



University of Colorado  
Boulder

## RRCC to CU-Boulder Transfer Advising Guide for Civil Engineering (B.S.)

College of Engineering and Applied Science

[Civil Engineering Department Website](#)

### Program Overview:

Civil engineers design and supervise the construction of the buildings and infrastructure that make up our world: roads, bridges, tunnels, skyscrapers, transit systems, water treatment facilities, and offshore structures. They are problem solvers meeting the challenges of pollution, clean drinking water, climate change, energy and transportation needs, urban development, and community planning for the megacities of the 21st century.

### Admission Requirements:

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

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

\* **BOLD** denotes admission requirement courses (only ONE science course needed for admission)

#### Mathematics:

<b>MAT 201*</b>	<b>Calculus 1</b>	<b>(5 credits)</b>
<b>MAT 202*</b>	<b>Calculus 2</b>	<b>(5 credits)</b>
MAT 204	Calculus 3 with Engineering Applications	(5 credits)
MAT 261	Differential Equations	(4 credits)
MAT 255	Linear Algebra	(3 credits)

#### Science:

<b>PHY 211*</b>	<b>Calc-based Physics 1</b>	<b>(5 credits)</b>
PHY 212	Calc-based Physics 2	(5 credits)
CHE 111	General Chemistry 1	(5 credits)

<sup>^</sup>CHE 111 will also count for admission requirement in place of PHY 211

#### Engineering/Computer Science:

CSC 160	Computer Science 1	(4 credits)
CAD 101+102 (OR 227)	Computer Aided Drafting	(6 credits total)
CAD 227 (OR 101+202)	Advanced Revit Architecture	(3 credits)
EGT 140	IDEA (engineering projects)	(3 credits)
EGG 211	Statics (prerequisite of PHY 211)	(3 credits)

#### Humanities and Social Sciences (H/SS):

- Up to nine (9) credit hours at the lower division (100-200) level
  - Six (6) credit hours at 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 Civil 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

### Red Rocks Community College (first two years)

#### Fall Semester 1

Course	Course Title	Credits
MAT 121	College Algebra*	4
CHE 101	Intro to Chemistry*	5
ENG 121	English Composition 1 *	3
	<a href="#">Humanities/Social Science</a>	3
	<b>Total Credits</b>	<b>15</b>

#### Spring Semester 1

Course	Course Title	Credits
MAT 122	Trigonometry*	3
CHE 111	College Chemistry 1 (with lab)	5
CSC 119	Intro to Programming*	3
	<b>Total Credits</b>	<b>11</b>

#### Fall Semester 2

Course	Course Title	Credits
MAT 201	Calculus 1	5
CAD 101+102	Computer Aided Drafting	6
OR CAD 227	Advanced Revit Architecture	3
CSC 160	Computer Science 1	4
	<b>Total Credits</b>	<b>12-15</b>

#### Spring Semester 2

Course	Course Title	Credits
MAT 202	Calculus 2	5
PHY 211	Physics 1	5
EGT 140	IDEA (engineering projects)	3
ENG 122	English Composition 2 ( <a href="#">H/SS</a> )	3
	<b>Total Credits</b>	<b>16</b>

### CU-Boulder (last three years)

#### Fall Semester 3

Course	Course Title	Credits
APPM 2350	Calculus 3	4
PHYS 1120	Physics 2	4
PHYS 1140	Experimental Physics	1
CVEN 2121	Analytical Mechanics 1	3
CVEN 3698	Engineering Geology	3
	<b>Total Credits</b>	<b>16</b>

#### Spring Semester 3

Course	Course Title	Credits
APPM 2360	Differential Eq./Linear Alg.	4
CVEN 2012	Geomatics	3
AREN 2110	Thermodynamics	3
CVEN 3161	Mechanics of Materials	3
CVEN 3313	Theoretical Fluid Dynamics	3
	<b>Total Credits</b>	<b>16</b>

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

#### Fall Semester 4

Course	Course Title	Credits
CVEN 3246	Intro to Construction	3
CVEN 3323	Hydraulic Engineering	3
CVEN 3414	Fund. Of Environ. Engineering	3
CVEN 3525	Structural Analysis	3
CVEN 3708	Geotechnical Engineering 1	3
	<b>Total Credits</b>	<b>15</b>

#### Spring Semester 4

Course	Course Title	Credits
CVEN 3111	Analytical Mechanics 2	3
CVEN 3227	Probability and Statistics	3
	CVEN Proficiency 1	3
	Engineering Writing Course	3
	<a href="#">Humanities/Social Science</a>	3
	<b>Total Credits</b>	<b>15</b>

#### Fall Semester 5

Course	Course Title	Credits
CVEN 4897	Professional Issues	3
	CVEN Proficiency 2	3
	Technical Elective	3
	Technical Elective	3
	<a href="#">UD Humanities/Social Science</a>	3
	<b>Total Credits</b>	<b>15</b>

#### Spring Semester 5

Course	Course Title	Credits
CVEN 4899	Senior Design	4
	CVEN Proficiency 3	3
	Technical Elective	3
	Technical Elective	3
	<a href="#">UD Humanities/Social Science</a>	3
	<b>Total Credits</b>	<b>16</b>