



Community College of Aurora (CCA) 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.](#)

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

<u>Core Curriculum:</u> (Please consult CU Denver Core Curriculum and Transferology)		<u>CCA Credits</u>
ENG 121	English Composition 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	GT-HI1	(3 credits)

Mathematics:

MAT 201	Calculus 1	(5 credits)
MAT 202	Calculus 2	(5 credits)
MAT 203	Calculus 3	(4 credits)
MAT 204	Calculus 3 with Engineering Applications	(5 credits)
MAT 255	Linear Algebra	(3 credits)
MAT 265	Differential Equations	(3 credits)
MAT 266	Differential Equations with Linear Algebra	(4 credits)

Science:

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)

Engineering/Computer Science:

EGG 106 and EGG 151	Robotics Design and Experimental Design	(3 credits total)
CSC 119 or CSC 160	Intro to Programming/Computing	(3-4 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.

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

Community College of Aurora (CCA) first two years

Fall Semester 1

Course	Course Title	Credits
MAT 122 or 166	Trigonometry or Pre-Calculus*	3-5
ENG 121	English Composition 1	3
CHE 111	College Chemistry 1 (with lab)	5
	Art/Hum/SS/BS/Hi	3
	Total Credits	14-16

Spring Semester 1

Course	Course Title	Credits
MAT 201	Calculus 1	5
ENG 122	English Composition 2	3
EGG 106	Robotics Design	1
	Art/Hum/SS/BS/Hi	3
	Art/Hum/SS/BS/Hi	3
	Total Credits	15

Fall Semester 2

Course	Course Title	Credits
MAT 202	Calculus 2	5
PHY 211	Physics 1	5
GEY 111	Physical Geology	4
	Art/Hum/SS/BS/Hi	3
	Total Credits	17

Spring Semester 2

Course	Course Title	Credits
MAT 203	Calculus 3	4
PHY 211	Physics 2	5
CSC 119	Intro to Programming	3
EGG 151	Experimental Design	2
	Total Credits	14

CU-Denver (last three years)

Fall Semester 3

Course	Course Title	Credits
CVEN 1025	Graphics and CAD	3
CVEN 1067	Intro to Civil Engineering	1
CVEN 2121	Analytical Mechanics I	3
CVEN 2212	Engineering Surveying	2
CVEN 3602	Transportation Engineering	3
	Total Credits	12

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

Spring Semester 3

Course	Course Title	Credits
CVEN 3121	Mechanics of Materials	3
CVEN 3141	Intro to Structural Materials	2
CVEN 3401	Intro to Environmental Engineering	3
	Cultural Diversity Core	3
	Art/Hum/SS/BS/Hi	3
	Total Credits	14

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
	Total Credits	12

Spring Semester 4

Course	Course Title	Credits
CVEN 3323	Hydrosystems	3
CVEN 3414	Water Supply & Distribution	3
CVEN 4728	Geotechnical Engineering II	2
MATH 3195	Linear Algebra & Differential Equations	4
	Design Elective	3
	Total Credits	15

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
	Total Credits	15

Spring Semester 5

Course	Course Title	Credits
CVEN 4000	Senior Seminar	0
CVEN 4067	Senior Design	3
	Design Electives x2	6
	Technical Elective	3
	Total Credits	12