About the University of Colorado Denver

The University of Colorado Denver (UC Denver) combines a tradition of excellence with a new vision for higher education in Colorado. By joining the strengths of a comprehensive campus in downtown Denver with the research and advanced health care programs at the Anschutz Medical Campus in Aurora, we confer more than 4,000 degrees each year and more graduate degrees than any other Colorado institution.

With our solid academic reputation, award-winning faculty and renowned researchers, we offer more than 115 highly ranked degree programs through 13 colleges and schools:

- **Denuer Campus**
  - College of Architecture and Planning
  - College of Arts & Media
  - Business School
  - School of Education & Human Development
  - College of Engineering and Applied Science
  - School of Liberal Arts and Sciences
  - School of Public Affairs

- **Anschutz Medical Campus**
  - School of Dental Medicine
  - School of Medicine
  - College of Nursing
  - School of Pharmacy
  - Graduate School
  - Colorado School of Public Health

More than 12,500 students call our Denver Campus home, choosing from more than 80 degree programs at bachelor’s, master’s and doctoral levels. Our community of learners includes traditional and nontraditional students, from recent high school graduates to seasoned professionals. Students come from throughout Colorado, around the country and overseas—all seeking a respected educational program, a convenient schedule of offerings and a vibrant urban environment.

Located on the Auraria Higher Education Center, the Denver Campus is just steps away from Denver’s historic Lower Downtown district with myriad entertainment, cultural and sports venues. Because we share the campus with two other institutions, our students have access to facilities and resources comparable to those of much larger public universities. They also enjoy the wide array of internship and job opportunities available in the vital, growing metropolitan area.

How do I learn more?

University of Colorado Denver
College of Engineering and Applied Science
Department of Civil Engineering
Campus Box 113, P.O. Box 172984
Denver, Colorado 80217-3364

- **www.ucdenver.edu/engineering**
- **Visit the College of Engineering and Applied Science Web site at:**

The civil engineering graduate program is designed for both full-time and part-time students who want to advance their academic and professional skills in civil engineering and related areas.

- Many students take classes full-time, while many also work full-time jobs and complete evening classes. Depending on a student’s pace, a master’s program takes 2-4 years to complete on average. All graduate courses are offered in the afternoons, evenings or on Saturdays. Some courses, including all GIS classes, are offered online.

- Visit the College of Engineering and Applied Science Graduate Program Web site at: www.ucdenver.edu/engineering.

The Department of Civil Engineering offers three graduate degrees:

- **Master of Science (M.S.)**
- **Master of Engineering (MEng)**
- **Doctor of Philosophy (Ph.D.)**
MASTER’S DEGREES

Specialty Areas for Degrees:
- Master of Science
  - Environmental and Sustainability Engineering
  - Geographic Information Systems (GIS)
  - Geotechnical Engineering
  - Hydrologic and Hydraulic Engineering
  - Structural Engineering
  - Transportation Engineering
- Master of Engineering
  - Geographic Information Systems (GIS)
  - Sustainable Infrastructure
  - Transportation Systems

Which master’s degree program is for me?

The master of science degree is for applicants with an undergraduate degree in engineering. The master of engineering degree is for applicants from a diverse background of undergraduate degrees. It is intended to address new technology areas requiring interdisciplinary backgrounds. All master’s students must complete 30 credit hours of course work to receive their degree. All master’s students have an advisor who meets with them regularly to advise them on which classes to take and discuss work toward their master’s thesis or report.

Degree Requirements:

Master’s of Science students have two options for completing their degree.

Plan 1: Master’s Thesis
This plan requires that students complete 24 credit hours of courses and 6 credit hours of master’s thesis work.

Plan 2: Master’s Report
This plan requires 27 credit hours of course work and 3 report credits.

Master’s of Engineering students must follow Plan 2 above. Additionally, of these 30 credit hours, at least 15 hours must be completed with CE classes, including the master’s report. The remaining 15 hours may be completed in related disciplines that supplement their area of study.

Both MS and MEng students must satisfactorily complete a written comprehensive exam and an oral defense of either the master’s thesis or master’s report to a committee of three or more graduate faculty members. Degree programs must be completed within seven years from the date that a student starts the degree program. Degrees taking longer than seven years will require course recertification.

Admissions Requirements:
- Application for admission
- 3 letters of recommendation
- 2 copies of all transcripts
- $50 processing fee
- Bachelor’s or master’s degree
- Previous GPA above 3.0

GRE & GRE
For GPAs between 3.0 and 2.75, students may be admitted provisionally, but are encouraged to submit official GRE scores to support their applications.

