



# Bioengineering

## Degree and Emphasis Offered

PhD in Biological Engineering  
Bioengineering Graduate Emphasis

## About the Program

UC Santa Barbara welcomed the inaugural cohort of graduate students to its Biological Engineering PhD Program in Fall 2022. The PhD program provides students with formal training in biological engineering that unites UCSB's strengths in engineering, biophysics, biochemistry, quantitative biology, and data sciences into a strong, coherent, forward-looking curriculum. At the interface of engineering and the sciences, the program benefits from the strong, collaborative relationships that already exist across campus. Our researchers are combining engineering from biology and engineering for biology to make fundamental scientific advances and transition discoveries to applications in medicine, biotechnology, and sustainability.

The Department of Bioengineering trains students in fundamental discovery, experimental methods, quantitative analysis, technological design, innovation, and application, and prepares them for careers in all areas of bioengineering. The department, based in the new, state-of-the-art BioEngineering Building, fosters an academic climate that not only celebrates diversity but actively dismantles institutional and systemic barriers to diversity at individual and institutional levels.

The Department of Bioengineering also houses two training grant programs which augment the Biological Engineering PhD program and provide first-year traineeship funding and offer professional development support throughout the PhD. The training grant programs include the National Institute of Health (NIH) T32 Training Grant in Quantitative Mechanobiology and the NSF National Research Traineeship (NRT) in Data Driven Biology.

## Focus Areas

- Computation, Modeling, and Signal Processing
- Synthetics and Systems Biology
- Cell, Tissue, and Device Engineering

## By the Numbers

- 27** Affiliated and Co-tenure Faculty, including:
  - 2** National Academy of Sciences members
  - 7** American Institute for Medical and Biological Engineering (AIMBE) Fellows
  - 15** National Science Foundation (NSF) Early CAREER Award recipients
  - 2** Presidential Early Career Award for Scientists and Engineers (PECASE) recipients
- 10** Departments represented by BioE faculty
- 22** PhD Students (Fall 2024)
  - 1** NSF National Research Traineeship (NRT) Grant in Data Driven Biology
  - 1** National Institutes of Health (NIH) T32 Training Grant in Quantitative Mechanobiology



UC SANTA BARBARA  
College of Engineering



## Requirements

- Online application: [www.graddiv.ucsb.edu/eapp](http://www.graddiv.ucsb.edu/eapp)
- Statement of Purpose (SOP), Personal History and Diversity Statement (PH&DS), and Resume or CV (submitted in the online application)
- Three letters of recommendation (Submitted online)
- Official transcripts from all post-secondary institutions attended (Submitted online)
- TOEFL scores 560 Paper-Based Test (PBT), 83 Internet-Based Test (IBT), IELTS (International English Language Testing System) Overall Band, or Duolingo English Test (DET)
- Final/Official transcripts will be required for all applicants who are admitted and have indicated their intent to enroll at UC Santa Barbara by submitting a Statement of Intent to Register (SIR).

## Testimonials



**Artury Ramirez**

*PhD Student*

“UCSB immediately welcomed me and provided rich academic and professional resources. Bioengineering is a supportive department that really values student well-being, collaboration, growth, and success. As a data-driven biology scholar, I have had the chance to dive into a range of research areas hands-on, from bioinstrumentation to tissue engineering and synthetic biology. I’m thrilled to say my time here in the UCSB Bioengineering Department has made me develop so much as a researcher, and it’s shown me that it’s never too late to pursue your passions.”



**Gianna Gathman**

*PhD Student*

“Through the Bioengineering Department at UCSB, I have been able to grow as a scientist and as a professional due to the department’s interdisciplinary approach to research and opportunities for career development. In addition to learning from skilled researchers, I have improved my scientific communication through mentorship and by leading classes and outreach for high school students and the community, rounding out the holistic approach I’ve taken to my PhD.”

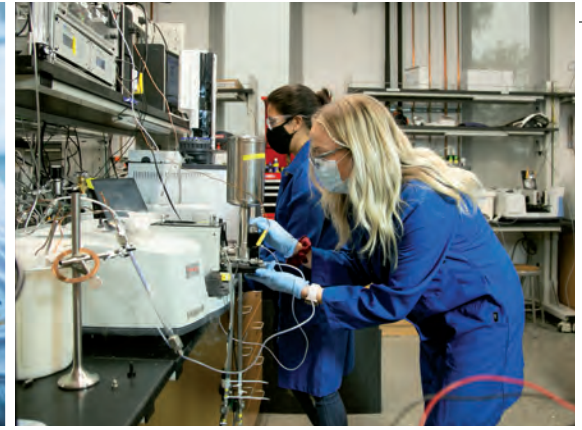
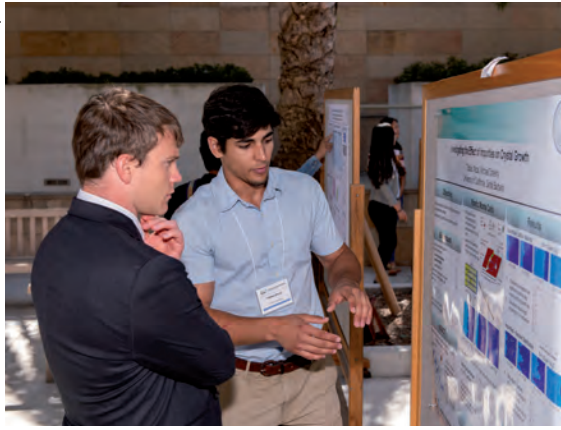
## Interdisciplinary Centers and Programs

- Biopolymers, Automated Cellular Infrastructure, Flow, and Integrated Chemistry Materials Innovation Platform
- California Nanosystems Institute
- Center for Materials for Water and Energy Systems
- Center for Polymers and Organic Solids
- Complex Fluids Design Consortium
- Dow Materials Institute
- Institute for Collaborative Biotechnologies
- Institute for Energy Efficiency
- Kavli Institute for Theoretical Physics
- Materials Research Laboratory
- Mitsubishi Chemicals Center for Advanced Materials
- National Science Foundation BioFoundry for Extreme and Exceptional Fungi, Archaea, and Bacteria (Ex-FAB)
- Technology Management Department

## Deadlines

- **Fall Only:** December 5 (by 11:59 PM PST)

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# Chemical Engineering

## Degree Offered

PhD

## About the Program

The Chemical Engineering Department at UC Santa Barbara offers a PhD in Chemical Engineering, with an emphasis on training the next generation of scholars and thought leaders. The program is consistently rated among the world's best, ranking second in the world in the most recent National Research Council rankings and among the top ten in the past five graduate school rankings released by U.S. News & World Report.

