

WE MAKE BOLD POSSIBLE.

We solve the tough challenges no lab, discipline, or company can take on alone.

How we do it

When we collaborate with industry, government and academia, **we actually listen.**

The result: deep interactions and bold collaborations within UC San Diego's **\$1.45 billion** research enterprise, throughout San Diego's tech ecosystems, across California, the nation and the world.

We are a **top 9 engineering school** with the creativity and openness necessary to tackle the toughest shared challenges for the public good.

In Franklin Antonio Hall, we are creating a national model for innovation ecosystems with geographical roots and national reach.

#9 Engineering School in the USA

*2021 U.S. News Rankings of Best Engineering Schools

#1

#1 in nation for research \$ per faculty member, among U.S. public engineering schools*

#2

#2 Public engineering school in California*
#5 Public engineering school in the USA*

\$222M

Total research expenditures for 2019-2020 at the Jacobs School of Engineering

\$69M

Industry-sponsored research expenditures; and funding from gift + endowment income

14

Industry-sponsored centers and institutes launched in the last 7 years

We are transforming engineering education, at scale

How we do it

We empower one of the largest – and strongest – cohorts of undergraduate students in the nation to apply engineering and computer science theory to **real-world problems.**

In 2020, we initiated and strengthened a series of **culture-building programs** at the Jacobs School. Our goal is to create and support environments in which all of our students can do the creative and innovative technical work they are so capable of.

#1

The Jacobs School of Engineering at UC San Diego is the largest engineering school on the West Coast, according to the latest enrollment data from ASEE

9,174

Engineering Students (Fall 2020)
6,276 BS / 1,581 MS / 1,317 PhD

2,647

Engineering Degrees (2019-2020)
1,409 BS / 1,018 MS / 220 PhD

281

24 New faculty hired for Fall 2020
130+ faculty hired in the last 7 years

ACADEMIC DEPARTMENTS

BIOENGINEERING

30 Faculty
575 Undergraduates
349 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
1,205 Undergraduates
548 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

67 Faculty
1,959 Undergraduates
767 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

NANOENGINEERING

31 Faculty
621 Undergraduates
176 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

63 Faculty
1,459 Undergraduates
869 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
- signal/image/video processing
- systems energy engineering
- wearable sensors

STRUCTURAL ENGINEERING

25 Faculty
457 Undergraduates
189 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