UC RIVERSIDE
Marlan and Rosemary Bourns
College of Engineering

DOMESTIC
ENGINEERING
GRADUATE PROGRAMS
https://graduate.engr.ucr.edu

UNIVERSITY OF CALIFORNIA, RIVERSIDE

U.S.News & WORLD REPORT

Ranked **America's fastest rising ranked university**, 2021

UNIVERSITY OF CALIFORNIA

One of **University of California**'s 10 prestigious universities

TOP RANKED, ACADEMICALLY CHALLENGING, AND READY FOR YOU

BEST IN EDUCATION & OPPORTUNITY

No. 1 Top performer in **social mobility** in the nation; U.S. News, 2021

TOP 1% Of universities **worldwide**; Center for World University Rankings, 2019-20

TOP 35 **Best value** public colleges in America; Money Magazine, 2020

BEST VALUE UNIVERSITY

TOP 12 **Public universities** in the nation; Forbes, "America's Best Value Colleges"

No. 14 U.S. college that pay off the most in 2020; CNBC Make It, 2020

TOP 20 America's **best value** colleges among public universities; Princeton Review, 2020

MARLAN AND ROSEMARY BOURNS
COLLEGE OF ENGINEERING

10
Graduate Programs

134
Award-Winning Faculty Members

900+
Graduate Students

7:1
Graduate Student to Faculty Ratio

$43M
in Research Grants Awarded (2020)

HIGHLY RANKED ENGINEERING COLLEGE

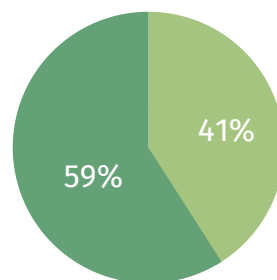**TOP 50** Public engineering college in the nation; U.S. News, 2021

No. 20 Best global university for engineering; U.S. News, 2021

No. 31 Best school of engineering majors by salary potential in the U.S.; Payscale 2020 College Salary Report

ADVANCED MASTER'S AND PH.D. PROGRAMS

41% M.S. Enrollment

59% Ph.D. Enrollment

UCR's 4,300-square-foot machine shop

GRADUATE PROGRAMS

(M) MASTER'S PROGRAM   (D) DOCTORAL PROGRAM   (O) ONLINE PROGRAM

(+) BACHELORS+MASTERS PROGRAM

BIOENGINEERING (M)(D)(O)(+)

CHEMICAL AND ENVIRONMENTAL ENGINEERING (M)(D)(O)(+)

COMPUTER ENGINEERING (M)(+)

COMPUTER SCIENCE AND ENGINEERING (M)(D)(O)(+)

ELECTRICAL AND COMPUTER ENGINEERING (M)(D)(O)(+)

INDUSTRIAL BIOTECHNOLOGY (EMPHASIS) (M)

MATERIALS SCIENCE AND ENGINEERING (M)(D)(O)

MECHANICAL ENGINEERING (M)(D)(O)(+)

MASTER'S OF SCIENCE IN ENGINEERING ONLINE (M)(O)

ROBOTICS - COMING SOON! (M)

BIOENGINEERING (M)(D)(O)(+)

Website: www.bioeng.ucr.edu
Graduate Advisor Email:
big@engr.ucr.edu
Phone Number: (951) 827-3383

The Bioengineering Interdepartmental Graduate (BIG) Program is home to an immersive, interdisciplinary experience that offers students exposure to more than 50 faculty from **four colleges** at the UCR campus, 10 **research centers** across the UC system, and numerous **industry partners**.
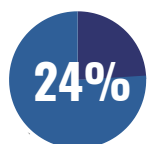
24% of UCR bioengineering doctoral students are named National Science Foundation Graduate Research Fellows, on average

CORE RESEARCH AREAS

- Biomaterials and Regenerative Medicine
- Biomedical Imaging
- Computational Bioengineering
- Neuroengineering
- Molecular and Cellular Engineering

MEET OUR ALUMNI

Yan Liu, Ph.D. 2012
Director of Research,
Nova Therapeutics

Maricela Maldonado,
Ph.D. 2016
Postdoctoral Fellow,
City of Hope

Enrique Roman,
M.S. 2019
Project Engineer,
Helbling Precision
Engineering

CHEMICAL & ENVIRONMENTAL ENGINEERING

M D O +

As one of the few departments in the country that encompasses teaching and research in both chemical and environmental engineering, students benefit from uniquely capitalizing on important synergies between the two fields.

CALIFORNIA AIR RESOURCES BOARD

New CARB headquarters opens in Riverside
CARB and UCR deliver an educational and research experience unlike any other.