Drawing students from around the world, the department has a long tradition of providing leadership in the field and groundbreaking contributions to multidisciplinary chemical engineering research. Its world-renowned faculty and spirit of collaboration define a unique approach to research. Student projects involve interdisciplinary teams, and typically, about forty percent of graduate students are co-advised. Students also interact regularly with academic, industrial, national lab, and start-up collaborators and department visitors, exposing them to a range of career paths and opportunities.

The department invites applications from determined and innovation-minded students, who are drawn toward UCSB's tradition of open collaboration and interdisciplinary research. The department encourages applications from diverse scholars, spanning distinct individual identities, backgrounds, and experiences. New students have access to multiple graduate housing options on campus, including the large San Clemente graduate housing complex and several family housing options.

## Research Strengths

- Biomaterials and Bioengineering
- Energy, Catalysis, and Reaction Engineering
- Sustainable Production of Chemicals, Fuels, and Materials
- Complex Fluids and Polymers
- Electronic and Optical Materials
- Fluids and Transport Phenomena
- Molecular Thermodynamics and Simulation
- Process Systems Engineering
- Surfaces and Interfacial Phenomena

## By the Numbers

- #2** ChE Graduate Research Program, NRC
- #9** ChE Graduate Program at Public University, U.S. News & World Report (2025)
- 21** Affiliated Faculty Members, including
  - 15** NSF Early CAREER/Young Presidential Award recipients
  - 4** National Academy of Engineering Members
  - 4** Sloan Research Fellows
  - 3** Presidential Early Career Award for Scientists and Engineers (PECASE) recipients
- 79** Graduate Students (Fall 2024)
- 3.8:1** PhD Student-to-Faculty Ratio
- 23** PhD Degrees Awarded (2023-'24)

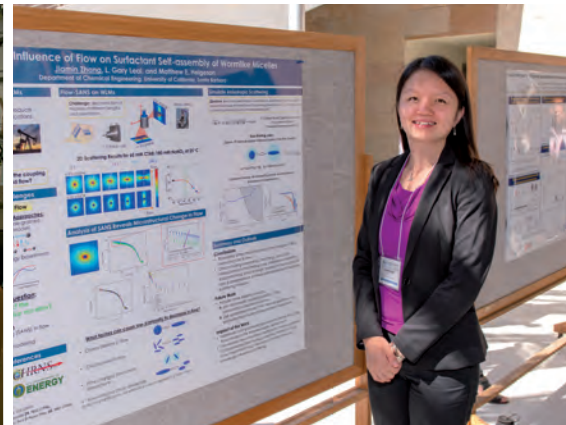


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[chemengr.ucsb.edu](http://chemengr.ucsb.edu)

[chegrads@engineering.ucsb.edu](mailto:chegrads@engineering.ucsb.edu)

(805) 893-8671



## Requirements

- Online application: <https://www.graddiv.ucsb.edu/eapp>
- Statement of Purpose (SOP), Personal History and Diversity Statement (PH&DS), and Resume or CV (submitted in the online application)
- Three letters of recommendation (Submitted online)
- Official transcripts from all post-secondary institutions attended (Submitted online)
- TOEFL scores 560 Paper-Based Test (PBT), 83 Internet-Based Test (IBT) or IELTS (International English Language Testing System) Overall Band score of 7 or higher (if applicable)
- Final/Official transcripts will be required for all applicants who are admitted and have indicated their intent to enroll at UC Santa Barbara by submitting a Statement of Intent to Register (SIR).

## Testimonials



**Nikki Schonbach**

(PhD '17)

Principal Scientist,  
Pfizer

“The opportunities are endless at UCSB. We have excellent educators and research principal investigators who conduct research across a broad range of engineering, chemistry, and physics that allow us to develop invaluable real-world skills. My time at UCSB helped me to build the toolset I needed to become a significant contributor to Pfizer's COVID-19 vaccine development, and to continued mRNA process development for other projects since.”



**Alexandra V. Bayles**

(PhD '18)

Assist. Prof. of Chemical  
and Biomolecular  
Engineering, University  
of Delaware

“At UCSB, I benefited from a highly collaborative research atmosphere. The prevalence of co-advising, both inside and outside the ChE Department, provided frequent exposure to fields outside my own. It made me a more well-rounded scientist. The department also provided me with opportunities to travel to connect with researchers across the world. ChE faculty are incredibly supportive of sending graduate students to conferences and to pursue collaborations. Unique programs like the UCSB-Chalmers Student Exchange allowed me to network in places as far away as Sweden!”

## Interdisciplinary Centers and Training Programs

- Bioengineering Department
- Biopolymers, Automated Cellular Infrastructure, Flow, and Integrated Chemistry Materials Innovation Platform (BioPACIFIC MIP)
- California Nanosystems Institute (CNSI)
- Center for Materials for Water and Energy Systems (M-WET)
- Center for Polymers and Organic Solids
- Complex Fluids Design Consortium
- Dow Materials Institute
- Institute for Collaborative Biotechnologies (ICB)
- Institute for Energy Efficiency (IEE)
- Kavli Institute for Theoretical Physics
- Materials Research Laboratory (MRL), an NSF MRSEC
- Mitsubishi Chemicals Center for Advanced Materials
- NSF BioFoundry for Extreme & Exceptional Fungi, Archaea and Bacteria (ExFAB)
- Technology Management Department

## Deadlines

- **Fall Only:** December 10, 2024 (by 11:59 PM PST)



Scan to learn more  
about centers and  
training programs.

