

WE MAKE BOLD POSSIBLE.

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

How we do it

We collaborate across disciplines within the Jacobs School and throughout UC San Diego's \$1.2 Billion research enterprise.

When we partner with industry, we actually listen. The result: bold collaborations that address the toughest shared challenges.

In Franklin Antonio Hall, our new building, we are expanding our abilities to partner across fields and industries through the Collaboratories for the Digital Future.

In all we do, we return to our guiding principle: engineering for the public good.

RESEARCH IMPACT

#1

#1 in nation for research expenditures per faculty member, among U.S. public engineering schools (U.S. News; 2019)

\$188M

Total research funding at the Jacobs School

\$56M

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

13

Industry-sponsored centers and institutes launched in the last 5 years

75

Member companies in our Corporate Affiliates Program

136

Jacobs School technologies licensed in the last 5 years

We are transforming engineering education, at scale.

How we do it

Hands-on undergraduate education all four years, team-based internships, vast research opportunities that often cross disciplines, world-class maker studios, bold student-led engineering teams, a dynamic entrepreneurship ecosystem, and more.

We empower one of the largest cohorts of undergraduate students in the nation to apply theory to real-world problems.

EDUCATION + WORKFORCE

#2

#2 in nation for bachelor's degrees in engineering and computer science awarded to women (ASEE)

#3

#3 in nation for bachelor's degrees awarded in engineering and computer science (ASEE)

8,976

Students enrolled in Fall 2018

2,749

Degrees awarded in 2017-2018

249

Faculty at the Jacobs School of Engineering

90

Faculty hires in the last 5 years

ACADEMIC DEPARTMENTS

BIOENGINEERING

29 Faculty
593 Undergraduates
307 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

49 Faculty
1,186 Undergraduates
533 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

61 Faculty
1,855 Undergraduates
837 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

30 Faculty
663 Undergraduates
171 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

57 Faculty
1,255 Undergraduates
914 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

23 Faculty
473 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