



University of Colorado **Denver**



Updated 2/2020

## RRCC to CU-Denver Transfer Advising Guide for Bioengineering (B.S.)

College of Engineering, Design and Computing

[Bioengineering Department Website](#)

### Program Overview:

Bioengineering is a highly interdisciplinary field that combines the mathematical and physical sciences with engineering principles to study biology, physiology, medicine, behavior and health. Bioengineering is emerging as the leading discipline at the interface of clinical sciences, basic research, and engineering and maintains focus on catalyzing technology to cure and prevent disease. The undergraduate bioengineering program provides training at both the Denver campus and the Anschutz Medical Campus.

The BS Bioengineering program emphasizes the professional competencies of leadership, communication, presentation and critical problem solving. These learning goals and the dual-campus model provide robust training for a variety of careers in the fast-growing biomedical and biotechnology industry. Graduates will also have an excellent foundation for continued education in science, engineering and medicine.

### Admission Requirements:

[Please see this website for more information regarding CU Engineering admission criteria.](#)

### RRCC Course Options: (the following courses will apply directly to the degree)

**Core Curriculum:** (Please consult [CU Denver Core Curriculum](#) and [Transferology](#)) RRCC Credits

ENG 121/131	English Composition 1 / Technical Writing 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	One GT-HI1	(3 credits)

**Mathematics:**

MAT 201	Calculus 1	(5 credits)
MAT 202	Calculus 2	(5 credits)
MAT 204	Calculus 3 with Engineering Applications	(5 credits)
MAT 255	Linear Algebra	(3 credits)
MAT 261	Differential Equations with Engineering Applications	(4 credits)

**Science:**

CHE 111	General Chemistry I	(5 credits)
CHE 112	General Chemistry 2	(5 credits)
CHE 211	Organic Chemistry 1	(5 credits)
PHY 211	Calculus Based Physics 1	(5 credits)
PHY 212	Calculus Based Physics 2	(5 credits)
BIO 111	General College Biology 1	(5 credits)
BIO 112	General College Biology 2	(5 credits)

## Suggested Five-Year Course Plan for Bioengineering

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 earn a community college associate degree. Course credits shown below reflect those awarded by the institution offering the course.

### Pre-Engineering at Red Rocks Community College (RRCC)

These are recommended courses for students who need preparation for the calculus sequence, chemistry, and computer science.

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

MAT 055/MAT 121 Combined Pre-Algebra and College Algebra, 8 credits

MAT 121 College Algebra\*, 4 credits

MAT 122 Trigonometry\*, 4 credits

CHE 101 Introduction to Chemistry\*, 5 credits

CSC 119, Introduction to Programming\*, 3 credits

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

### Red Rocks Community College (RRCC) first two years

#### Fall Semester 1

Course	Course Title	Credits
MAT 201	Calculus 1	5
ENG 121	English Composition1	3
BIO 111	General College Biology 1	5
COM 220	Intercultural Comm. GT-SS3	3
	<b>Total Credits</b>	<b>16</b>

#### Spring Semester 1

Course	Course Title	Credits
MAT 202	Calculus 2	4
CHE 111	College Chemistry 1 (with lab)	5
	GT-AH	3
ENG 122	English Composition 2	3
	<b>Total Credits</b>	<b>15</b>

#### Fall Semester 2

Course	Course Title	Credits
MAT 204	Calculus 3 w Eng. App	5
CHE 112	College Chemistry 2 (with lab)	5
BIO 112	General College Biology 2	5
	<b>Total Credits</b>	<b>15</b>

#### Spring Semester 2

Course	Course Title	Credits
PSY 101	General Psychology I GT-SS3	3
	GT-HI	3
CHE 211	Organic Chemistry I	5
	GT-AH	3
	<b>Total Credits</b>	<b>14</b>

See Advisor: This transfer plan is missing three credits of AH or HI To complete Associate of Science degree.

### CU-Denver (last three years)

#### Fall Semester 3 (Downtown Campus)

Course	Course Title	Credits
ENGR 1200	Fundamentals of Engineering Design Innovation	3
BIOE 2010	Intro to Programming for Bioengineers	2
MATH 3195	Linear Algebra and Differential Equations	4
PHYS 2331/2341	General Physics I with Lab	5
	<b>Total Credits</b>	<b>14</b>

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

#### Spring Semester 3

##### (Downtown Campus)

Course	Course Title
BIOE 1020	Bioengineering Des Prototyping II
BIOE 2020	Intro to Comp Met Bioengineers
PHYS 2331/2341	General Physics II v
	Cultural Diversity**
	<b>Total Credits</b>

\*\*\*Course apply toward completion of AS degree. See advisor

#### Fall Semester 4 (Anschutz Medical Campus)

Course	Course Title
BIOE 3010	Bioinstrumentation
BIOE 3020	Intro to Biomechanics
BIOE 3030	Intro to Biomaterials
BIOE 3040	Physiology for Bioengineers
BIOE 3070	Bioengineering Lab
	<b>Total Credits</b>