CORE RESEARCH AREAS

- Computation and Molecular Engineering
- Biotechnology and Biomolecular Engineering
- Advanced Materials and Nanotechnology
- Energy Conversion and Storage
- Air Quality Systems Engineering
- Water Quality Systems Engineering

MEET OUR ALUMNI

Tyler Lopez, Ph.D. 2018
Scientist II,
Element Biosciences

Brandon Simmons-Rawls, M.S. 2017
Sr. Research Associate,
Zymergen, Inc.

Bill Lichtenberg,
M.S. 2018
Environmental Engineer
Spec. III, Arizona Dept. of
Environmental Quality

INDUSTRIAL BIOTECHNOLOGY M

A CHEMICAL AND ENVIRONMENTAL ENGINEERING EMPHASIS

Study at one of the nation's few programs training engineers in skills required for bio-therapeutics production including fermentation, cell culture, chromatography, and membrane process.

- **$370 billion industry** has grown more than 10% each year for the last decade
- Pairs a master's education with **targeted experience** at a research center

CORE RESEARCH AREAS

Agriculture

Industrial Chemistry

Biofuels

Healthcare

MEET OUR ALUMNI

Adam Kravitz, M.S. 2020
Staff Engineer, Applied
Geoscience and
Engineering, Inc.

Marcos Moran Cabrera,
M.S. 2020
Vice President of
Engineering, VIRUN

Cristina Moreno Borja,
M.S. 2019
Facilities Engineer,
Illumina

COMPUTER ENGINEERING Ⓜ ✚

Website: www.cen.ucr.edu
Graduate Advisor Email:
cengradinfo@engr.ucr.edu
Phone Number: (951) 827-5639

Build faster, more energy efficient, smaller, more secure, and more reliable computer systems. Students benefit from covering both hardware and software elements.

Internationally Ranked by CSRankings:

- **6th** in High Performance Computing
- **7th** in Design Automation
- **13th** in Computer Architecture
- **Top 20** in Computer Systems; Embedded and Real-Time Systems; and Computer Security

CORE RESEARCH AREAS

- Compilers and Software Systems
- Computer Architecture
- Digital Design and Design Automation
- Embedded and Real-Time Systems
- High Performance Computing
- VLSI Circuits and Systems

MEET OUR ALUMNI

Anuja Patil, M.S. 2020
Technical Staff
Member, Nutanix Inc.

Ethan Valdez, M.S. 2020
Software Engineer,
zyBooks

Chuanqin Qiu,
M.S. 2019
Product Engineer, ESRI

COMPUTER SCIENCE AND ENGINEERING Ⓜ Ⓓ Ⓞ ✚

Website: www1.cs.ucr.edu
Graduate Advisor Email:
gradinfo@cs.ucr.edu
Phone Number: (951) 827-2903

Computer science at UCR is internationally ranked and well-known for its rigorous academics and groundbreaking research.

Internationally Ranked by CSRankings:

- **6th** in High Performance Computing
- **7th** in Design Automation
- **12th** in Computational Bio and Bioinformatics
- **15th** in Systems category overall

CORE RESEARCH AREAS

- Algorithms and Bioinformatics
- Architecture, Compilers, and Embedded Systems
- Cybersecurity
- Databases, Data Mining, and Artificial Intelligence
- High Performance Computing and Graphics
- Programming Languages and Software Engineering
- Systems and Networks

MEET OUR ALUMNI

Titus Winters,
M.S. 2004, Ph.D. 2006
Sr. Staff Software
Engineer, Google

Pamela Bhattacharya,
Ph.D. 2012
Principal Applied
Scientist and Manager,
Microsoft

Francisco Gallego,
M.S. 2020
Scientist, ND-3,
NAVSEA-NSWC Corona

ELECTRICAL ENGINEERING

M **D** **O** **+**

ECE at UCR introduces students to the latest research and applications in the interdisciplinary area of electrical engineering, collaborating with seven of the university's premier research centers.

31st
U.S. News Global University Rankings

$9M
Research expenditures (2019-20)

$103k
Average reported salaries of graduates (2019)

CORE RESEARCH AREAS

- Communications, Signal Processing, and Networking
- Computer Engineering
- Controls and Robotics
- Intelligent Systems
- Nanotechnology, Advanced Materials, and Devices
- Power Systems and Smart Grid

MEET OUR ALUMNI

Chao Wang,
Ph.D. 2020
Software Engineer,
Google

Sonya Ragothaman,
M.S. 2018
Embedded Control
Systems Engineer, The
Aerospace Corporation

Rameswar Panda,
Ph.D. 2018
Research Staff Member,
MIT-IBM Watson AI Lab

ROBOTICS - COMING SOON! **M**

The new M.S. in robotics focuses on the mechanical, electrical and algorithmic principles underlying the design, construction, and operation of intelligent and autonomous robots in complex settings. The program provides students with a comprehensive, theoretical preparation and a synergistic practical training using state-of-the-art robotics facilities.

