



4 + 1 program | Environmental & Sustainability Engineering

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 **environmental** and **sustainability** (E&S) engineering comprises two areas. First, the program covers water treatment, wastewater treatment and environmental remediation that are fundamental for public health. Second, the program provides quantitative training in sustainability, which is included prominently in our Code of Ethics. E&S engineers make it possible for Colorado to maintain its agricultural, mining and industrial sectors in harmony with our expectations for human health and environmental quality. Moreover, metropolitan Denver is a hub for E&S engineering with numerous private, governmental and nonprofit organizations. See below for an outline of the curriculum.

SOPHOMORE YEAR		SENIOR YEAR		GRADUATE YEAR		GRADUATE YEAR	
Spring Semester		Spring Semester		Fall Semester		Spring Semester	
CVEN 3111	Analytical Mechanics II	CVEN 4067	Senior Design	CVEN 5404	Sustainable Water Systems: Physical & Chemical Processes	CVEN 5405	Systems Analysis for Environment & Sustainability
CVEN 3121	Mechanics of Materials	CVEN 4xxx	Design Elective (3 of 4)	CVEN 5434	Sustainable Water Systems: Biological Processes	CVEN 5461	Introduction to Sustainable Infrastructure
CVEN 5401 ^{1,3}	Introduction to Environmental Engineering	CVEN 5402 ¹	Integrated Environmental Modeling	CVEN 5464	Fundamentals of Sustainability & Climate Change	CVEN 5xxx	Graduate Elective
MATH 3195	Linear Algebra/Differential Equations	Varies	Core Curriculum	CVEN 5950 ²	Master's Thesis (1 of 2)	CVEN 5950 ²	Master's Thesis (2 of 2)
Varies	Core Curriculum	TOTAL CREDITS 15		TOTAL CREDITS 12		TOTAL CREDITS 12	

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).
3. If CVEN-3401 is taken instead of CVEN-5401, take another graduate course as a technical elective in the fall semester of the senior year, then take a second Graduate Elective in the fall semester of the graduate year.

