ENGINEERING
GRADUATE PROGRAMS

- BIOLOGICAL SYSTEMS ENGINEERING
- BIOMEDICAL ENGINEERING
- CHEMICAL ENGINEERING
- CIVIL AND ENVIRONMENTAL ENGINEERING
- COMPUTER SCIENCE
- ELECTRICAL AND COMPUTER ENGINEERING
- MATERIALS SCIENCE AND ENGINEERING
- MECHANICAL AND AEROSPACE ENGINEERING
- TRANSPORTATION TECHNOLOGY AND POLICY

APPLICATION DEADLINES: gradstudies.ucdavis.edu/applicationdeadlines

BIOLOGICAL SYSTEMS ENGINEERING
(530) 752-0102
engineering.ucdavis.edu/graduate/bse
Ph.D., M.S., M.Engr., D.Engr.

The program stresses the use of engineering to efficiently produce, distribute and process biological products for energy, food, feed and fiber while conserving natural resources, preserving environmental quality, and ensuring the health and safety of people. Programs of study include: aquacultural engineering, bioprocess engineering, ecological systems engineering, energy systems engineering, environmental engineering, food engineering, forest and fiber engineering, health and safety engineering, machine systems engineering, postharvest engineering, sensor and control engineering, and soil and water engineering.

BIOMEDICAL ENGINEERING
(530) 752-2611
engineering.ucdavis.edu/graduate/bme
Ph.D., M.S.

Biomedical engineering graduate students engage in a rich spectrum of advanced research at the molecular, cellular, tissue, systems and organism levels, as well as in clinical practice. They benefit from the highly ranked UC Davis life sciences research environment that incorporates the work of more than 70 faculty members in departments across campus, including biomedical engineering; mechanical engineering; radiology; neurobiology; physiology and behavior; chemical engineering and materials science; orthopaedics; bioinformatics; and mathematics. Approximately 35 percent of faculty members are within the schools of Medicine and Veterinary Medicine. The breadth of activity represented in this highly collaborative environment allows students to find the best match between their research interests and those of the faculty. The graduate program’s culture is characterized by a personal mentoring style, small collaborative teams and multidisciplinary laboratories, all fostering a dynamic medium for research, learning and success.

CHEMICAL ENGINEERING
(530) 752-7952
engineering.ucdavis.edu/graduate/che
Ph.D., M.S.

Study in chemical engineering provides a strong grounding in the fundamentals and explores critical applications in a wide range of process systems. Areas of research include: biochemistry, biomaterials, biotechnology, biomedical engineering, catalysis, colloids and surface science, electrochemical properties and devices, fluid mechanics and rheology, green engineering and design, interfaces, mathematical modeling, molecular modeling, nanotechnology, polymers, reaction engineering, renewable energy, thermodynamics, thin films, and transport phenomena.

CIVIL AND ENVIRONMENTAL ENGINEERING
(530) 752-1441
engineering.ucdavis.edu/graduate/cee
Ph.D., M.S.

Civil and environmental engineering graduate students specialize in one or more of the following areas: environmental engineering (air quality, water quality and wastewater treatment); structural engineering and structural mechanics; geotechnical engineering (earthquake engineering, geomechanics and social remediation); water resources engineering (hydraulics and fluid mechanics, hydrology, and systems planning and design); and transportation engineering (planning and design).

COMPUTER SCIENCE
(530) 752-7224
engineering.ucdavis.edu/graduate/cs
Ph.D., M.S.

Faculty members in the computer science graduate program bring a wide variety of research interests to the curriculum. Research strengths lie in algorithms, computational biology, computer architecture, computer graphics and visualization, computer systems design, database systems, computer security, computer networks, machine learning, program specifications and verification, programming languages and compilers, parallel and distributed systems, operating systems, performance evaluation, scientific computation, and software engineering. Interdisciplinary research in computer science is encouraged. Preparation should normally include an undergraduate degree in computer science, or advanced computer science electives taken in conjunction with a degree in an allied field, such as electrical engineering or mathematics.

ELECTRICAL AND COMPUTER ENGINEERING
(530) 752-8251
engineering.ucdavis.edu/graduate/ece
Ph.D., M.S.

The electrical and computer engineering graduate program, or ECEGP, provides graduate instruction and cutting-edge research in a wide spectrum of areas including: communications, control, networking and signal processing; computer engineering; electronic circuits; optoelectronics; radio frequency (RF), micro- and millimeter waves; and physical electronics. The graduate program is tailored to meet the specific needs of the individual student. Interdisciplinary research is encouraged, and the ECEGP has strong synergy with other departments and programs on campus. For example, the ECE Ph.D. program is affiliated with the Designated Emphasis in Biotechnology inter-graduate group program, which allows Ph.D. students to receive and be credited for training in the area of biotechnology.

MATERIALS SCIENCE AND ENGINEERING
(530) 752-7952
engineering.ucdavis.edu/graduate/mse
Ph.D., M.S., M.Engr.

The materials science and engineering graduate program provides students with a strong background in advanced materials synthesis, processing and characterization — both from an experimental and
theoretical standpoint. Research areas include: biomaterials, catalysts, ceramics, electronic and electrochemical properties and devices, glasses, green engineering and design, interfaces, magnetic materials and devices, materials microstructure/processing, mathematical modeling, mechanical properties and synthesis, metals, microscopy, molecular modeling, nanomaterials, optical properties and devices, polymers, renewable energy, sintering, structural materials, thermochemistry, and thin films.

**MECHANICAL AND AEROSPACE ENGINEERING**

(530) 752-0581  
engineering.ucdavis.edu/graduate/mae  
Ph.D., M.S.

The program is targeted for students who are attracted to engineering in a broad sense but who also wish to apply engineering skills to mechanical/aerospace systems. A unique aspect of the program is that it covers a large spectrum of research approaches — from the theoretical to the more applied — with opportunities for experiments and practical validation of concepts in the following major areas of studies: aerospace engineering; biomechanical engineering; control and mechatronics; design, manufacturing, and materials; dynamics and design of mechanical systems; energy systems and environmental science; micro-electromechanical systems, or MEMS, nano-electromechanical systems, or NEMS, and sensors; and thermo/fluids.

**TRANSPORTATION TECHNOLOGY AND POLICY**

(530) 752-0247  
engineering.ucdavis.edu/ttp  
Ph.D., M.S.

The transportation technology and policy, or TTP, program is an interdisciplinary graduate group designed to meet the world’s growing need for highly qualified, thoughtful and dedicated leaders in sustainable transportation. Our students come from a variety of disciplines and can pursue either a technology or policy track. The curriculum includes courses in civil engineering, mechanical engineering, environmental engineering, economics, policy sciences, statistics, travel behavior, management, technology assessment, and environmental studies. The TTP degree gives students the tools and ability to pursue leadership roles in government, academia, nongovernmental organizations and industry.