INTERDISCIPLINARY PROGRAM WITH FACULTY FROM:

Computer Science

Electrical Engineering

Mechanical Engineering

More information coming soon! To learn more about our robotics capabilities, visit the Center for Robotics and Intelligent Systems (CRIS) at www.cris.ucr.edu

MEET OUR FACULTY

Amit Roy-Chowdhury
vcg.engr.ucr.edu/amit

Fabio Pasqualetti
fabiopas.engr.ucr.edu

Christian Shelton
cs.ucr.edu/~cshelton

CORE RESEARCH AREAS

- Controls and Robotics
- Machine Intelligence
- Embedded Systems
- Mobile Communications

MATERIALS SCIENCE AND ENGINEERING (M)(D)(O)

MSE at UCR provides students with an understanding of materials to predict, modify, and tailor the properties of materials to achieve enhanced performance.

The benefit of two colleges: The program combines engineering faculty with faculty from the College of Natural and Agricultural Sciences, doubling student opportunities to gain specific experience.

CORE RESEARCH AREAS

- Biomaterials
- Structural Materials
- Computational Materials
- Material Processing
- Electronic, Optical, and Magnetic Materials
- Energy and Green Technology

MEET OUR ALUMNI

Claudia C. Villarreal, Ph.D. 2018
Professor, Instituto Tecnológico de Costa Rica

Barath Kanna Mahadevan, M.S. 2020
TD Module & Integration Yield Engineer, Intel Corporation

Sahar Naghibi, Ph.D. 2019
R&D Semiconductor Process Engineer, Keysight Technologies

MECHANICAL ENGINEERING

(M)(D)(O)(+)

ME at UCR provides both solid foundations in classical mechanical engineering, and an opportunity to acquire knowledge in cutting edge areas such as robotics, biotechnology, and advanced materials. The program is home to highly recognized faculty, including a member of the National Academy of Engineering in Mexico.

A State-of-the-Art Machine Shop
Design, research, and develop experimental projects in our 4,300-square-foot machine shop.

CORE RESEARCH AREAS

- Air Quality and Fire Engineering
- Bioapplications
- Controls, Robotics and Automation
- Mechanics, Advanced Materials, and Manufacturing
- Nanoscale Design and Micro-Device Engineering
- Thermal Systems and Multiphase Flows

MEET OUR ALUMNI

Jeanette Cobian, Ph.D. 2019
Assistant Professor, UC Merced

Stephanie Pham, M.S. 2016
Readiness Systems Engineer, NAVSEA - NSWC Corona

Alejandro Alvarez Barragan, Ph.D. 2019
Process Engineer - Technology Dvlpmt. Program, Intel Corp.

MASTER OF SCIENCE IN ENGINEERING ONLINE **M** **O**

The online engineering program is a calibrated blend of targeted engineering skills and management strategy. Delivered by experts with industry experience, our program can help you thrive in a rapidly growing global industry.

13	**7**	**100%**	**3**
Graduate in as few as 13 months	Choose from 7 specializations	No residency requirements; 100% online	Flexible admissions with three start dates

SPECIALIZATIONS

- Bioengineering
- Chemical Engineering
- Data Science
- Electrical Engineering
- Environmental Engineering
- Nanotechnology Engineering
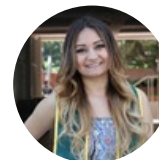- Mechanical Engineering

MEET OUR ALUMNI

Charles Ezell, M.S. 2016 Molecular Imaging Specialist, Blue Earth Diagnostics, Inc.

David Butler, M.S. 2016 Principal Project Engineer, Bell Flight

Dominique Acuna, M.S. 2020 Reliability and Maintainability Engineer, NAVSEA - NSWC Corona

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AVAILABLE TO CURRENT UCR ENGINEERING STUDENTS PURSUING A BACHELOR'S DEGREE

BACHELOR'S+MASTER'S PROGRAM

LEARN MORE: HTTPS://STUDENT.ENGR.UCR.EDU/BS-MS-REQUIREMENTS

PROGRAM BENEFITS

Earn a M.S. degree in **as little as three quarters**

Half the cost of a traditional M.S. degree

No GRE requirement

Guaranteed admission if requirements are met

MEET A FUTURE GRAD

Keith Z.
B.S.+M.S. student and future software engineer at zyBooks

"The B.S.+M.S. program allowed me to gain a more fine-grained understanding of my field, dive into new research areas and develop my technical skills. I would recommend this program to anyone wishing to 'level up' in a timely and cost-effective manner."

