UC San Diego
JACOBS SCHOOL OF ENGINEERING

SNAPSHOT
2025

WE MAKE **BOLD** POSSIBLE.

We are moving the needle on big challenges that hold the power to improve lives, drive the national economy and enhance global competitiveness.

FUSION ENGINEERING

We are leaders in California and across the country in fusion engineering. With collaborations linking universities, industry and government expertise, we are pursuing the fundamental and applied advances needed to make fusion energy a practical reality. At the same time, we are driving key workforce development efforts in fusion.

TRANSFORMED AND TRANSFORMING HEALTHCARE

Our strengths in ultra-low-power hardware, artificial intelligence (AI), privacy and security, and more represent opportunities to drive clinical-grade wearable biometric sensing at scale. Research partnerships with UC San Diego's forward-thinking Health System mean transformational advances can reach the clinic.

DOMESTIC BIOMANUFACTURING

We are building a domestic manufacturing base driven by microbes. With R&D partnerships and workforce development, we seek to make biomanufacturing cost-competitive by leveraging our unique capabilities in design, advanced data analytics, AI and robotics.

GENERATIVE AI / EMERGING INTELLIGENCE

With generative AI tools, software innovation, and teaching excellence, we have created a scalable "AI Tutor" platform aimed at improving learning inside and outside the classroom. This is just one of a series of computer science and electrical engineering efforts aimed at creating and harnessing the power of emerging intelligence for the public good.

SEMICONDUCTORS

California DREAMS (Defense Ready Electronics And Microdevices Superhub) is an easy-access platform for the design and manufacture of prototypes of advanced electronic modules such as heterogeneous semiconductors. This platform is a national resource for the U.S. microelectronics industry.

#1	**For citations per publication among public engineering schools***
#6	**Public engineering school in the USA***
#10	**Engineering School in the USA***
$316M	Total research expenditures for 2023-2024 at the Jacobs School of Engineering
47%	Approximately 47% of our research expenditures come from university-industry research partnerships and philanthropy
#2	The Jacobs School of Engineering is the second largest engineering school in California
5,994	Undergraduate Engineering Students (Fall '24)
3,625	Graduate Engineering Students (Fall '24) 2,254 MS / 1,371 PhD
2,822	Degrees (2023-2024) 1,459 BS / 1,119 MS / 244 PhD
288	Faculty at the Jacobs School 13 New faculty hired in 2024

*2025 U.S.NEWS RANKINGS OF BEST ENGINEERING SCHOOLS

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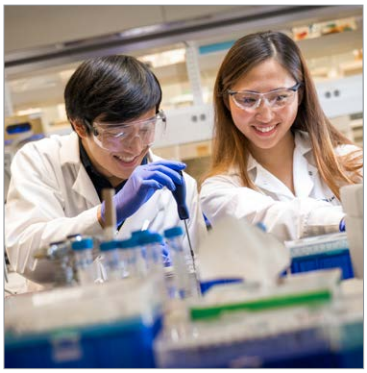
UC San Diego
JACOBS SCHOOL OF ENGINEERING

ACADEMIC DEPARTMENTS

BIOENGINEERING
SHU CHIEN-GENE LAY
DEPARTMENTOF BIOENGINEERING

33 Faculty
529 Undergraduates
495 Graduate students



- autodigestion
- bioinformatics
- biomaterials / biomechanics
- cell / tissue mechanics
- biophotonics / biosensors
- cardiac mechanics
- cardiovascular engineering and imaging
- cartilage / tissue engineering
- genomic engineering
- metabolic bioengineering
- microcirculation / transfusion medicine
- molecular / cellular bioengineering
- nanotechnology
- neuroengineering
- regenerative medicine / stem cells
- systems bioengineering
- translational bioengineering

MECHANICAL & AEROSPACE ENGINEERING

57 Faculty
1,137 Undergraduates
539 Graduate students

- aerospace technologies
- biomaterials, bio-inspired tech
- cell / membrane mechanics
- control and optimization
- combustion
- high-energy materials processing
- materials for extremes
- medical device technologies
- MEMS for extremes
- networked control systems
- renewable and carbon-neutral energy technologies
- robotics and design
- solid and soft matter mechanics of metamaterials
- thermo-physics, heat and mass transfer
- tribology for memory storage
- turbulence, geophysical flows, macro/microfluidic flows

COMPUTER SCIENCE & ENGINEERING

76 Faculty
1,604 Undergraduates
1,274 Graduate students

- artificial intelligence / machine learning
- bioinformatics
- computer architecture
- computer science pedagogy
- databases and info mgmt.
- embedded systems, VLSI/CAD
- graphics and vision
- human-computer interaction
- programming languages
- robotics
- security and cryptography
- software engineering
- systems and networking
- theoretical computer science

CHEMICAL AND NANO ENGINEERING
AIISO YUFENG LI FAMILY DEPARTMENT
OF CHEMICAL AND NANO ENGINEERING

28 Faculty
619 Undergraduates
177 Graduate students

- advanced nanomaterials
- computational materials science
- nanobiotechnology
- nanomanufacturing
- nanomedicine
- nanophotonics
- nanorobotics
- nanosensors
- nanotechnologies for energy storage and conversion
- stretchable, flexible electronics
- sustainable nanoengineering
- wearable devices

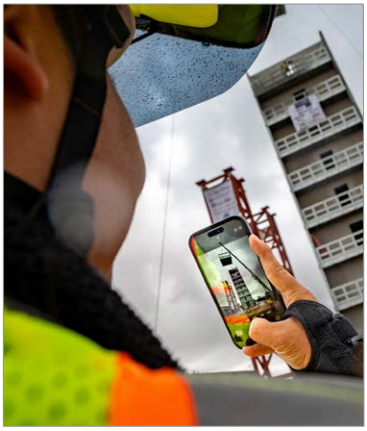
ELECTRICAL & COMPUTER ENGINEERING

66 Faculty
1,266 Undergraduates
975 Graduate students

- applied electromagnetics
- bioinformatics / bionanotech
- brain imaging / mapping
- communications systems
- cyber-physical systems security
- electronic circuits / systems
- embedded systems
- intelligent systems / robotics
- machine learning and data science
- magnetic and optical storage
- medical devices and systems
- nanoelectronics
- network infrastructure
- neural interfaces
- photonics / nanophotonics
- power engineering
- signal/image/video processing
- systems energy engineering
- wearable sensors

STRUCTURAL ENGINEERING

26 Faculty
839 Undergraduates
165 Graduate students



- aerospace structures / aviation safety
- biomechanics
- composites / nanomaterials
- computational fluid-structure interaction analysis
- computational mechanics for extreme events damage prediction
- earthquake engineering and infrastructure renewal
- geotechnical engineering / geomechanics
- large-scale experimental research
- multi-hazard mitigation for earthquakes, blasts and more
- risk analysis / visualization / optimization
- structural health monitoring / nondestructive evaluation