

Environmental engineering

Did You Know?

Environmental engineering faculty and students are working with several Colorado communities to study acid mine drainage in the watershed.

Students:

76 undergraduates

Faculty:

EVEN faculty are drawn from four departments making the program interdisciplinary at its heart

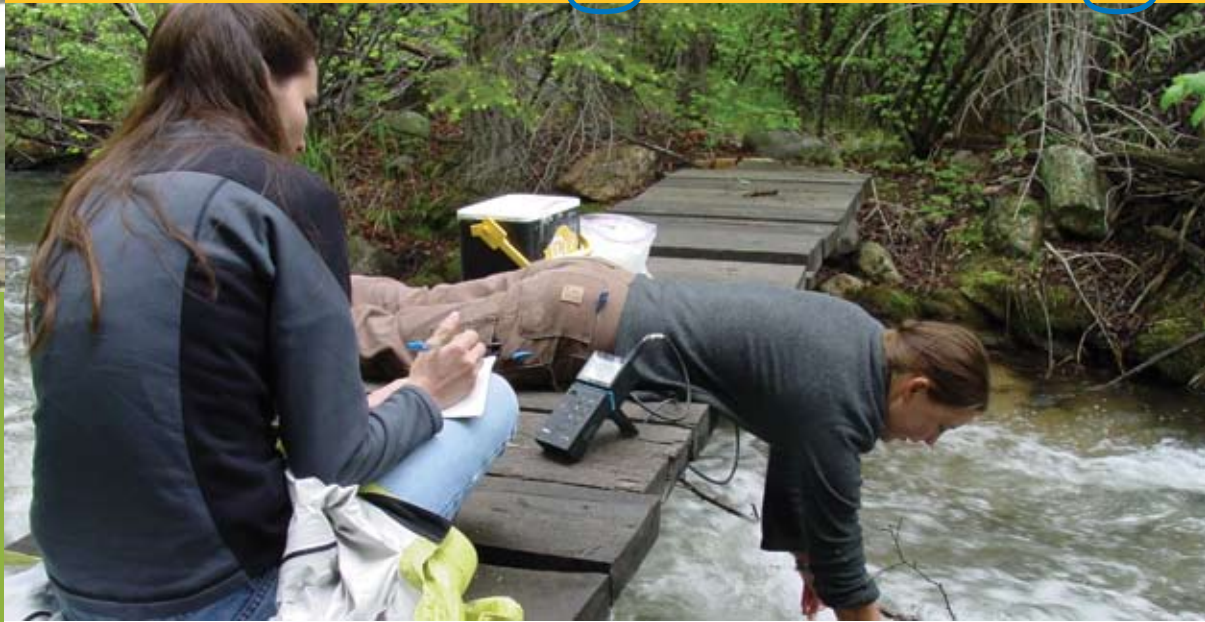
Research:

Areas of faculty expertise include biological waste water treatment, membrane filtration, contamination in ground and surface waters, drinking water treatment, air quality modeling, combustion processes and pollution abatement.

Rankings:

CU-Boulder is the only doctoral university in the Rocky Mountain region ranked in the top 20 public engineering programs in the nation. The graduate program in environmental engineering (within civil) is ranked 14th among public institutions (USNWR).

Colorado
University of Colorado at Boulder



Environmental engineers play a vital role in maintaining the quality of both human environmental systems and the natural environment. Environmental engineering encompasses the scientific assessment and development of engineering solutions to environmental problems impacting the biosphere, land, water, and air quality. To address these challenges, environmental engineers often encounter challenging problems that must be solved in data-poor situations as members of multidisciplinary teams.

The University of Colorado at Boulder's multidisciplinary undergraduate environmental engineering program offers six areas of specialization – air quality, applied ecology, chemical processing, environmental remediation, energy, and water resources and treatment. Students may also formulate their own specialty within the program. The environmental engineering degree emphasizes mastery of principles and practices, inspires service for the global public good, and prepares students for broad and dynamic careers.



"With environmental engineering I am able to develop technical solutions to protect and play in the outdoors I love. At CU I have all the resources of a large university and all of the camaraderie and personal attention of a small college."
— Hallie Bevan

Hands-on Learning

At CU-Boulder, students learn by doing. Environmental engineering students enjoy extensive hands-on learning opportunities through laboratory courses, field work, and undergraduate research positions. Through service learning activities such as Engineers without Borders, students apply their knowledge to real-world projects that improve the quality of life for people in developing countries.

What can I do with a degree in environmental engineering?

- Become an environmental consultant
- Pursue graduate, law, or medical degree
- Work in industry as a licensed Professional Engineer
- Work for a governmental regulatory agency such as EPA or Dept. of Public Health and Environment

Environmental curriculum

128 semester credit hours required

(Sample Curriculum)

FRESHMAN YEAR

Fall Semester

APPM 1350 Calculus 1 for Engineers	4
CHEN 1211 Engr. General Chemistry	3
CHEM 1221 Engr. General Chemistry Lab	2
EVEN 1000 Intro to Environmental Engr	1
GEEN 1300 Intro to Engr Computing	3
Humanities and Social Science Elective	3

Spring Semester

APPM 1360 Calculus 2 for Engrs	4
GEEN 1400 First-year Engineering Projects	3
PHYS 1110 General Physics 1	4
Technical Elective I	3
Humanities and Social Science Elective	3

SOPHOMORE YEAR

Fall Semester

APPM 2350 Calculus 3 for Engrs	4
CVEN 3414 Fund. of Environmental Engr	3
PHYS 1120 General Physics 2	4
PHYS 1140 Experimental Physics I	1
Humanities and Social Science Elective	3

Spring Semester

APPM 2630 Diff Eq with Linear Algebra	4
CHEM 4521 Physical Chemistry for Engrs	3
CHEN 2120 Material & Energy Balances	3
Solid Mechanics	3
Humanities and Social Science Elective	3

Credits

16

4

3

2

1

3

3

17

4

3

4

3

3

15

4

3

3

4

1

3

17

4

3

3

3

3

JUNIOR YEAR

Fall Semester

CVEN 3454 Water Chemistry	4
Fluid Mechanics	3
Thermodynamics	3
Engineering Economics	3
Required Communication Course	3

Spring Semester

CVEN 4424 Environmental Organic Chemistry	3
CVEN 4484 Environmental Microbiology	3
MCEN 4131 Air Pollution Control	3
Probability and Statistics	3
Heat Transfer	3

SENIOR YEAR

Fall Semester

CVEN 4444 Environ Eng Processes	3
Humanities/Social Science Elective	3
Option Course I	3
Option Course II	3
Technical Elective II	3
Technical Elective III or Senior Thesis	3

Spring Semester

CVEN 4333 Engineering Hydrology	3
CVEN 4434 Environmental Engineering Design	3
Air or Earth Lab or Field Course	3
Option Course III	3
Technical Elective IV or Senior Thesis	3

Credits

16

4

3

3

3

3

15

3

3

3

3

3

18

3

3

3

3

3

3

15

3

3

3

3

3

The Environmental Engineering Program seeks to graduate students who will:

- become established in professional careers and earn advanced degrees
- apply multi-disciplinary approaches to manage the unique challenges and balance the competing social, political, economic, and technical goals of environmental problems and solutions
- serve the needs of our society and protect the future of our planet in an ethical manner

For more information visit www.colorado.edu/engineering/even

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A photograph showing two students in a field setting up equipment for an environmental study. One student is kneeling and writing in a notebook, while the other is kneeling and working with a piece of equipment. The background shows a forested area with snow-capped mountains in the distance.