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[chemengr.ucsb.edu](http://chemengr.ucsb.edu)

[chegrads@engineering.ucsb.edu](mailto:chegrads@engineering.ucsb.edu)

(805) 893-8671



# Computer Science

## About the Program

The Computer Science (CS) Department's graduate program is designed for preparing the future leaders in this dynamic discipline. The department offers research and education in all major areas of computing. From harnessing the power of machine learning to ensuring the security of cloud computing, from investigating new horizons of human-computer interaction to improving energy efficiency, our faculty and students are making impactful contributions on all frontiers of computer science. CS is the most in-demand graduate program at UCSB, and it has been rising fast in rankings. The National Research Council's most recent ranking places UCSB's CS doctoral program in the top ten.

The CS graduate program offers PhD and master's degrees. The program has a collaborative and supportive culture that prioritizes the success and well-being of its students. Research, courses, and special-topic seminars provide graduate students a high degree of interaction with the department's world-renowned faculty, as well as opportunities for interdisciplinary research. Course offerings emphasize computing foundations, systems, and applications. One of the most important aspects of the program is the wealth of hands-on research opportunities for graduate students.

The CS Department has an outstanding research presence in all core areas of computing. CS faculty and students are pioneering novel technologies that transform society, such as natural language processing to identify misinformation, vulnerability detection that improves the security of cloud computing, wireless technologies that provide network access to developing regions, interface technologies integrating digital and real-world experiences, techniques for mining large data sets for meaningful information, distributed computing for smart farms, algorithms for quantum computers, and computational techniques that enable new discoveries in biology, materials science, medicine, and ecology. And that is only a subset of the exciting research being pursued by CS faculty and students.

## Degree Offered

MS, PhD

## Areas of Specialization

- Data, Systems, and Networks
- Interactive and Visual Computing
- Machine Learning and Artificial Intelligence
- Security, Privacy, and Dependability
- Theory, Algorithms, and Computational Science

## By the Numbers

- 41** Faculty, including:
- 18** National Science Foundation (NSF) Early CAREER Award winners
- 9** Association for Computing Machinery (ACM) Fellows
- 6** Institute of Electrical and Electronics Engineers (IEEE) Fellows
- 9** Endowed Chair holders
- 1** National Academy of Engineering (NAE) member
- 1** National Academy of Sciences (NAS) member
- 210** MS and PhD Students (Fall 2024)
- 71** MS and PhD Degrees Awarded (2023-'24)
- #6** CS Doctorate Program, National Research Council (2011)
- #13** Public CS Science Graduate Program, U.S. News & World Report (2024)
- #15** Public CS Department, CSRankings (2012-'24)

**see next page for more specialty rankings...**



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[cs.ucsb.edu](http://cs.ucsb.edu) | [gradhelp@cs.ucsb.edu](mailto:gradhelp@cs.ucsb.edu)



## Requirements

- Online application: <https://www.graddiv.ucsb.edu/eapp>
- Statement of Purpose, Personal History and Diversity Statement, and Resume or CV (Submitted in the online application)
- Three letters of recommendation (Submitted online)
- Unofficial transcripts from all post-secondary institutions attended (Submitted online)
- English Language Exam Scores (if applicable): TOEFL Internet-Based Test (IBT) total score of 100, or TOEFL Paper-Based Test (PBT) total score of 600, or IELTS Overall Band score of 7, or Duolingo English Test total score of 130, or higher
- Final/Official transcripts will be required for all applicants who are admitted and have indicated their intent to enroll at UC Santa Barbara by submitting a Statement of Intent to Register (SIR)

## Testimonials



**George Runcie**  
(MS '97)  
*Engineering Software  
Manager, Nvidia*

“UCSB Computer Science was an essential element of my professional career. The curriculum provided a fundamental understanding of software architecture and algorithm design. This foundation has led me to achieve innovative versatility in high-scale computer systems.”



**Sharon Levy**  
(PhD '23)  
*Assistant Professor of  
Computer Science,  
Rutgers University*

“The collaborative and welcoming environment in the Computer Science Department has allowed me to excel in academic research and make an impact on society!”



**Yi Ding**  
(PhD '22)  
*Assistant Professor of  
Computer Science,  
Georgia State University*

“I'd like to express my gratitude to the UCSB Computer Science Department for providing an open and supportive research environment for mentors and mentees alike, recruiting and training wonderful students, and supporting their research. I hope to re-create these wonderful experiences for students and mentors in my new role as an assistant professor at Georgia State University.”

## Research Centers, Affiliated Institutes, and Initiatives

AI Institute for Agent-based Cyber Threat Intelligence and Operation (ACTION)

Institute for Collaborative Biotechnologies (ICB)

Center for Cybersecurity

Center for Information Technology and Society

Center for Geometric Computing

Center for Responsible Machine Learning

Data Science Initiative

Information Network Academic Research Center

Institute for Energy Efficiency (IEE)

Mind and Machine Intelligence Initiative

### Additional CS Rankings, among public universities (2012-'24)

- |                                  |  |
|----------------------------------|--|
| <b>#7</b> Design Automation      | <b>#14</b> Natural Language Processing     |
| <b>#5</b> Databases              | <b>#11</b> The Web & Information Retrieval |
| <b>#6</b> Computer Graphics      | <b>#13</b> Operating Systems               |
| <b>#10</b> Computer Architecture | <b>#12</b> Cryptography                    |

