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.

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

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
- cardiovascular engineering and imaging
- cartilage / tissue engineering
- control and optimization
- combustions
- high-energy materials processing
- materials for extremes
- military 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

30 Faculty
575 Undergraduates
349 Graduate students

MECHANICAL & AEROSPACE ENGINEERING
- aerospace technologies
- biomaterials, bio-inspired technology
- 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

57 Faculty
1,205 Undergraduates
548 Graduate students

COMPUTER SCIENCE & ENGINEERING
- artificial intelligence / machine learning
- bioinformatics
- computer architecture
- computer science pedagogy
- databases and information management
- embedded systems, VLSI/CAD
- graphics and vision
- human-computer interaction
- programming languages
- robotics
- security and cryptography
- software engineering
- systems and networking
- theoretical computer science

67 Faculty
1,959 Undergraduates
767 Graduate students

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

31 Faculty
621 Undergraduate
176 Graduate students

ELECTRICAL & COMPUTER ENGINEERING
- applied electromagnetics
- bioinformatics / bionanotech
- brain imaging / mapping
- communications systems
- cyber-physical systems
- 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

63 Faculty
1,459 Undergraduates
869 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 Undergraduate
189 Graduate students