



FRCC (all campuses) to CU-Boulder

Transfer Advising Guide for Environmental Engineering (B.S.)

[Environmental Engineering Department Website](#)

Program Overview:

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 affecting the biosphere, land, water, and air quality.

Admission Requirements:

[Please see this website for more information regarding CU Engineering admission criteria](#)

FRCC Course Summary: (the following courses will apply directly to the degree)

**BOLD denotes admission requirement courses*

Mathematics:

MAT 2410*	Calculus 1	(5 credits)
MAT 2420*	Calculus 2	(5 credits)
MAT 2431	Calculus 3 with Engineering Applications	(5 credits)
MAT 2562	Differential Equations/Linear Algebra	(4 credits)

Science:

CHE 1111*	General Chemistry 1	(5 credits)
CHE 1112*	General Chemistry 2	(5 credits)
PHY 2111	Calc-based Physics 1	(5 credits)
PHY 2112	Calc-based Physics 2	(5 credits)

^It is recommended for this major that you complete CHE 1111 + 1112 before transferring

Additional Science & Engineering Courses:

EGG 1000	Introduction to Engineering	(1 credit – free elective)
EGG 1040	Engineering Projects	(3 credits)
GEY 1111	Physical Geology (lower division technical elec.)	(4 credits)
EGG 2011	Statics	(3 credits)

Humanities and Social Sciences (H/SS):

- Up to nine (9) credit hours at the lower division (1000-2000) level
 - Six (6) credit hours the upper-division level – *typically taken at CU Boulder*
- Please consult our [CCCS humanities and social science list](#) when selecting these classes

Suggested Five-Year Course Plan for Environmental Engineering

This is a suggested guide of coursework only and is subject to change. Always consult with your academic advisor for graduation planning purposes.

*denotes courses that do not apply directly to degree, other than as free electives

Front Range Community College (two years)

Fall Semester 1

Course	Course Title	Credits
MAT 1440	Pre-Calculus*	5
EGG 1000	Intro to Engineering*	1
	Free Elective*	3
	Humanities/Social Science	3
	Total Credits	12

Spring Semester 1

Course	Course Title	Credits
MAT 2410	Calculus 1	5
CHE 1111	College Chemistry 1 (with lab)	5
GEY 1111	Physical Geology	4
	Total Credits	14

Fall Semester 2

Course	Course Title	Credits
MAT 2420	Calculus 2	5
CHE 1112	College Chemistry 2 (with lab)	5
PHY 2111	Physics 1	5
	Total Credits	15

Spring Semester 2

Course	Course Title	Credits
MAT 2431	Calculus 3	5
PHY 2112	Physics 2	5
CHE 2111	Organic Chemistry 1	5
	Total Credits	15

CU-Boulder (last three years)

Fall Semester 3

Course	Course Title	Credits
APPM 2360	Differential Eq./Lin. Algebra	4
CHEN 1310	Engineering Computing	3
CVEN 3227	Prob. Stats. And Decision	3
CVEN 2121	Analytical Mechanics 1	3
	Humanities/Social Science	3
	Total Credits	16

Spring Semester 3

Course	Course Title	Credits
CHEN 2120	Material & Energy Balances	3
CVEN 4834	Sustainability Principles	3
CVEN 3414	Fund. Of Environmental Engr.	3
	Humanities/Social Science	3
	Total Credits	12

CU-Boulder (last three years)...continued

Fall Semester 4

Course	Course Title	Credits
	Fluid Mechanics	3
CVEN 4404	Water Chemistry	3
CVEN 4414	Water Chemistry Lab	1
	Engineering Economics	3
	Thermodynamics	3
	UD Humanities/Social Science	3
	Total Credits	16

Spring Semester 4

Course	Course Title	Credits
CVEN 4484	Environmental Microbiology	3
CVEN 4424	Environmental Org. Chemistry	3
	Heat Transfer	3
	Option Course 1	3
	Engineering Writing Course	3
	Total Credits	15

Fall Semester 5

Course	Course Title	Credits
EVEN 4464	Environmental Eng. Processes	3
	Lab or Field Course	3
	Option Course 2	3
	Technical Elective	3
	Technical Elective	3
	Total Credits	15

Spring Semester 5

Course	Course Title	Credits
CVEN 4333	Engineering Hydrology	3
MCEN 4131	Air Pollution Control	3
CVEN 4434	Environmental Eng. Design	3
	Option Course 3	3
	UD Humanities/Social Science	3
	Total Credits	15