

COLLEGE OF ENGINEERING, DESIGN AND COMPUTING

Leadership

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Overview

The College of Engineering, Design and Computing at the University of Colorado Denver provides nationally accredited engineering education programs that serve a diverse population of traditional and non-traditional students. The programs are delivered in a flexible format emphasizing experiential learning, interdisciplinary design, and leveraging of the latest digital tools.

An engineering degree opens the door to a wide range of careers and employment opportunities. The following is a brief summary of the engineering disciplines taught at CU Denver.

Bioengineering offers opportunities for interdisciplinary graduate training for master of science and doctor of philosophy degrees. Our programs are uniquely integrated with the CU Anschutz Medical Campus. Students enjoy opportunities to learn from clinicians and engineers and to perform research or medical device design in world-class hospitals and clinical research labs. Bioengineering is one of the fastest growing job markets this decade, according to the Bureau of Labor Statistics. A degree in this area provides numerous opportunities to work in health care, biomedical industry, government regulatory agencies and academia.

Civil engineering offers interesting and challenging careers in the design and construction of buildings, bridges, dams, aqueducts and other structures; in transportation systems including highways, canals, pipelines, airports, rapid transit lines, railroads and harbor facilities; in the distribution of water and the regulation of rivers; in the development of water resources for urban use, industry and land reclamation; in the control of water quality through water purification and proper waste treatment; in the construction and contracting industry; and in the problems concerned with our physical environment and the growth of cities.

Computer science offers graduates the solid foundation needed for jobs in computing and enabling technology encompassing many areas

across diverse fields such as healthcare, business, natural & applied sciences, mathematics and visual arts. Career paths in computer science involve designing and implementing software, devising new computer applications and developing effective ways to solve computing problems.

Electrical engineering's graduate program prepares students for technical leadership roles in industry, academia and government in our rapidly changing technological world. The program offers numerous specialties within electrical engineering, including computer engineering, embedded systems, electromagnetics, microwave systems, optics, electrical neuroscience engineering, control systems, communications and signal processing, power systems, smart grids, renewable energies, VLSI system design, and electron devices.

Mechanical engineering offers a wide range of interesting and challenging career opportunities in research, design, development, manufacturing, testing and marketing for either private industry or government. Mechanical engineers help develop a wide range of products such as engines, transmissions, compressors, pumps, oil field drilling rigs, missiles, space satellites, earth-moving equipment, container-manufacturing machines, medical equipment and many other products encountered in daily life.

Graduate Study in Engineering

The College of Engineering, Design and Computing offers graduate programs in bioengineering, civil engineering, computer science and engineering, electrical engineering, and mechanical engineering, as well as an interdisciplinary doctoral degree in engineering and applied science.

For information regarding courses and requirements leading to the master of science, master of engineering, or the PhD degree, see the appropriate discipline heading in this section. For general graduate admission information and policies, see the Information for Graduate Students (<http://catalog.ucdenver.edu/cu-denver/graduate/information-graduate-students/>) section of this catalog.

TOEFL/Language Requirements

For the most up-to-date information about TOEFL/language requirements, please visit the Office of International Admissions website (<https://www.ucdenver.edu/international-admissions/apply-for-admission/>).

Education for Employed Professional Engineers

Continuing education for employed engineers grows more important each year. Therefore, the college puts great emphasis upon making graduate courses available through late afternoon and evening courses. The master of engineering degree permits graduate students more flexibility in defining specialized interdisciplinary fields that meet their professional needs. This degree has standards equivalent to those of the master of science degree.

Nondegree Students

Nondegree graduate students may apply 9 semester hours of graduate-level course work toward a master's degree in engineering from CU Denver.

College of Engineering, Design and Computing Admissions Information

Application Deadlines

Applicants must make arrangements to ensure all their materials (including transcripts, references, and any required test scores) are received by the relevant deadlines below. Applications with outstanding materials are considered incomplete and will be canceled unless a request for deferment to a later term is requested.