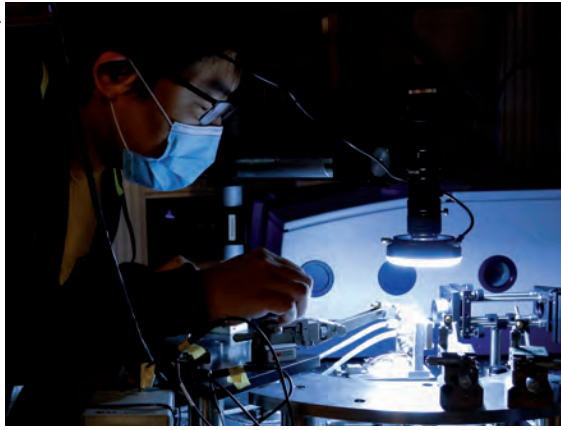
## Deadlines

- **Fall Only:** December 15, 2024 (by 11:59 PM PST)

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[cs.ucsb.edu](https://cs.ucsb.edu)

[gradhelp@cs.ucsb.edu](mailto:gradhelp@cs.ucsb.edu)



# Electrical and Computer Engineering

## Degrees Offered

MS, MS/PhD, PhD

## About the Program

The Department of Electrical and Computer Engineering (ECE) is a broad field encompassing such diverse areas as computers and digital systems, control, communications, electronics, signal processing, electromagnetics, electro-optics, physics of electronic devices, and device fabrication. As in most areas of engineering, in ECE, knowledge of mathematics and the natural sciences is combined with engineering fundamentals and applied to the theory, design, analysis, and implementation of devices and systems for the benefit of society.

The department is known for its high-impact interdisciplinary research and collaboration — many revolutionary innovations have been developed by ECE research, and our faculty continue to pioneer new technical frontiers.

## Research Specializations

- Communication and Signal Processing
- Computer Engineering
- Control Systems
- Electronics and Photonics

## By the Numbers

**#7** ECE program at a U.S. public institution (2024)

**#15** Public graduate program, U.S. News and World Report (2025)

**45** Faculty Members

**Among our current faculty, research professors, and emeriti:**

**2** Nobel Laureates

**15** National Academy of Engineering (NAE) members

**5** National Academy of Science (NAS) members

**43** Institute of Electrical and Electronics Engineers (IEEE) Fellows

**25** National Science Foundation (NSF) Early CAREER recipients

**3** Presidential Early Career Award for Scientists and Engineers (PECASE) recipients

**\$19.1M** in Annual Research Funding (2021-'24)

**316** MS and PhD Students (Fall 2024)

**7:1** PhD Student to Faculty Ratio (Fall 2024)

**39** MS Degrees Awarded (2023-'24)

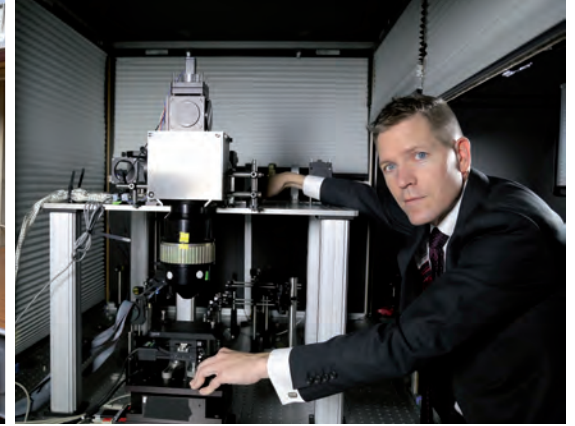
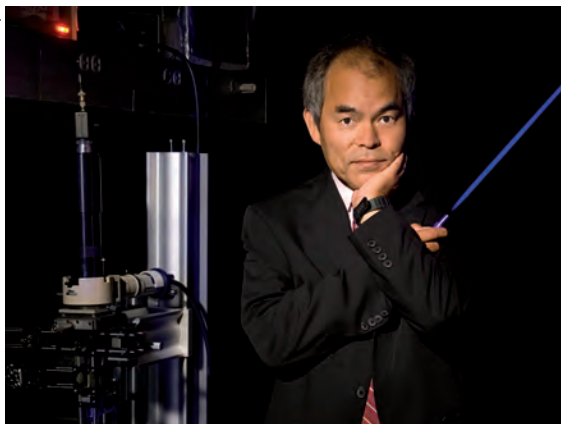
**32** PhD Degrees Awarded (2023-'24)



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[www.ece.ucsb.edu/grad/apply](http://www.ece.ucsb.edu/grad/apply)

[grad-apply@ece.ucsb.edu](mailto:grad-apply@ece.ucsb.edu)



## Requirements

- Online application: <https://www.graddiv.ucsb.edu/eapp>
- ECE Graduate Studies Application Information page: <https://www.ece.ucsb.edu/grad/apply>
- ECE Graduate Studies Frequently Asked Questions page: <https://web.ece.ucsb.edu/academics/grad/resources/ms-resources/faq>
- Statement of Purpose, Personal History and Diversity Statement (minimum word count of 250 words), and brief resume or CV of your academic career (submitted in the online application).
- Three letters of recommendation (submitted online).
- Official transcripts from all post-secondary institutions attended (submitted online).
- English Language Exam Scores (if applicable): TOEFL Internet-Based Test (IST) total score of 80, or TOEFL PaperBased Test (PBT) total score of 550, or IELTS Overall Band score of 7, or Duolingo English Test total score of 120, or higher.
- Note: DO NOT include papers, technical reports, or copies of bachelor or master's theses, as these will be discarded. A mention of their existence in your resume or CV is sufficient
- All required application materials must be received by the corresponding admission deadline in order for the application to be considered complete, and evaluated.
- Final/Official transcripts will be required for all applicants who are admitted and have indicated their intent to enroll at UC Santa Barbara by submitting a Statement of Intent to Register (SIR).

## Testimonials



**Jenny Zeng**  
(PhD '24)

“ I chose UCSB because the College of Engineering is among the best in the nation, and ECE professors pursue world-leading research and greatly encourage graduate student internships in their labs. The department also offers very innovative and diverse research fields for graduate students, and the academic advisors are very responsive and helpful.”



