



RRCC to CU-Denver Transfer Advising Guide for Mechanical Engineering (B.S.)

College of Engineering, Design and Computing
[Mechanical Engineering Department Website](#)

Program Overview:

The Mechanical engineering offers interesting and challenging career opportunities in research, design, development, manufacturing, testing and marketing for either private industry or government. As a mechanical engineer, you may work on products such as engines, transmissions, compressors, pumps, computer disk drives, CAD/CAE software, oil field drilling rigs, missiles, space satellites, earth moving equipment, container manufacturing machines and medical equipment.

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)

<u>Core Curriculum:</u> (Please consult CU Denver Core Curriculum and Transferology)		<u>RRCC Credits</u>
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)
<u>Mathematics:</u>		
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)
<u>Science:</u>		
PHY 211	Calc-based Physics I	(5 credits)
PHY 212	Calc-based Physics II	(5 credits)
CHE 111	General Chemistry I	(5 credits)
<u>Engineering/Computer Science:</u>		
CSC 160	Computer Science	(4 credits)
CAD 255-259	Solid Works (choose one course)	(3 credits)
EGT 140	IDEA (engineering projects)	(3 credits)
EKG 211	Statics	(3 credits)

Suggested Five-Year Course Plan for Mechanical Engineering

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 count toward 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

Red Rocks Community College (First 2 Years)

Fall Semester 1

Course	Course Title	RRCC Credits
MAT 201	Calculus 1	5
CHE 111	College Chemistry 1 (w/Lab)	5
ENG 121	English Composition 1	3
COM 220	Intercultural Comm. GT-SS3	3
	Total Credits	16

RRCC Spring Semester 1

Course	Course Title	RRCC Credits
MAT 202	Calculus 2	5
ENG 122	English Composition 2	3
CSC 160	Computer Science 1	4
	GT-AH**	3
	Total Credits	15

**See RRCC advisor for course selection

RRCC Fall Semester 2

Course	Course Title	RRCC Credits
MAT 204	Calculus 3	5
PHY 211	Physics 1	5
CAD 255-259	Solid Works 3D Modeling (only need one course)	3
EGT 140	IDEA (engineering projects)	3
	Total Credits	16

Spring Semester 2

Course	Course Title	RRCC Credits
MAT 261	Differential Equations	4
PHY 212	Physics 2	5
EGG 211	Statics	3
	GT-AH**	3
HIS 247	20 th Century World History	3
	Total Credits	18

**See RRCC advisor for course selection

CU Denver (Last 3 Years)

CU Denver Fall Semester 3

Course	Course Title	CU-Denver Credits
MATH 3191	Linear Algebra	3
MECH 2024	Materials Science	3
MECH 2034	Properties of Materials Lab	1
MECH 3043	Strength of Materials	3
MECH 1045	Manufacturing	3
MECH 2033	Dynamics	3
MECH 3012	Thermodynamics	3
	Total Credits	19

CU Denver Spring Semester 3

Course	Course Title	CU-Denver Credits
MECH 3021	Introduction to Fluid Mechanics	3
MECH 3031	Fluids Thermal Lab	1
ELEC 3030/MECH 3032	Electric Circuits & Systems w/ Lab	4
MECH 3010	Elem. Numerical Methods & Programming	3
MECH 3035	Design of Mechanical Elements	3
MECH 3027/3028	Measurements w/ Lab	4
	Total Credits	18

CU Denver Fall Semester 4

Course	Course Title	CU-Denver Credits
MECH 4035	Senior Design I	3
MECH 3023	System Dynamics I	3
MECH 3022	Thermodynamics II	3
MECH 3042	Heat Transfer	3
MECH	Technical Elective	3
	Social Science***	3 Transfer AS
	Total Credits	18

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

CU Denver Spring Semester 4

Course	Course Title	CU-Denver Credits
MECH 4045	Senior Design II	3
MECH 4023	System Dynamics II	3
MECH 4142	Thermal Systems Design	3
MECH	Technical Elective	3
	Cultural Diversity***	3 Transfer As
	Total Credits	15

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