$15k+ Engineering Master's graduates report earning $10,000-$15,000 more upon graduation
U.S. Bureau of Labor Statistics

How do I find out my eligibility? Submit an interest form to https://bcoe.wufoo.com/forms/bsms-interest-form/

WORLD-CLASS RESEARCH CENTERS

CENTER FOR ENVIRONMENTAL RESEARCH AND TECHNOLOGY
(CE-CERT)

CE-CERT addresses society's most pressing environmental challenges in air quality, climate change, energy, and transportation. www.cert.ucr.edu

CENTER FOR INDUSTRIAL BIOTECHNOLOGY (CIB)

CIB seeks to unlock the full potential of industrial biotechnology applications in the areas of healthcare, agriculture, industrial chemistry, and biofuels. www.cib.ucr.edu
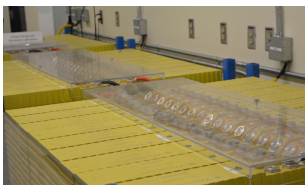
WINSTON CHUNG GLOBAL ENERGY CENTER (WCGEC)

WCGEC focuses on developing emerging energy solutions related to storage, generation and distribution to advance the science and applications of energy technology. www.wcgec.ucr.edu
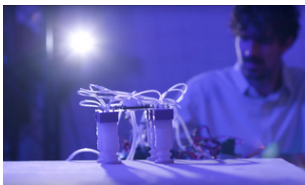
CENTER FOR ROBOTICS AND INTELLIGENT SYSTEMS (CRIS)

CRIS researchers focus on the foundations and applications of intelligent and autonomous systems, including robotics, computer vision, controls, machine learning, and real-time systems. www.cris.ucr.edu

CENTER FOR ADVANCED NEUROIMAGING (UCR-CAN)

UCR-CAN researchers are taking a deeper dive into the brain than ever before, uncovering the secrets of brain disorders, mapping and accessing connectivity, and visualizing deep-brain structures. https://can.ucr.edu

CENTER FOR NETWORKED CONFIGURABLE COMMAND, CONTROL AND COMMUNICATIONS FOR RAPID SITUATIONAL AWARENESS (NC4)

NC4 studies fundamental research issues involved in creating robust, resilient command, control, and communication systems that lead to more accurate and timely situational awareness. https://nc4.ucr.edu

CENTER FOR RESEARCH AND EDUCATION IN CYBER SECURITY AND PRIVACY (CRESP) 🔒

CRESP works on designing novel approaches to building secure systems and enabling them to detect, resist, and tolerate attacks. https://cresp.ucr.edu

CENTER FOR UBIQUITOUS COMMUNICATION OF LIGHT (UC-LIGHT) ⚡ 📶

UC-Light enables wireless communications by embedding signals into the light emitted by next-generation LEDs in systems for illumination, traffic control, advertising, and other purposes. www.uclight.ucr.edu

ENERGY, ECONOMICS, AND ENVIRONMENT RESEARCH CENTER (E3) ⚡ 🌱

E3 determines how society can best integrate the energy system, the economic system and built environment to provide for growing demand of energy in an economical and sustainable manner. https://e3.ucr.edu

CE-CERT is home to the world-largest known indoor atmospheric chamber.

ADMISSION, TUITION, FINANCIAL AID

ADMISSION REQUIREMENTS

Admission requirements may vary by program. If you do not meet the following requirements, contact a program officer directly. Applications are reviewed in their entirety and programs can advise applicants on potential admission.

A bachelor's degree, or its equivalent, from an accredited institution

A minimum 3.0 GPA or B-equivalent

Submit remaining documentation as specified by the program

FELLOWSHIPS AND FINANCIAL AID

The cost of an education at UC Riverside is competitive with private institutions and other University of California campuses. All Ph.D. students are supported through fellowships. Master's students may be eligible for a variety of scholarships to help cover tuition, living expenses, health insurance, research, and conference travel.

