**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.

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**#9 Engineering School in the USA**

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

<table>
<thead>
<tr>
<th>Rank</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>#1 in nation for research $ per faculty member, among U.S. public engineering schools*</td>
</tr>
<tr>
<td>#2</td>
<td>#2 Public engineering school in California* #5 Public engineering school in the USA*</td>
</tr>
<tr>
<td>$222M</td>
<td>Total research funding for 2019-2020 at the Jacobs School of Engineering</td>
</tr>
<tr>
<td>$69M</td>
<td>Industry-sponsored research funding; and funding from gift and endowment income</td>
</tr>
<tr>
<td>14</td>
<td>Industry-sponsored centers and institutes launched in the last 7 years</td>
</tr>
</tbody>
</table>

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**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.
ACADEMIC DEPARTMENTS

BIOENGINEERING
- 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

57 Faculty
1,205 Undergraduates
548 Graduate students

MECHANICAL & AEROSPACE ENGINEERING
- 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

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

COMPUTER SCIENCE & ENGINEERING
- 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

25 Faculty
457 Undergraduates
189 Graduate students

ELECTRICAL & COMPUTER ENGINEERING
- 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

30 Faculty
575 Undergraduates
349 Graduate students

STRUCTURAL ENGINEERING
- 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

25 Faculty
457 Undergraduates
189 Graduate students