



## CMC-Steamboat Springs to CU Boulder Transfer Advising Guide for Mechanical Engineering (B.S.)

[Mechanical Engineering Department Website](#)

### Program Overview:

Mechanical engineers use the principles of mechanics and energy conservation to design, manufacture and test mechanical devices. They develop power-producing and power-using machines as well as new materials and manufacturing processes. Many mechanical engineers work in fields related to design, aerospace, automotive industries, energy, bioengineering, and research and manufacturing.

### 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:

<b>MAT 201*</b>	<b>Calculus 1</b>	<b>(5 credits)</b>
<b>MAT 202*</b>	<b>Calculus 2</b>	<b>(5 credits)</b>
MAT 204	Calculus 3	(5 credits)
MAT 266	Differential Equations/Linear Algebra	(4 credits)

#### Science:

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

<sup>^</sup>PHY 211 will also count for admission requirement in place of CHE 111

#### Engineering/Computer Science:

CSC 160	Computer Science 1	(4 credits)
CAD 255	Solid Works	(3 credits)
EGG 140	Engineering Projects	(3 credits)
EGG 211	Statics ( <i>fall only</i> )	(3 credits)
EGG 212	Dynamics ( <i>spring only</i> )	(3 credits)
EGG 206	Mechanics of Materials	(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 Mechanical 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*	5
ENG 121	English Composition 1 *	3
	<a href="#">Humanities/Social Science</a>	3
	<b>Total Credits</b>	<b>15</b>

#### 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
	<b>Total Credits</b>	<b>13</b>

#### Fall Semester 2

Course	Course Title	Credits
MAT 201	Calculus 1	5
CSC 160	Computer Science 1	4
CAD 255	Solid Works	3
	<a href="#">Humanities/Social Science</a>	3
	<b>Total Credits</b>	<b>15</b>

#### Spring Semester 2

Course	Course Title	Credits
MAT 202	Calculus 2	5
PHY 211	Physics 1	5
EGG 140	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 2350	Calculus 3	4
PHYS 1120	Physics 2	4
PHYS 1140	Experimental Physics	1
MCEN 2023	Statics and Structures	3
MCEN 2000	Professionalism Seminar	1
	<b>Total Credits</b>	<b>13</b>

#### Spring Semester 3

Course	Course Title	Credits
APPM 2360	Differential Eq./Linear Alg.	4
MCEN 3012	Thermodynamics	3
ECEN 3010	Circuits and Electronics	3
MCEN 2024	Materials Science	3
	<b>Total Credits</b>	<b>13</b>

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

#### Fall Semester 4

Course	Course Title	Credits
MCEN 3021	Fluid Mechanics	3
MCEN 2043	Dynamics	3
MCEN 2063	Solid Mechanics	3
MCEN 3030	Computational Methods	3
	Engineering Writing Course	3
	<b>Total Credits</b>	<b>15</b>

#### Spring Semester 4

Course	Course Title	Credits
MCEN 3025	Component Design	3
MCEN 3022	Heat Transfer	3
MCEN 3047	Data & Measurements	4
	General Technical Elective	3
	<a href="#">UD Humanities/Social Science</a>	3
	<b>Total Credits</b>	<b>16</b>

#### Fall Semester 5

Course	Course Title	Credits
MCEN 4045	Senior Design 1	3
MCEN 4043	System Dynamics	3
MCEN 3032	Thermodynamics 2	3
MCEN 4026	Manufacturing Systems	3
PHYS 2130	Physics 3	3
	<b>Total Credits</b>	<b>15</b>

#### Spring Semester 5

Course	Course Title	Credits
MCEN 4085	Senior Design 2	3
	ME Technical Elective	3
	ME Technical Elective	3
	General Technical Elective	3
	<a href="#">UD Humanities/Social Science</a>	3
	<b>Total Credits</b>	<b>15</b>

## Suggested Four-Year Course Plan for Mechanical 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
EGG 140	Engineering Projects	3
	<a href="#">Humanities/Social Science</a>	3
	<b>Total Credits</b>	<b>16</b>

#### Spring Semester 1

Course	Course Title	Credits
MAT 202	Calculus 2	5
CSC 160	Computer Science 1	4
PHY 211	Physics 1	5
CAD 255	Solid Works	3
	<b>Total Credits</b>	<b>17</b>

#### Fall Semester 2

Course	Course Title	Credits
MAT 204	Calculus 3	5
EGG 211	Statics	3
PHY 212	Physics 2	5
	<a href="#">Humanities/Social Science</a>	3
	<b>Total Credits</b>	<b>16</b>

#### Spring Semester 2

Course	Course Title	Credits
MAT 266	Diff.Eq/Linear Algebra	4
EGG 212	Dynamics	3
EGG 206	Mechanics of Materials	3
EGG 230	Thermodynamics	3
	<a href="#">Humanities/Social Science</a>	3
	<b>Total Credits</b>	<b>16</b>

### CU-Boulder (Last 2 years)

#### Fall Semester 3

Course	Course Title	Credits
MCEN 2000	Professionalism Seminar	1
MCEN 3021	Fluid Mechanics	3
MCEN 2024	Materials Science	3
	Engineering Writing Course	3
	<a href="#">UD Humanities/Social Science</a>	3
	<b>Total Credits</b>	<b>13</b>

#### Spring Semester 3

Course	Course Title	Credits
MCEN 3030	Computational Methods	3
MCEN 3025	Component Design	3
MCEN 3022	Heat Transfer	3
MCEN 3047	Data & Measurements	4
	<a href="#">UD Humanities/Social Science</a>	3
	<b>Total Credits</b>	<b>16</b>

#### Fall Semester 3

Course	Course Title	Credits
MCEN 4045	Senior Design 1	3
MCEN 4043	System Dynamics	3
MCEN 3032	Thermodynamics 2	3
MCEN 4026	Manufacturing Systems	3
	ME Technical Elective	3
	<b>Total Credits</b>	<b>15</b>

#### Spring Semester 4

Course	Course Title	Credits
MCEN 4085	Senior Design 2	3
	ME Technical Elective	3
PHYS 2130	Physics 3	3
	General Technical Elective	3
	General Technical Elective	3
	<b>Total Credits</b>	<b>15</b>

*^ Summer coursework can lighten semester loads*