**Elaheh Ahmadi**  
(PhD '15)  
*Associate Professor of  
Electrical and Computer  
Engineering, UCLA*

“ I had an amazing experience at UCSB working with some of the most distinguished professors in the field of semiconductors. The unique collaborative atmosphere at UCSB helped me to grow both professionally and personally. Moreover, the world-class facilities at UCSB provided me with all the critical tools needed to succeed in my research. Last but not least, the support and mentorship of my PhD and postdoc advisors greatly helped me to prepare for an academic career.”

## Interdisciplinary Centers and Programs

- UCSB Nanofabrication Facility
- American Institute for Manufacturing of Photonics (AIM)
- AI Institute for Agent-Based Cyber Threat and Operation (ACTION)
- California Nanosystems Institute (CNSI)
- Institute for Energy Efficiency (IEE)
- Center for Bio-Image Informatics (CBI)
- Center for Converged TeraHertz Communications & Sensing (ComSenTer)
- Center for Control Dynamical Systems, and Computation (CCDC)
- Center for Multimodal Big Data Science and Healthcare
- Center for Responsible Machine Learning (CRML)
- Materials Research Laboratory (MRL)
- Neuroscience Research Institute (NRI)
- Optoelectronics Technology Center (OTC)
- Solid-State Lighting and Energy Electronics Center (SLEEC)
- Terabit Optical Ethernet Center (TOEC)
- UCSB Quantum Foundry (UQF)

## Deadlines

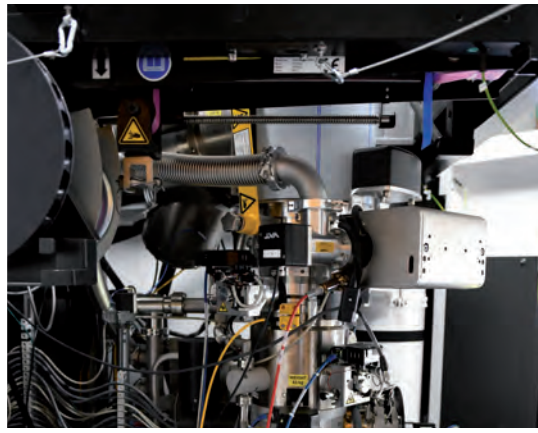
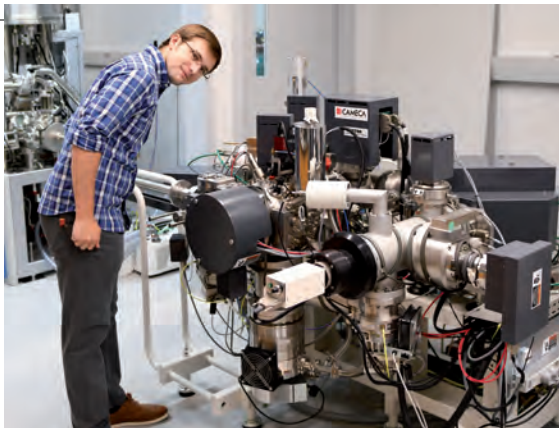
- **Fall:** December 16, 2024 (by 11:59 PM PST) - Financial support and admission consideration (MS, MS/PhD, PhD)
- **Winter:** November 1, 2024 (by 11:59 PM PST) - Admission only (PhD)
- **Spring:** January 2, 2025 (by 11:59 PM PST) - Admission only (PhD)

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[www.ece.ucsb.edu/grad/apply](http://www.ece.ucsb.edu/grad/apply)

[grad-apply@ece.ucsb.edu](mailto:grad-apply@ece.ucsb.edu)





# Materials

## Degree Offered

PhD

## About the Program

The Materials Department at UC Santa Barbara is a globally recognized leader in materials research, annually ranked among the top graduate departments in the world. The department was conceptualized and built around one central precept: that research is most effective in a collaborative, multidisciplinary academic environment. The approach has proved to be a department hallmark, as collaboration and collegiality are the norm, and education is paramount.

Our world-class faculty offers accredited programs leading to a PhD in Materials. In addition to providing a wealth of research and educational opportunities in these areas, the department offers an array of cross-cutting courses that cover the conceptual foundations of the field: the principles governing the growth and evolution of materials, the techniques used to characterize the structure and properties of materials, and computational methods that enable precision materials design and analysis.

The Materials Department is deeply invested in the idea that diverse research teams improve our ability to innovate and solve problems effectively, and is committed to supporting and mentoring diverse cohorts of students from all backgrounds to develop as scholars and professionals.

Materials at UC Santa Barbara is world renowned yet retains the spirit and excitement of a growing institution, with research programs constantly evolving and new initiatives emerging. The future looks very promising. We invite you to be part of it at UC Santa Barbara.

## Areas of Specialization/ Research Strengths

- Electronic and Photonic Materials
- Functional and Quantum Materials
- Macromolecular and Biomolecular Materials
- Structural Materials

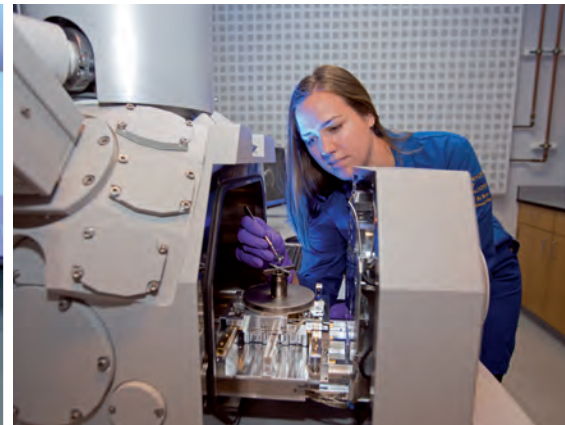
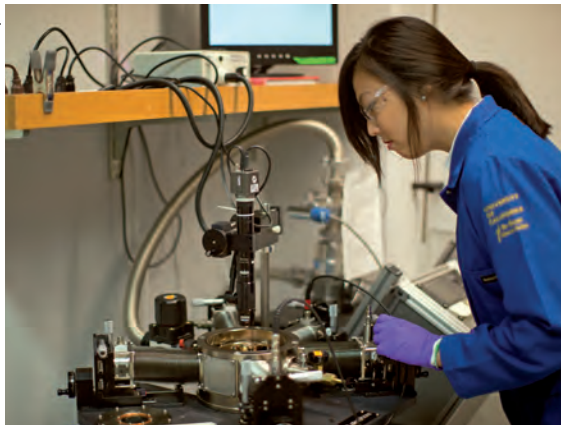
## By the Numbers