$4M+ of extramural funding is awarded each year to UCR students

Learn more at: https://graduate.ucr.edu/resources-finding-external-funding

12+ available scholarships specific to engineering graduate students **PLUS** many more across the university

ESTIMATED TUITION AND FEES*

DOMESTIC
$17,309 + living expenses per year

INTERNATIONAL
$32,411 + living expenses per year

ONLINE
$875 per unit for 36 units
or $31,500 total

CHEN, PH.D. COMPUTER SCIENCE '10

My graduate study experience was amazing. The faculty are enthusiastic about addressing challenging research problems. They provide incredible mentorship, training, and support. The instructional curriculum, inspiring technical discussions, and effective research environment have also helped me build a strong foundation for my career.
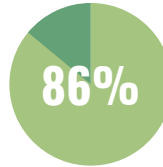
Tuition and fees are subject to change. To view the latest tuition rates, visit https://graduate.ucr.edu/

CAREER OUTCOMES

$99K Average reported salary of engineering M.S. and Ph.D. graduates (Class of 2020)

86% of M.S. and Ph.D. graduates who reported next steps pursued careers in industry vs. continuing education (Class of 2020)

MASTER'S AND PH.D. ALUMNI WORK AT TOP UNIVERSITIES AND COMPANIES:

NAVSEA WARFARE CENTERS · Microsoft · CISCO · ebay · TESLA · BLIZZARD ENTERTAINMENT · Apple

SPACEX · BioConsortia · GM · facebook · twilio · UNIVERSITY of VIRGINIA

BOEING · Northwestern University · Qualcomm · Google · Walt Disney Studios

CalPolyPomona · Outreach · Adobe

BECOME AN ENTREPRENEUR
FROM IDEATION TO LAUNCH, WE HAVE RESOURCES TO FAST TRACK YOUR BUSINESS

ENTREPRENEURIAL PROOF OF CONCEPT AND INNOVATION CENTER (EPIC)
A path-to-market platform to validate ideas, build teams, and launch companies

EPIC SMALL BUSINESS DEVELOPMENT CENTER (SBDC)
Provides early-stage tech entrepreneurs support such as training and consulting at no cost

INTERNATIONAL PARTNERSHIPS
Facilitates entrepreneurship capacity building and technology transfer across the globe

EXCITE STARTUP INCUBATOR
A community partnership providing startups with facilities, workshops, and support

UCR LIFE SCIENCE INCUBATOR
A new lab outfitted to house companies in agtech, biomedical, bioengineering, and medicinal chemistry

LAUNCHPAD @ UCR
Helps students succeed in entrepreneurship and careers by providing on- and off-campus opportunities to expand their reach

YOUR HOME AWAY FROM HOME

TOP EATERIES

Enjoy American and international cuisine at all-you-can-eat dining halls, grab a coffee or snack at our coffee shops and convenience stores, or have a meal at The Barn, UCR's legendary dining and entertainment space.

STATE-OF-THE-ART RECREATION CENTER

Get fit by climbing "The Rock", running the indoor track, or playing at the raquetball, squash and tennis courts. Plus, swim laps at the pool, learn to cook in the classroom kitchen, and take on the outdoor Challenge Course!

FESTIVALS AND EVENTS

With weekly concerts and cultural celebrations at the Bell Tower, food truck festivals, epic Block Party, Winter Soulstice, and Spring Splash music concerts, you'll never run out of things to do on campus!

SAFETY IS OUR TOP PRIORITY

We have a 24/7, on-campus police department and emergency text notification system. At night, our community service officers patrol halls and parking lots and Campus Safety Escorts accompany students across campus.

UCR Student Recreation Center (SRC) pool and two-story gym

RIVERSIDE, CALIFORNIA

WELCOME TO RIVERSIDE: SMALL TOWN CHARM, **BIG** ON OPPORTUNITY!

The City of Riverside awaits you! Nestled just inland of Los Angeles, Riverside offers everything within reach. You can visit the mountains during the day and still make it to the beach for a night-time bonfire with friends. Riverside is full of historic gems including the world-famous Historic Mission Inn Hotel and Spa, well-known for its dazzling holiday displays, and the California Citrus Historic State Park, which pays homage to the city's citrus roots. No matter what you want to do, Riverside is at the heart of it all!

ONE HOUR OR LESS FROM CAMPUS:

Hollywood   Beaches   Mountains   Disneyland   Palm Springs   Wineries

Apple Orchards   Hot Springs   Mission Inn   Shopping   Hiking Trails

AND WITHIN DRIVING DISTANCE TO:

San Diego   San Francisco   Joshua Tree National Park   Las Vegas

Downtown Riverside at dusk

LEARN MORE

GRADUATE ADMISSIONS

900 University Avenue   I   Winston Chung Hall Suite 446   I   Riverside, CA 92521 USA
Website: www.graduate.engr.ucr.edu   I   Email: gradadmissions@engr.ucr.edu
Phone: 951-827-5190