



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

College of Engineering, Design and Computing

[Civil Engineering Department Website](#)

### Program Overview:

Earning a bachelor of science in civil engineering is the start of a long and successful career. Given the increase in population, the continuing development of second- and third-world countries and the eventual degradation of city infrastructure, civil engineers will always be in demand. A degree in civil engineering opens the door to many areas of study including transportation and highways, hydrology and wastewater systems, structures and bridges, environmental and sustainability issues, and geotechnical and earth design.

### Admission Requirements:

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

**RRCC Course Options:** (the following courses will apply directly to the degree)

<u>Core Curriculum:</u> (Please consult <a href="#">CU Denver Core Curriculum</a> and <a href="#">Transferology</a> )		<u>RRCC Credits</u>
ENG 121/131	English Composition 1 / Technical Writing 1	(3 credits)
ENG 122	English Composition 2	(3 credits)
Arts & Humanities	Two Courses (GT-AH1, AH2, AH3, or AH4)	(6 credits)
Social & Behavior Science	Two courses (GT-SS1, GT-SS2, or GT-SS3)	(6 credits)
History	One GT-HI1	(3 credits)
<u>Mathematics:</u>		
MAT 201	Calculus 1	(5 credits)
MAT 202	Calculus 2	(5 credits)
MAT 204	Calculus 3 with Engineering Applications	(5 credits)
MAT 255	Linear Algebra	(3 credits)
MAT 261	Differential Equations with Engineering Applications	(4 credits)
<u>Science:</u>		
PHY 211	Calc-based Physics I	(5 credits)
PHY 212	Calc-based Physics II	(5 credits)
CHE 111	General Chemistry I	(5 credits)
BIO 111 or CHE 112 or GEY 111	General Biology or Chemistry 2 or Physical Geology	(4-5 credits)
<u>Engineering/Computer Science:</u>		
CSC 119	Intro to Programming	(3 credits)
CAD 101+102	Computer Aided Drafting	(6 credits total)
EGG 211	Statics	(3 credits)

## Suggested Five-Year Course Plan for Civil Engineering

This is a suggested guide of coursework only and is subject to change. Students should consult with a CU Denver academic advisor as soon as possible prior to transferring. CU Denver courses may be reverse transferred to count toward a community college associate degree. Course credits shown below reflect those awarded by the institution offering the course.

### Pre-Engineering at Red Rocks Community College (RRCC)

These are recommended courses for students who need preparation for the calculus sequence, chemistry, and computer science.

\* denotes courses that do not apply to the B.S. degree

MAT 055/MAT 121 Combined Pre-Algebra and College Algebra, 8 credits

MAT 121 College Algebra\*, 4 credits

MAT 122 Trigonometry\*, 4 credits

CHE 101 Introduction to Chemistry\*, 5 credits

### Red Rocks Community College (First 2 Years)

#### RRCC Fall Semester 1

Course	Course Title	Credits
MAT 201	Calculus 1	5
CHE 111	General Chemistry 1 (with lab)	5
ENG 121	English Composition 1	3
COM 220	Intercultural Comm. GT-SS3	3
<b>Total Credits</b>		<b>16</b>

#### RRCC Spring Semester 1

Course	Course Title	Credits
MAT 202	Calculus 2	5
ENG 122	English Composition 2	3
CSC 119	Intro to Programming	3
	GT-AH**	3
<b>Total Credits</b>		<b>14</b>

#### RRCC Fall Semester 2

Course	Course Title	Credits
MAT 204	Calculus 3	5
PHY 211	Physics 1 (with lab)	5
	GT-AH**	3
	GT-HI**	3
<b>Total Credits</b>		<b>16</b>

#### RRCC Spring Semester 2

Course	Course Title	Credits
MAT 261	Differential Equations	4
PHY 212	Physics 2	5
EGG 211	Statics	3
	GT-SS, HI** (choose)	3
<b>Total Credits</b>		<b>15</b>

\*\*See RRCC advisor for course selection

### CU-Denver (last three years)

#### Fall Semester 3

Course	Course Title	Credits
CVEN 1067	Intro to Civil Engineering	1
CVEN 2121	Analytical Mechanics I	3
CVEN 2212	Engineering Surveying	2
CVEN 3602	Transportation Engineering	3
	Cultural Diversity***	3 Transfer AS
<b>Total Credits</b>		<b>12</b>

\*\*\*Course apply toward completion of AS degree. See advisor

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

#### Spring Semester 3

Course	Course Title	Credits
MATH 3191	Linear Algebra	3
CVEN 3121	Mechanics of Materials	3
CVEN 3141	Intro to Structural Materials	2
CVEN 3401	Intro to Environmental Engineering	3
<b>Total Credits</b>		<b>11</b>

#### Fall Semester 4

Course	Course Title	Credits
CVEN 3111	Analytical Mechanics II	3
CVEN 3313	Fluid Mechanics	3
CVEN 3505	Structural Analysis	3
CVEN 3718	Geotechnical Engineering I	3
<b>Total Credits</b>		<b>12</b>

#### Spring Semester 4

Course	Course Title	Credits
CVEN 3323	Hydrosystems	3
CVEN 3414	Water Supply & Distribution	3
CVEN 4728	Geotechnical Engineering II	2
	Design Elective	3
<b>Total Credits</b>		<b>11</b>

#### Fall Semester 5

Course	Course Title	Credits
CVEN 4025, CVEN 4077, OR CVEN 4087	AutoCAD Civil 3D, OR Engineering Economy, OR Contracts	3
	Design Elective	3
	Technical Elective	3
CVEN 3611	Engineering Statistics	3
CVEN 4230	Construction Engineering	3
<b>Total Credits</b>		<b>15</b>

#### Spring Semester 5

Course	Course Title	Credits
CVEN 4000	Senior Seminar	0
CVEN 4067	Senior Design	3
	Design Electives x2	6
	Technical Elective	3
	Technical Elective	3
<b>Total Credits</b>		<b>15</b>