



## FRCC (all campuses) to CU-Boulder

### Transfer Advising Guide for Architectural Engineering (B.S.)

[Architectural Engineering Department Website](#)

#### Program Overview:

Architectural engineers focus on the engineering aspects of buildings; they design the structural systems, the mechanical systems, and the lighting and electrical systems of buildings, while tackling the challenges related to managing the construction process. While architectural engineers work with architects, they are engineers and not architects. CU graduates in architectural engineering are working at such companies as Accenture, Whiting-Turner Contracting, Elkhorn Construction, Hathaway Dinwiddie Construction, LiteControl, and MCLA, to name only a few.

#### 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:

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

#### Science:

<b>PHY 2111*</b>	<b>Calc-based Physics 1</b>	<b>(5 credits)</b>
CHE 1111	General Chemistry 1	(5 credits)
<i>^ also counts for admission requirement in place of PHY 2111</i>		
PHY 2112	Calc-based Physics 2	(5 credits)

#### Engineering/Computer Science:

EKG 1000	Introduction to Engineering	(1 credit – free elective)
EKG 1060 ( <b>preferred</b> )	Introduction to Engineering Computing	(4 credits)
<u>OR</u> CSC 1060	Computer Science 1 (C++ section)	(4 credits)
CAD 2220	Revit Architecture	(3-6 credits)
EKG 1040	Engineering Projects	(3 credits)
EKG 2011	Statics	(3 credits)
EKG 2012	Dynamics	(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 Architectural 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
ENG 1021	English Composition ( <a href="#">H/SS</a> )	3
EGG 1000	Intro to Engineering*	1
CHE 1111	College Chemistry (with lab)	5
	<b>Total Credits</b>	<b>13</b>

### Spring Semester 1

Course	Course Title	Credits
MAT 201	Calculus 1	5
CAD 2220	Revit Architecture	3
ENG 1022	English Composition 2 ( <a href="#">H/SS</a> )	3
EGG 1060	Engineering Computing	4
	<b>Total Credits</b>	<b>15-18</b>

### Fall Semester 2

Course	Course Title	Credits
MAT 2420	Calculus 2	5
PHY 2111	Physics 1	5
	<a href="#">Humanities/Social Science</a>	3
EGG 1040	Engineering Projects	3
	<b>Total Credits</b>	<b>16</b>

### Spring Semester 2

Course	Course Title	Credits
MAT 2431	Calculus 3 (Engr. Applications)	5
PHY 2012	Physics 2	5
EGG 1040	Engineering Projects	3
	<a href="#">Humanities/Social Science</a>	3
	<b>Total Credits</b>	<b>16</b>

## CU-Boulder (last three years)

### Fall Semester 3

Course	Course Title	Credits
APPM 2360	Differential Eq./Lin. Algebra	4
CVEN 2121	Analytical Mechanics 1	3
AREN 2050	Building Materials and Syst.	3
AREN 2110	Thermodynamics	3
	<b>Total Credits</b>	<b>13</b>

### Spring Semester 3

Course	Course Title	Credits
CVEN 2012	Geomatics	3
CVEN 3161	Mechanics of Materials	3
AREN 2120	Fluids and Heat Transfer	3
CVEN 3246	Intro to Construction	3
	<b>Total Credits</b>	<b>12</b>

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

### Fall Semester 4

Course	Course Title	Credits
AREN 3540	Illumination 1	3
AREN 3010	Mechanical Sys. for Bldgs.	3
CVEN 3525	Structural Analysis	3
ECEN 3030	Electrical Circuits	3
	<b>Total Credits</b>	<b>12</b>

### Spring Semester 4

Course	Course Title	Credits
	AREN/CVEN Proficiency 1	3
	AREN/CVEN Proficiency 2	3
	AREN/CVEN Concentration 1	3
	Technical Elective	3
	Engineering Writing Course	3
	<b>Total Credits</b>	<b>15</b>

### Fall Semester 5

Course	Course Title	Credits
ENVD 3114	Hist. & Theories of Arch. 1	3
ARCH 4010	Arch. Appreciation & Design	5
	AREN/CVEN Concentration 2	3
	Technical Elective	3
	<b>Total Credits</b>	<b>14</b>

### Spring Semester 5

Course	Course Title	Credits
ENVD 3134	Hist. & Theory of Arch. 2	3
AREN 4317	Architectural Engr. Design	5
	Technical Elective	3
	Technical Elective	3
	<b>Total Credits</b>	<b>14</b>