

University of Colorado **Denver**

Community College of Aurora (CCA) 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.](#)

CCA Course Summary: (the following courses will apply directly to the degree)

<u>Core Curriculum:</u> (Please consult CU Denver Core Curriculum and Transferology)		<u>CCA Credits</u>
ENG 121	English Composition 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	GT-HI1	(3 credits)
 <u>Mathematics:</u>		
MAT 201	Calculus 1	(5 credits)
MAT 202	Calculus 2	(5 credits)
MAT 203	Calculus 3	(4 credits)
MAT 204	Calculus 3 with Engineering Applications	(5 credits)
MAT 255	Linear Algebra	(3 credits)
MAT 265	Differential Equations	(3 credits)
MAT 266	Differential Equations with Linear Algebra	(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)
EGG 106	Robotics Design	(1 credit)
EGG 151	Experimental Design	(2 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.

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

Community College of Aurora (CCA) first two years

Fall Semester 1

Course	Course Title	Credits
MAT 122 or 166	Trigonometry or Pre-Calculus*	3-5
ENG 121	English Composition 1	3
	Art/Hum/SS/BS/HI	3
	Art/Hum/SS/BS/HI	3
	Total Credits	12-14

Spring Semester 1

Course	Course Title	Credits
MAT 201	Calculus 1	5
ENG 122	English Composition 2	3
CHE 111	College Chemistry 1 (with lab)	5
EGG 106	Robotics Design	1
	Total Credits	14

Fall Semester 2

Course	Course Title	Credits
MAT 202	Calculus 2	5
PHY 211	Physics 1	5
CSC 160	Computer Science 1	4
	Total Credits	14

Spring Semester 2

Course	Course Title	Credits
MAT 203	Calculus 3	4
PHYS 212	Physics 2	5
EGG 151	Experimental Design	2
	Art/Hum/SS/BS/HI	3
	Total Credits	14

CU-Denver (last three years)

Fall Semester 3

Course	Course Title	Credits
MECH 1025	Graphics & CAD	3
MECH 2024	Materials Science	3
MECH 2034	Properties of Materials Lab	1
MECH 2023	Statics	3
	Art/Hum/SS/BS/HI	3
	Total Credits	13

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

Spring Semester 3

Course	Course Title	Credits
MATH 3195	Linear Algebra & Differential Equations	4
MECH 1045	Manufacturing	3
MECH 3043	Strength of Materials	3
	Art/Hum/SS/BS/HI	3
	Total Credits	13

Fall Semester 4

Course	Course Title	Credits
MECH 3012	Thermodynamics	3
MECH 3010	Elem. Numerical Methods & Programming	3
ELEC 3030/MECH 3032	Electric Circuits & Systems w/ Lab	4
MECH 2033	Dynamics	3
	Cultural Diversity	3
	Total Credits	16

Spring Semester 4

Course	Course Title	Credits
MECH 3021	Introduction to Fluid Mechanics	3
MECH 3031	Fluids Thermal Lab	1
MECH 3022	Thermodynamics II	3
MECH 3035	Design of Mechanical Elements	3
MECH 3023	System Dynamics I	3
	Total Credits	13

Fall Semester 5

Course	Course Title	Credits
MECH 4023	System Dynamics II	3
MECH 4035	Senior Design I	3
MECH 3042	Heat Transfer	3
MECH	Technical Elective	3
	Total Credits	12

Spring Semester 5

Course	Course Title	Credits
MECH 4045	Senior Design II	3
MECH 3027/3028	Measurements w/ Lab	4
MECH 4142	Thermal Systems Design	3
MECH	Technical Elective	3
MECH	Total Credits	13