- #1** Materials Department, National Research Council
- #2** Public Materials Graduate Program, U.S. News & World Report (2025)
- 32** Faculty, including:
  - 2** Nobel Laureates
  - 14** National Academy of Engineering (NAE) members
  - 2** National Academy of Sciences (NAS) members
  - 8** National Academy of Inventors (NAI) members
  - 10** American Physical Society (APS) Fellows
  - 17** National Science Foundation Early CAREER and Presidential Young Investigator award winners
- 140** Graduate Students (Fall 2024)
- 4:1** PhD Student-to-Faculty Ratio (Fall 2023)
- 46** MS and PhD Degrees Awarded (2023-'24)



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[materials.ucsb.edu](https://materials.ucsb.edu) | [mtrl-application@engineering.ucsb.edu](mailto:mtrl-application@engineering.ucsb.edu) | (805) 893-4601



## Requirements

- Online application: <https://www.graddiv.ucsb.edu/eapp>
- Statement of Purpose, Personal History and Diversity Statement, and Resume or CV (submitted in the online application)
- Three letters of recommendation from referees who can attest to the ability of the student to excel in a rigorous academic program and in creative research (submitted online)
- Unofficial transcripts from all post-secondary institutions attended (submitted online)
- TOEFL scores 600 Paper-Based Test (PBT), 100 Internet-Based Test (IBT), or IELTS (International English Language Testing System) Overall Band score of 7 or higher (if applicable), or Duolingo English Test total score of 120, or higher.
- Departmental Academic History sheet (submitted online)
- Application fee waivers are available to qualified U.S. citizens and permanent residents who demonstrate evidence of financial need or proof of participation in undergraduate research programs, such as McNair Scholars and California Alliance Minority Participation (CAMP).
- For more details, scan QR code or visit [materials.ucsb.edu/academics/phd-program-application-process](https://materials.ucsb.edu/academics/phd-program-application-process)



## Testimonials



**Wennie Wang**  
(PhD '18)

*Assistant Professor,  
The University of Texas  
at Austin*

“ I am deeply grateful for my graduate experience in the Materials Department at UCSB. It was here that I learned how to engage with research, establish and grow my network, and become an effective communicator. The world-renowned faculty, state-of-the-art facilities and instrumentation, and plethora of student- and university-run initiatives and seminars means there is something for everyone to create their own unique research experience and community of lifelong friends and collaborators. The interdisciplinary interactions and collaborations in the Materials Department with the engineering and natural sciences departments truly provided an outstanding education.”



**Hunter Martin**  
(PhD '18)

*Director, Hughes  
Research Laboratory's  
Center for Additive  
Materials*

“ The UCSB Materials Department enabled me to work with the best and brightest materials scientists in the world. Utilizing leading analytical and experimental facilities exposed me to a wealth of material knowledge few get to experience. The collaborative nature of the program and the faculty's deep expertise helped me grow as a scientist and become a key contributor at HRL Laboratories designing new alloys for additive manufacturing. I would not trade this experience for anything, and I look forward to working with the future material science leaders that UCSB continues to generate.”

## Select Interdisciplinary Centers and Programs

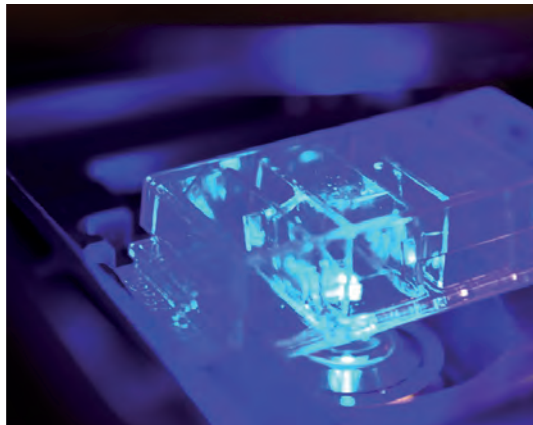
- Aqueous Battery Consortium, a DOE Energy Innovation Hub
- California NanoSystems Institute
- Center for Materials for Water and Energy Systems
- Center for Multifunctional Materials and Structures
- Dow Materials Institute
- Institute for Collaborative Biotechnologies
- Institute for Energy Efficiency
- Materials Research Laboratory
- Mitsubishi Chemical Center for Advanced Materials
- Pratt and Whitney Center of Excellence for Composites
- NSF BioPACIFIC Materials Innovation Platform
- Solid State Lighting and Energy Electronics Center
- UC Santa Barbara NSF Quantum Foundry

## Deadlines

- **Fall/ Winter/ Spring:** December 1, 2024 (by 11:59 PM PST)

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[materials.ucsb.edu](https://materials.ucsb.edu) | [mtrl-application@engineering.ucsb.edu](mailto:mtrl-application@engineering.ucsb.edu) | (805) 893-4601



# Mechanical Engineering

## Degrees Offered

MS, PhD

## About the Program

The profession of mechanical engineering is undergoing fundamental transformations initiated by scientific breakthroughs and newly emerging technologies. Graduate students in UC Santa Barbara's Mechanical Engineering Department are prepared to actively shape these transformations and to build on the opportunities they create.