Non-international applicants not wishing to take the GRE may gain admittance by registering as a nondegree student and completing three classes with a GPA above 3.25.

Transfer Credit:
Master’s students may transfer up to 9 credit hours from another institution toward their master’s degree, if approved by their advisor.

Program Prerequisites:
Prerequisite courses are in addition to the 30 credits needed to complete a master’s degree, as they are necessary background information that is usually included in an engineering bachelor’s program. Students may complete prerequisite courses either before or after being admitted to a degree program. However, applicants with too many outstanding prerequisites may not get admitted. For applicants completing prerequisites after admission, all prerequisite courses must be completed before 12 of the 30 master’s credit hours are complete.

International Admissions:
International applicants should apply through the Office of International Admissions. All international applicants must submit GRE scores. Strong candidates will have verbal plus quantitative scores exceeding 1200, with a minimum of 1000 required.

For more information on admissions and a full list of prerequisite classes go to: www.ucdenver.edu/civil/graduate-admissions.

DOCTORAL DEGREE

Specialty Areas For Degrees:
- Civil Engineering Systems
- Environmental and Sustainability Engineering
- Geotechnical Engineering
- Hydrologic and Hydraulic Engineering
- Structural Engineering
- Transportation Engineering

What is Civil Engineering Systems?

The doctoral program in Civil Engineering Systems has different rules than the five other traditional doctoral tracks in order to facilitate more interdisciplinary research. This doctoral track can be the degree that would follow the master of engineering.

Degree Requirements:
Doctoral students must complete a minimum of 30 credit hours of course work. Courses taken should be carefully planned with advisors. At least 5 credits of hours of this course work must be completed at CU Boulder for the five traditional specialty tracks. For doctoral students in the civil engineering systems specialty, at least 3 hours of graduate credit must be taken at CU Boulder.

In addition to the 30 credit hours of course work, students must complete a minimum of 30 hours of dissertation research credit.

Transfer Credit:
Doctoral students may transfer up to 15 credits toward their required course work but not for dissertation hours. For students completing their master’s at UC Denver or Boulder, up to 21 credits may be transferred.

Program Prerequisites:
Prerequisites are the same as those described for the master’s degrees. In addition, doctoral applicants must have already earned a master’s degree or be in the process of completing a master’s degree before applying to the doctoral program.

CERTIFICATE PROGRAMS

The Civil Engineering Department offers three certificates. One certificate is in GIS, one in sustainable urban infrastructure, and one in water resources.

Certificate in GIS
This certificate is for students who want to get a taste of the program before applying, and for professionals who need a working knowledge of GIS. To earn the certificate in GIS, students must complete four of the core GIS classes, totaling 12 credit hours of work. Students can complete this certificate as a master’s student or as a nondegree student. Students must already have a baccalaureate degree and must complete any course specific prerequisites.

Certificate in Sustainable Urban Infrastructure
This certificate is for student and working professionals who seek an interdisciplinary curriculum in the broad field of sustainable infrastructure to address complex water, energy, built environment and transportation challenges using engineering and social science strategies.

Certificate in Water Resources
This certificate is for graduate students who seek an interdisciplinary curriculum in the field of hydrologic and hydraulic engineering to analyze water-related problems and obtain knowledge pertaining to watershed hydrology, groundwater modeling, urban storm water management, flood mitigation and river mechanics.

For questions on all certificates and degree programs, call 303-556-2871 or visit www.ucdenver.edu/civil.

Faculty
- Carol Zach, assistant professor, PhD, University of Colorado Denver
  Specialties: sustainable energy systems development, power generation technologies
- Brian Brey, senior instructor, PhD, Colorado School of Mines
  Specialties: engineering geology, analytical mechanics, applied mathematics
- Nanc-Yin Chang, professor, PE, PhD, University of Colorado Denver
  Specialties: geotechnical and geotransportation engineering
- Steven Langer, associate professor, PhD, University of Arkansas
  Specialties: structural engineering, concrete materials, bridge engineering
- James Gao, professor, PE, PhD, University of Illinois at Urbana-Champaign
  Specialties: hydrology and hydraulics
- Bruce Janson, professor, PhD, University of Colorado Denver
  Specialties: hydrology and hydraulics
- Gary Haggard, professor, PhD, University of Colorado Denver
  Specialties: geotechnical and geotransportation engineering
- John Rivas, professor, PhD, University of Colorado Denver
  Specialties: structural engineering, concrete materials, bridge engineering
- Amani Zum, professor, PhD, University of Colorado Denver
  Specialties: geotechnical and geotransportation engineering

Visit www.ucdenver.edu/civil for more information.