

University of Colorado **Denver**

Front Range Community College (FRCC) to CU-Denver Transfer Advising Guide for Electrical Engineering (B.S.)

College of Engineering, Design and Computing

[Electrical Engineering Department Website](#)

Program Overview:

The Bachelor of Science in Electrical Engineering, provides an ABET-accredited undergraduate education to a diverse group of students of different racial and cultural backgrounds, full-time students as well as those who have considerable work and family commitments outside their academic learning and students with a wide variety of work experiences. The department strives to continually update our program of study to qualify our graduates for technical positions in the Denver metropolitan area and beyond, while also providing sufficient breadth and depth to assure our graduates of success in their chosen profession. The electrical engineering program stresses the rigorous scientific and theoretical foundations of the discipline so our graduates can enter any advanced level educational program with the critical thinking skills needed for success. In addition, the program includes interdisciplinary work. Our graduates are productive engineers who can advance their careers on different professional tracks in the engineering industry.

Admission Requirements:

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

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

<u>Core Curriculum:</u> (Please consult CU Denver Core Curriculum and Transferology)		<u>FRCC 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 204	Calculus 3 with Engineering Applications	(5 credits)
MAT 266	Differential Equations/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 I	(4 credits)
EKG 140	Engineering Projects	(3 credits)

Suggested Five-Year Course Plan for Electrical 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

** denotes CU Denver online course

Front Range Community College (FRCC) first two years

Fall Semester 1

Course	Course Title	Credits
MAT 121	College Algebra*	4
ENG 121	English Composition 1	3
EGG 100	Intro to Engineering*	1
	Art/Hum/SS/BS/Hi	3
	Art/Hum/SS/BS/Hi	3
	Total Credits	14

Spring Semester 1

Course	Course Title	Credits
MAT 122 or 166	Trigonometry or Pre-Calculus*	3-5
ENG 122	English Composition 2	3
CHE 111	College Chemistry 1 (with lab)	5
CSC 119	Intro to Programming*	3
	Total Credits	14-16

Fall Semester 2

Course	Course Title	Credits
MAT 201	Calculus 1	5
CSC 160	Computer Science equals Elec 1520 @ UC Denver	4
ELEC 1510	Digital Logic**	3
	Art/Hum/SS/BS/Hi	3
	Total Credits	15

Spring Semester 2

Course	Course Title	Credits
MAT 202	Calculus 2	5
PHY 211	Physics 1	5
ELEC 2531	Logic Lab**	1
ELEC 2520	Embedded Systems**	3
	Art/Hum/SS/BS/Hi	3
	Total Credits	17

CU-Denver (last three years)

Fall Semester 3

Course	Course Title	Credits
MATH 2421	Calculus 3	4
PHYS 2331	Physics II	4
ELEC 2132	Circuits I	3
MATH 3195	Linear Alg./Differential Eq.	4
	Total Credits	15

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

Spring Semester 3

Course	Course Title	Credits
ENGR 1200	Intro to Engineering Design	3
ELEC 2142	Circuits Analysis II	3
ELEC 3520	AL-IoT	3
ELEC 2651	Signal processing	3
ELEC 3133	Electromagnetic Fields	3
	Total Credits	15

Fall Semester 4

Course	Course Title	Credits
ELEC 3817	Probability and Statistics	3
ELEC 3225	Electronics	4
ELEC 3164/3724	Energy Systems and Lab	4
ELEC 3316	Signals and Systems	3
	Total Credits	14

Spring Semester 4

Course	Course Title	Credits
ELEC 3701	Machine Learning	3
ELEC 3900	Circuits Design and Fab. Lab	3
ELEC 4xxx and lab	ELEC 4xxx 1 of the 5 specialty courses and lab	4
ELEC 4xxx	ELEC Specialty	3
	Art/Hum/SS/BS/Hi	3
	Total Credits	16

Fall Semester 5

Course	Course Title	Credits
ELEC 4309	Senior Design I Project	3
	ELEC Specialty 4xxx	3
	ELEC Specialty 4xxx	3
	Professional Elective	3
	Total Credits	12

Spring Semester 5

Course	Course Title	Credits
ELEC 4319	Senior Design II Project	3
	ELEC Specialty 4xxx & Lab	4
ENGR 3400	Technology and Culture	3
	Total Credits	10