



Want to earn your Master of Science in civil engineering in one year of full-time study beyond your Bachelor of Science in civil engineering? Then take a look at our 4 + 1 program.

There are many reasons to consider a master's degree:

- Gain top-notch training in your chosen civil engineering specialty.
- Become an expert in your chosen thesis (or report) research.
- Position yourself in a competitive employment market.
- Earn 9-13% more than those with only a bachelor's degree.



The Master of Science program in **geotechnical engineering** offers opportunities for study and research in design and construction of structures built on, in or of natural/improved soils or rocks. As desirable construction sites in urban settings are fast becoming fewer, innovations in geotechnical engineering is arguably some of the most intriguing and interesting. Geotechnical engineering covers diverse areas such as earth retaining structures, reinforced soil structures, dams, tunneling, bridge abutments, landslide stabilization, environmental geotechnics, in-situ testing, new soil composites, soil-structure interaction, earthquake engineering, subsurface characterization, ground improvement, computational geomechanics, and geosynthetics. This specialty area allows professionals to have close association with field work and is excellent for students who love to work in and with the nature.

JUNIOR YEAR	
Fall Semester	
CVEN 3111	Analytical Mechanics II
CVEN 4728	Geotechnical Engineering II
CVEN 5780 <sup>1</sup>	Engineering Geology
MATH 3195	Linear Algebra/ Differential Equations
Varies	Core Curriculum
<b>TOTAL CREDITS 16</b>	

SENIOR YEAR	
Spring Semester	
CVEN 4067	Senior Design
CVEN 4xxx	Design Elective (4 of 4)
CVEN 4738	Intermediate Foundation Engineering
CVEN 5708 <sup>1</sup>	Advanced Soils Engineering
Varies	Core Curriculum
<b>TOTAL CREDITS 15</b>	

GRADUATE YEAR	
Fall Semester	
CVEN 5718	Engineering Properties of Soils
CVEN 5768	Introduction to Rock Engineering
CVEN 5719	Design & Construction of GRS Structures
CVEN 5950 <sup>2</sup>	Master's Thesis (1 of 2)
<b>TOTAL CREDITS 12</b>	

GRADUATE YEAR	
Spring Semester	
CVEN 5709	Settlement Analysis
CVEN 5798	Dynamics of Soils and Foundations
CVEN 5xxx	Graduate Elective
CVEN 5950 <sup>2</sup>	Master's Thesis (2 of 2)
<b>TOTAL CREDITS 12</b>	

**Ready to apply? Visit <http://engineering.ucdenver.edu/civil/admission-MS>.**

1. Courses count toward bachelor's and master's degrees.
2. CVEN-5960 Master Report and a second Graduate Elective may substitute for 2x(CVEN-5950).