The curricula for each of the major areas emphasize a broad education in the fundamental principles, with subsequent training in the area of specialization. Programs of study and research are highly flexible, and can be individually tailored to accommodate the interests and needs of the students. Interdisciplinary approaches are emphasized, and students are encouraged to cross over traditional boundaries into other departments within the College of Engineering and other science disciplines.

The Department of Mechanical Engineering features world-renowned faculty. Numerous faculty members have been awarded the most prestigious prizes and awards in their respective fields, including the National Science Foundation's Early CAREER Award, the Sloan Fellowship, the Packard Fellowship, and election to the National Academy of Engineering. Faculty and staff in the department look forward to the opportunity to collaborate with talented and motivated graduate students.

## Areas of Specialization

- Bioengineering and Systems Biology
- Computational Science and Engineering
- Dynamic Systems, Control and Robotics
- Micro and Nanoscale Engineering
- Solid Mechanics, Materials and Structures
- Thermal Sciences and Fluid Mechanics

## By the Numbers

- 26** Faculty, including:
  - 4** National Academy of Engineering (NAE) members
  - 1** National Academy of Sciences (NAS) member
  - 16** National Science Foundation (NSF) Early CAREER Award winners
  - 7** American Society of Mechanical Engineers (ASME) Fellows
  - 3** Sloan Fellows
  - 1** Presidential Early Career Award for Scientists and Engineers (PECASE) recipient
  - 1** Packard Fellow
- 92** MS and PhD Students (Fall 2024)
- 2.3:1** PhD Student-to-Faculty Ratio (Fall 2024)
- 38** MS and PhD Degrees Awarded (2023-'24)
- #16** Public Mechanical Engineering Graduate Program, U.S. News & World Report (2025)

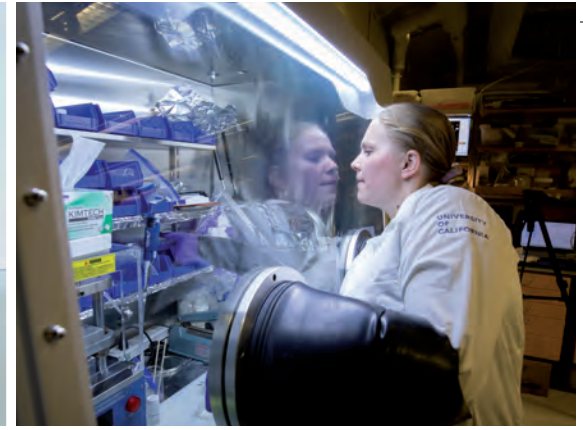
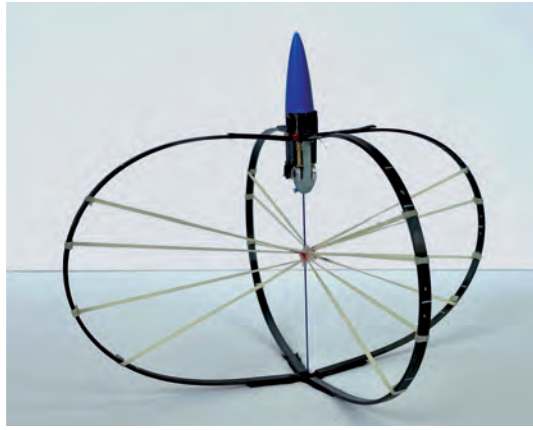


UC SANTA BARBARA  
College of Engineering

[me.ucsb.edu/graduate](http://me.ucsb.edu/graduate)

[megrad@engineering.ucsb.edu](mailto:megrad@engineering.ucsb.edu)

(805) 893-8198



## Requirements

- Online application: <https://www.graddiv.ucsb.edu/eapp>
- Statement of Purpose, Personal History and Diversity Statement, and Resume or CV (submitted in the online application)
- Three letters of recommendation (submitted online)
- Official transcripts from all post-secondary institutions attended (Submitted online)
- TOEFL scores 550 Paper-Based Test (PBT), 80 Internet-Based Test (IBT), IELTS (International English Language Testing System) Overall Band score of 7 or higher (if applicable), or a score of 120 or more on the Duolingo English Test (DET).
- **Important note:** applicants must list their top three areas of research interest (using the following abbreviations) in the online application field labeled Area of Research Interest: (1) Bioengineering and Systems Biology (BESB), (2) Computational Science & Engineering (CSE), (3) Dynamic Systems, Controls, and Robotics (DCR), (4) Micro/Nanoscale Systems (MEMS), (5) Solid Mechanics, Structures, and Materials (SMMS), or (6) Thermofluid Sciences (TFS)
- Final/Official transcripts will be required for all applicants who are admitted and have indicated their intent to enroll at UC Santa Barbara by submitting a Statement of Intent to Register (SIR).

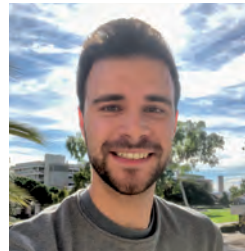
## Testimonials



**Shantal Adajian**

PhD Student

“I chose UCSB in order to learn from and be mentored by the leading scientists in my field. Having an international background, I was pleased by the department's inclusivity, and the people made me feel at home. UCSB unites the most innovative, interesting, and passionate researchers in a collaborative environment where interdisciplinary work is highly encouraged. This doctorate program will help me become a well-rounded and independent researcher, with life-long connections and a supportive community behind me.”



**Fernando Temprano-Coleto**  
(PhD '21)

*Distinguished Postdoctoral Fellow, Princeton University*

“My PhD years were the most transformative of my professional life. The flexibility to talk to different faculty members during my first months in the program was key to making an informed choice of doctoral advisors. The highly collaborative environment promotes co-advising by several mentors, as in my case, something especially important for students with broad research interests. With state-of-the-art experimental and shared facilities across campus, engaging in new lines of work is straightforward and provides all the necessary tools for cutting-edge research. I could not have asked for a better graduate school experience.”

