but well-rounded, a pairing that assures they will excel on the job.

Our Faculty

Every full-time faculty member has a PhD and comes to USD highly qualified with a breadth of practical experience and a strong commitment to student learning and scholarship. Members of our faculty also serve as academic advisors and provide guidance to our students.

Small Class Sizes

Most engineering classes are small, with fewer than 20 students, and faculty — not graduate students — teach all classes. The result? Close relationships between students and faculty that extend well beyond the classroom.

Extensive Lab Opportunities

Students don't just learn to be an engineer by listening to lectures and reading textbooks: they learn by doing. The engineering program at the University of San Diego requires extensive lab work that provides the hands-on, problem-solving experience needed to not just study, but to become an engineer.

Connection to Your Future

USD offers invaluable internship opportunities during each course of study, targeted career counseling and a strong alumni network to enrich our student's journey.



Electrical Engineering

Electrical Engineering applies principles of design and analysis to the many systems and devices that use electricity. Electrical engineers impact daily life by delivering power to homes and businesses and designing systems for everything from TVs and stereos to wireless communication systems, medical devices and computers. Electrical engineers play a key role in the development of alternative and sustainable energy systems.

Mechanical Engineering

Mechanical Engineering involves the design, analysis and manufacture of mechanical components and devices, as well as the generation and conversion of mechanical energy. Mechanical engineers work on machines such as automobiles, jet engines, air-conditioners, robots, machine tools and manufacturing equipment. Mechanical engineers are also at the forefront of new technologies such as bioengineering, nanoengineering, and renewable energy.

Industrial and Systems Engineering

Industrial and Systems Engineering focuses on the design and improvement of integrated systems of people, materials, information, equipment and energy. Industrial engineers apply technical and business knowledge with engineering problem-solving skills in areas as diverse as health care, transportation and manufacturing. Because of the focus on the human aspects of these systems, industrial engineers are known as the “people engineers.”





Internships and Job Opportunities

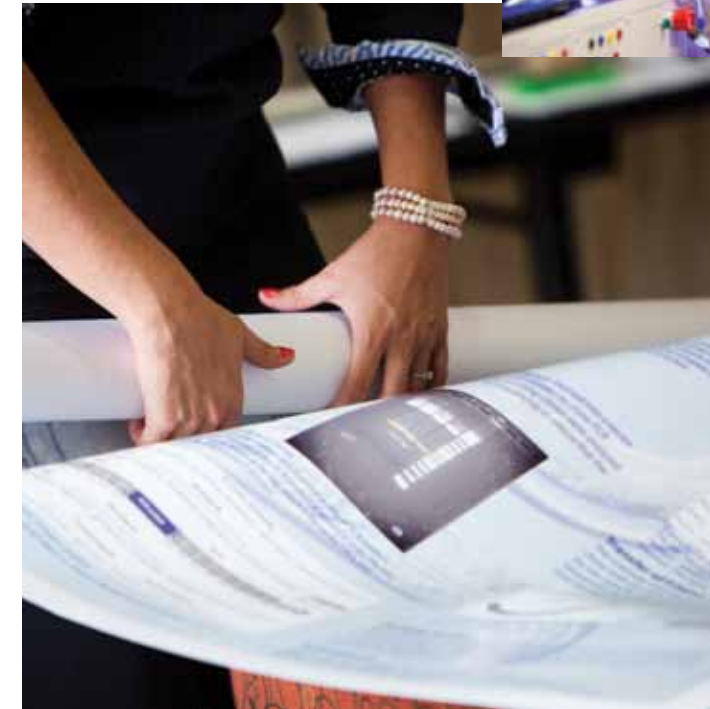
Internships are an important part of a college education; an internship gives the student an opportunity to gain hands-on, practical experience and enhance what is being taught in the classroom. USD students are in high demand throughout the San Diego area. Most engineering students are able to find paid internship positions while at school, and great career opportunities once they graduate.

Here are just some of the organizations where our students have worked: **BF Goodrich, Boeing, Callaway Golf, Disneyland, Honeywell, Lockheed Martin, Motorola, NASA, Northrop Grumman, Peace Corps, Qualcomm, Solar Turbines and UPS.**

Senior Projects

Students work on a senior project in their final year, which requires teamwork and an interdisciplinary approach in bringing together topics and knowledge from throughout the curriculum. Unique among USD's undergraduate programs, our engineering senior project allows students to demonstrate their engineering design skills in a concrete way: through a major project that requires the integration and application of their studies, which is then presented to faculty, fellow students and potential employers.

Following are a few examples of senior project topics: **Converting Exercise into Electric Energy, Electromagnetic Energy Harvesting, Human Powered Vehicle, Kinetic Chandelier, MRI Scheduling for the Moores UCSD Cancer Center Group, Pain Relief Glove and San Diego Food Bank Process Improvements.**



Excellent Results

We are proud of the outstanding achievements of our students, graduates and faculty. Our program is highly rated among non-doctoral engineering programs by *U.S. News and World Report*. To get the latest news about our program or to learn more about our faculty research, program recognition or the career achievements of our graduates, go to www.sandiego.edu/engineering.

How to Apply

Applicants to the University of San Diego are not required to declare a major in the admissions process; therefore, a separate application for engineering is not required. We seek students for our program who are well prepared academically, who have challenged themselves in the classroom, and have also shown a commitment to being involved in their communities and making a difference in the world around them. For more information on applying as a first-year or transfer student, please go to www.sandiego.edu/admissions/undergraduate.



USD ENGR DEPT

Financial Aid

There are a variety of financial aid opportunities available for incoming freshmen and transfer students, including scholarships, grants, work-study and loans. For more information, go to www.sandiego.edu/financial_aid.



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