Bioengineering

- MS: July 15 (fall), Dec. 15 (spring)
- PhD: December 1 (fall admittance only)

Civil Engineering

- MS/MEng (domestic): April 15 (fall), October 15 (spring)
- PhD (domestic): March 15 (fall), September 15 (spring)
- MS/MEng/PhD (international): March 15 (fall), September 15 (spring)

Computer Science

- MS (domestic): April 15 (fall), October 15 (spring)
- CSIS PhD (domestic): March 15 (fall), September 15 (spring)
- MS/PhD (international): February 15 (fall), September 15 (spring)

Electrical Engineering

- MS/MEng (domestic): April 15 (fall), October 15 (spring)
- PhD (domestic): March 15 (fall), September 15 (spring)
- MS/MEng/PhD (international): March 15 (fall), September 15 (spring)

Mechanical Engineering

- MS/MEng (domestic): April 15 (fall), October 15 (spring)
- PhD (domestic): March 15 (fall), September 15 (spring)
- MS/MEng/PhD (international): February 15 (fall), September 15 (spring)

Engineering and Applied Science PhD

- February 15 (fall), September 15 (spring)

College of Engineering, Design and Computing Departments and Programs

Courses listed in the following curricula are typical illustrations. Changes in specific courses may be necessary to accommodate students' needs and/or changes in institution requirements; students should take courses in logical sequence.

Departments & Programs

- Bioengineering (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/bioengineering/>)
 - Assistive Technology and Inclusive Engineering Certificate (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/bioengineering/assistive-technology-inclusive-engineering-certificate/>)
 - Bioengineering Dual, MS-MBA (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/bioengineering/bioengineering-dual-ms-mba/>)
 - Bioengineering, MD-MS (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/bioengineering/bioengineering-md-ms/>)
- Bioengineering, MD-PhD (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/bioengineering/bioengineering-md-phd/>)
- Bioengineering, MS (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/bioengineering/bioengineering-ms/>)
- Bioengineering, PhD (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/bioengineering/bioengineering-phd/>)
- Medical Device Design and Entrepreneurship Certificate (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/bioengineering/medical-device-design-entrepreneurship-certificate/>)
- Neural Engineering Graduate Certificate (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/bioengineering/neural-engineering-graduate-certificate/>)
- Civil Engineering (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/civil-engineering/>)
 - Civil Engineering, MEng (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/civil-engineering/civil-engineering-meng/>)
 - Civil Engineering, MS (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/civil-engineering/civil-engineering-ms/>)
 - Civil Engineering, PhD (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/civil-engineering/civil-engineering-phd/>)
- Construction Project Management Graduate Certificate (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/civil-engineering/construction-project-management-graduate-certificate/>)
- Engineering and Applied Science, PhD (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/civil-engineering/engineering-applied-science-phd/>)
- Geographic Information Systems and Geomatics Graduate Certificate (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/civil-engineering/geographic-information-systems-geomatics-graduate-certificate/>)
- Integrated Construction, Management + Leadership Graduate Certificate (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/civil-engineering/integrated-construction-management-leadership-graduate-certificate/>)
- Computer Science and Engineering (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/computer-science-engineering/>)
 - Computer Science and Information Systems, PhD (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/computer-science-engineering/computer-science-information-systems-phd/>)
 - Computer Science, MS (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/computer-science-engineering/computer-science-ms/>)

- design-computing/computer-science-engineering/computer-science-ms/)
- Cybersecurity and Defense Graduate Certificate (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/computer-science-engineering/cyber-security-defense-graduate-certificate/>)
 - Engineering and Applied Science, PhD (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/computer-science-engineering/engineering-applied-science-phd/>)
 - Software Engineering Graduate Certificate (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/computer-science-engineering/software-engineering-graduate-certificate/>)
 - Electrical Engineering (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/electrical-engineering/>)
 - Electrical Engineering, MEng (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/electrical-engineering/electrical-engineering-meng/>)
 - Electrical Engineering, MS (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/electrical-engineering/electrical-engineering-ms/>)
 - Engineering and Applied Science, PhD (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/electrical-engineering/engineering-applied-science-phd/>)
 - Engineering and Applied Science, PhD (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/engineering-applied-science-phd/>)
 - Inworks (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/inworks/>)
 - Human-Centered Design and Innovation Graduate Certificate (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/inworks/human-centered-design-innovation-graduate-certificate/>)
 - Mechanical Engineering (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/mechanical-engineering/>)
 - Engineering and Applied Science, PhD (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/mechanical-engineering/engineering-applied-science-phd/>)
 - Mechanical Engineering, MEng (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/mechanical-engineering/mechanical-engineering-meng/>)
 - Mechanical Engineering, MS (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/mechanical-engineering/mechanical-engineering-ms/>)