## Interdisciplinary Centers and Departments

- Bioengineering Department
- California Nanosystems Institute
- Center for Control, Dynamical Systems and Computation
- Center for Stem Cell Biology and Engineering
- Institute for Collaborative Biotechnologies
- Institute for Energy Efficiency
- Institute for Theoretical Physics
- Materials Research Laboratory
- NSF BioPACIFIC Materials Innovation Platform
- NSF UC Santa Barbara Quantum Foundry
- Technology Management Department

## Deadlines

- **Fall Only:** December 15, 2024 (by 11:59 PM PST)

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# Technology Management

## Graduate Offerings

PhD, MTM, Graduate Program in Management Practice (GPMP) Certificat

## About the Program

Technology Management (TM) is a department focused on understanding the dynamics of technological innovation and entrepreneurship. Faculty research focuses on how digital technologies are changing the nature of work and organizing, and how to create startups and new ventures inside established companies to effectively design and develop technological breakthroughs. Students learn about the human and organizational contexts for new technology creation and implementation through one or more academic pathways: PhD in Technology Management, Master of Technology Management, New Venture Program and Competition, and Graduate Program in Management Practice (GPMP) Certificate

The Ph.D. in Technology Management is designed to produce exceptional scholars with a deep knowledge of technology's effects on organizations and work, technological change, entrepreneurship, and technology-enabled innovation, who go on to conduct research and teach at top universities across the country and around the world. The Master of Technology Management (MTM) is a residential, nine-month, STEM-designated graduate program that offers motivated, early- to mid-career professionals the essential business knowledge and entrepreneurial mindset to expand their leadership opportunities within technology driven fi ms. Over eighty percent of MTM graduates have job offers within six months of graduation.

Technology Management's New Venture Program and Competition invites innovators across academic backgrounds to immerse themselves in entrepreneurial education and mentorship alongside their core studies and research. Technology Management faculty have won numerous prestigious national and international awards for the impact of their research and have international reputations for scholarship on technology, management, and innovation and real-world knowledge of management problems and practices.

## Areas of Research

Management of:

- Technological innovation and organizational change
- Digital Transformation
- Technology-enabled teams and remote work
- AI and the changing nature of work
- Technology strategy and entrepreneurship

## By the Numbers

- 10** Faculty, including:
- 3** Fellows of the Academy of Management (AOM)
- 1** Fellow of the International Communication Association (ICA)
- 1** National Science Foundation (NSF) Early CAREER Award winner
- 1** Sloan Research Fellow
- 42** MTM and PhD Students (Fall 2024)
- 1:1** PhD Student-to-Faculty Ratio
- 27** MTM and PhD Degrees Awarded (2023-24)
- 81%** MTM Graduates received job offers within six months of graduation
- +150** fi ms where MTM graduates have been placed, including Oracle, SpaceX, Microsoft, Northrop Grumman, Uber, Google, Amazon, and Apple



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[tmp.ucsb.edu](http://tmp.ucsb.edu) | [PhDadmissions@tmp.ucsb.edu](mailto:PhDadmissions@tmp.ucsb.edu) | [MTMadmissions@tmp.ucsb.edu](mailto:MTMadmissions@tmp.ucsb.edu)



## Requirements

- Online Application: <https://www.graddiv.ucsb.edu/eapp>
- Statement of Purpose
- Personal History & Diversity Statement
- Resume or CV
- Three letters of recommendation (submitted online)
- Official GRE General Scores (Required for PhD Applicants ONLY)
- Ph.D. Only: In addition to the GRE, we ask applicants to describe their specific research interests in their statement of purpose, as well as the activities and experiences they believe have prepared them to succeed in our specific Ph.D. program. In the personal history statement, applicants may also describe a particular challenge they faced in their educational or personal journey and how they overcame adversity. What did they learn from that

- experience about their own resiliency? How did that lesson better prepare them to be successful in a rigorous graduate program?
- Language Scores (if applicable): TOEFL: 550 Paper-Based Test (PBT), 80 Internet-Based Test (IBT); IELTS: Overall Band score of 7 or higher; or DET: 120 or higher
- Unofficial transcripts from all post-secondary institutions attended (submitted online)
- MTM additional admission requirements information: [tmp.ucsb.edu/mtm](http://tmp.ucsb.edu/mtm)
- PhD additional admission requirements information: [tmp.ucsb.edu/academics/phd-technology-management](http://tmp.ucsb.edu/academics/phd-technology-management)
- Final/Official transcripts will be required for all applicants who are admitted and have indicated their intent to enroll at UC Santa Barbara by submitting a Statement of Intent to Register (SIR).

## Testimonials



“The Master of Technology Management program gave me the legitimacy to jumpstart my tech career at a great company and the knowledge to keep my career growing over the years.”

**Luan Viera** (MTM '16)  
Software Engineer, GitHub



“The faculty mentorship was one of the most important parts of my education in Technology Management. I learned how to do meaningful and rigorous scholarship largely through my relationships with my advisors and by working alongside them over the course of my Ph.D.”

**Virginia Leavell** (PhD '22)  
Assistant Prof., Organizational Theory & Information Systems, Univ. of Cambridge



“The fact that you're able to get so much done and cover so much ground in a really short period of time is one of its strengths. A typical MBA is two years, so I was thrilled to have found an option that was nine months, you're in and out.”

**Jessica Carpenter** (MTM '20)  
Product Marketing Manager, Google



“I'm a specialist at Amazon Web Services. It's a blend of the technical and the business side of things. Without going through MTM, I would not have as good of a baseline to be able to do that. This is the perfect role for me coming out of MTM.”

**Shelby Salling** (MTM '18)  
Graviton Specialist, Amazon Web Services

## Deadlines

- **PhD Only:** January 15, 2025
- **MTM Only:** February 1, 2025
- **MTM Only:** December 1, 2024
- **MTM Only:** March 1, 2025

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