CMC-Steamboat Springs 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

CMC 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 203	Calculus 3	(5 credits)
MAT 266	Differential Equations/Linear Algebra	(4 credits)

Science:

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

^CHE 111 will also count for admission requirement in place of PHY 211

Engineering/Computer Science:

CSC 160	Computer Science 1	(4 credits)
CAD 255	Solid Works	(3 credits)
EGG 211	Statics (fall only)	(3 credits)
EGG 230	Thermodynamics	(3 credits)

Humanities and Social Sciences (H/SS):

- Minimum of 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 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

Colorado Mountain College (first two years)

Fall Semester 1

Course	Course Title	Credits
MAT 121	College Algebra*	4
CHE 101	Intro to Chemistry (with Lab)*	5
ENG 121	English Composition*	3
	Total Credits	**12**

Spring Semester 1

Course	Course Title	Credits
MAT 166	Pre-Calculus*	5
CHE 111	College Chemistry (with lab)	5
	Humanities/Social Science	3
	Total Credits	**13**

Fall Semester 2

Course	Course Title	Credits
MAT 201	Calculus 1	5
CAD 255	Solid Works	3
CSC 160	Computer Science 1	4
	Humanities/Social Science	3
	Total Credits	**15**

Spring Semester 2

Course	Course Title	Credits
MAT 202	Calculus 2	5
PHY 211	Physics 1	5
	Humanities/Social Science	3
EGG 140	Engineering Projects	3
	Total Credits	**16**

CU-Boulder (last three years)

Fall Semester 3

Course	Course Title	Credits
APPM 2350	Calculus 3	4
CVEN 2121	Analytical Mechanics 1	3
AREN 2050	Building Materials and Syst.	3
AREN 2110	Thermodynamics	3
	Total Credits	**13**

Spring Semester 3

Course	Course Title	Credits
APPM 2360	Differential Eq./Lin. Algebra	4
CVEN 3161	Mechanics of Materials	3
AREN 2120	Fluids and Heat Transfer	3
CVEN 3246	Intro to Construction	3
PHYS 1120	Physics 2	4
	Total Credits	**17**

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
CVEN 2012	Geomatics	3
	Total Credits	**15**

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
	Total Credits	**15**

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
	Total Credits	**14**

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
	Total Credits	**14**

Updated 12/2017

Suggested Four-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

Colorado Mountain College (first 2 years)

Fall Semester 1

Course	Course Title	Credits
MAT 201	Calculus 1	5
CHE 111	College Chemistry (with lab)	5
CAD 255	Solid Works	3
EGG 140	Engineering Projects	3
	Total Credits	**13**

Spring Semester 1

Course	Course Title	Credits
MAT 202	Calculus 2	5
CSC 160	Computer Science 1	4
PHY 211	Physics 1	5
	Humanities/Social Science	3
	Total Credits	**17**

Fall Semester 2

Course	Course Title	Credits
MAT 204	Calculus 3	5
EGG 211	Statics	3
PHY 212	Physics 2	5
	Humanities/Social Science	3
	Total Credits	**16**

Spring Semester 2

Course	Course Title	Credits
MAT 266	Diff.Eq/Linear Algebra	4
EGG 206	Mechanics of Solids	3
EGG 230	Thermodynamics	3
	Humanities/Social Science	3
	Total Credits	**13**

CU-Boulder (last 2 years + one summer course)

Fall Semester 3

Course	Course Title	Credits
CVEN 3246	Intro to Construction	3
CVEN 2012	Geomatics #	3
AREN 3540	Illumination 1 #	3
AREN 2050	Building Materials and Syst. #	3
ECEN 3030	Electrical Circuits #	3
	Total Credits	**15**

Spring Semester 3

Course	Course Title	Credits
AREN 2120	Fluids and Heat Transfer #	3
CVEN 3525	Structural Analysis	3
	Technical Elective	3
	AREN/CVEN Concentration 1	3
	AREN/CVEN Concentration 2	3
	Total Credits	**15**

Summer between Jr./Sr year

Course	Course Title	Credits
	Engineering Writing Course	3

Fall Semester 4

Course	Course Title	Credits
AREN 3010	Mechanical Sys. for Bldgs. #	3
	AREN/CVEN Proficiency 1	3
	AREN/CVEN Proficiency 2	3
ENVD 3114	Hist. & Theories of Arch. 1 #	3
ARCH 4010	Senior Design 1 #	5
	Total Credits	**17**

^ Summer coursework can lighten semester loads

Spring Semester 4

Course	Course Title	Credits
ENVD 3134	Hist. &Theory of Arch. 2 #	3
AREN 4317	Architectural Engr. Design #	5
	Technical Elective	3
	Technical Elective	3
	Technical Elective	3
	Total Credits	**15**

Course is offered once per year (Fall or Spring, as shown)