



CCD 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](#)

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

**BOLD denotes admission requirement courses*

Mathematics:

| | | |
|-----------------|---------------------------------------|--------------------|
| MAT 201* | Calculus 1 | (5 credits) |
| MAT 202* | Calculus 2 | (5 credits) |
| MAT 204 | Calculus 3 w/Engineering Applications | (5 credits) |
| MAT 266 | Differential Equations/Linear Algebra | (4 credits) |

Science:

| | | |
|-----------------|----------------------------|--------------------|
| CHE 111* | General Chemistry 1 | (5 credits) |
| PHY 211 | Calc-based Physics 1 | (5 credits) |
| PHY 212 | Calc-based Physics 2 | (5 credits) |

^PHY 212 will also count for admission requirement in place of CHE 111

Engineering/Computer Science:

| | | |
|-------------|-------------------------------------|-------------|
| CSC 160 | Computer Science 1 | (4 credits) |
| CAD 101+102 | Computer Aided Drafting (need both) | (6 credits) |
| EGG 140 | Engineering Projects | (4 credits) |

Humanities and Social Sciences (H/SS):

- Up to twelve (12) credit hours at the lower division (100-200) 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 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

Community College of Denver (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 |
| | Humanities/Social Science | 3 |
| | Total Credits | 13 |

Spring Semester 1

| Course | Course Title | Credits |
|---------|--------------------------------|-----------|
| MAT 166 | Pre-Calculus* | 5 |
| CHE 111 | College Chemistry 1 (with lab) | 5 |
| CSC 119 | Intro to Programming* | 3 |
| | Total Credits | 16 |

Fall Semester 2

| Course | Course Title | Credits |
|-------------|---|-----------|
| MAT 201 | Calculus 1 | 5 |
| CSC 160 | Computer Science 1 | 4 |
| CAD 101+102 | Computer Aided Drafting (need both to count for CU) | 6 |
| | Total Credits | 15 |

Spring Semester 2

| Course | Course Title | Credits |
|---------|---|-----------|
| MAT 202 | Calculus 2 | 5 |
| PHY 211 | Physics 1 | 5 |
| | Humanities/Social Science | 3 |
| | Humanities/Social Science | 3 |
| | Total Credits | 16 |

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 |
| | Total Credits | 16 |

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 |
| | Total Credits | 16 |

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 |
| | Total Credits | 15 |

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 |
| GEEN 3400 | Projects (if no EGG 140) | 3 |
| | Total Credits | 15 |

Fall Semester 5

| Course | Course Title | Credits |
|-----------|--|-----------|
| CVEN 4897 | Professional Issues | 3 |
| | CVEN Proficiency 2 | 3 |
| | Technical Elective | 3 |
| | Technical Elective | 3 |
| | UD Humanities/Social Science | 3 |
| | Total Credits | 15 |

Spring Semester 5

| Course | Course Title | Credits |
|-----------|--|-----------|
| CVEN 4899 | Senior Design | 4 |
| | CVEN Proficiency 3 | 3 |
| | Technical Elective | 3 |
| | Technical Elective | 3 |
| | UD Humanities/Social Science | 3 |
| | Total Credits | 16 |