Electrical Engineering

Bachelor of Science (B.S.) – Catalog Year 2026-2027

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 electrical engineering graduates are productive engineers who can advance their careers on different professional tracks in the engineering industry.

ACADEMIC ADVISING

Students admitted to the College of Engineering, Design and Computing (CEDC) who have declared a major should to meet with an advisor in their specific department and should contact that department to schedule an appointment. Electrical@ucdenver.edu The Electrical Engineering department is located in North Classroom, NC 2615 303-315-7520	*Students admitted to the College of Engineering, Design and Computing* *as pre-engineers or who are undecided should meet with a college academic advisor.* engineering@ucdenver.edu Visit engineering.ucdenver.edu for more information. 303-315-7170

GENERAL GRADUATION REQUIREMENTS & POLICIES

All College of Engineering, Design and Computing (CEDC) students are required to complete the following minimum general graduation requirements:

1. Complete a minimum of 128 semester hours.
2. Achieve a minimum 2.0 grade point average (GPA) for all courses attempted, for all required courses and for all courses taken within the student's major department.
3. Complete all CU Denver Core, CEDC and major requirements.
4. Complete the last 40 credits as an enrolled CEDC student.

PROGRAM REQUIREMENTS & POLICIES

The following program requirements are based on degree requirements for the current Catalog year at CU Denver and are subject to change. Students are responsible for completing degree requirements based on the Catalog year for which they are admitted.

Students are responsible for meeting with the major/faculty advisor in the department to confirm major requirements. Student completing the Electrical Engineering, B.S. degree are required to complete the following minimum program requirements:

1. Complete 24 semester hours of CU Denver Core Curriculum coursework.
2. Complete a minimum of 30 semester hours of pre-major coursework.
3. Complete a minimum of 74 semester hours of Electrical Engineering coursework.

COURSEWORK THAT CAN BE COMPLETED AT PREVIOUS INSTITUTION

The following is a "bucket" of requirements students can complete prior to transferring to CU Denver, including equivalent Colorado Community College System (CCCS) courses. To determine the equivalencies of courses to be completed at non-CU Denver institutions, students can visit

https://transferology.com/school/ucdenver. It is critical students connect with a CU Denver academic advisor to ensure planned courses will transfer *and* apply to CU Denver degree requirements. All non-CU Denver coursework must be completed with a C- or better to be eligible for transfer.

Students interested in completing an Associate (A.A. or A.S.) Degree or a Colorado Statewide Transfer Articulation Agreement or Degree with Designation (DWD) must work with their community/junior college academic advisor to create an academic plan that accounts for all degree or transfer articulation agreement requirements. Colorado Community College Students may also explore the option to complete Reverse Transfer at CU Denver.

CU Denver Requirements	CU Denver Credits	CCCS Equivalent Courses & Notes	CCCS Credits
CU Denver Core Curriculum Requirement	s 21		
ENGL 1020 – Core Composition I	3	ENG 1021	3
ENGL 2030 – Core Composition II	3	ENG 1022	3
Arts	3	GT-AH	3
Humanities	3	GT-AH or GT-HI	3
Behavioral Sciences	3	GT-SS	3
Social Sciences	3	GT-SS or GT-HI*	3
International Perspectives	3	Additional GT-AH, HI, SS* *(see note below)*	3
Cultural Diversity	0	*To be completed at CU Denver. This requirement must be completed with ENGR 3400*	
Required Mathematics Courses	16		
MATH 1401 Cal I, Math 2411 Cal II	8	*GT-MA1 (MAT 2410) and Math 2420*	5
MATH 2421 Calculus III, MATH 3195 Diff. and Linear Algebra	8	MAT 2431 and MAT 2562	5
Chemistry, Physics and Eng. Courses	20		10
ENGR 1130	5	CHE111 General Chemistry w/Lab	
PHYSICS 2311 & 2321 PHYS I and Lab	5	PHY 2111 physics Calculus based with Lab	4
PHYSICS 2321 PHYSICS II without lab	4	*PHY 2112 Physics Calculus based with lab*	4
ENGR 1200 Fund. of Eng. Design & Inn	3	EGT 1110 Intro to Design and Eng. or EGG 1030 Robotics Design and EGG 1051 Exp. Design	3 3
ELEC 1520 Programming for EE	3	CSCI 1060 Computer Science	3
Total Hours:	57		

SAMPLE PLAN – COURSEWORK TO BE COMPLETED AT CU DENVER

Based on successful completion of applicable transfer credits <u>and</u> the complete "bucket" of requirements outlined above, students would have the following remaining to complete at CU Denver. At CU Denver, students must tailor this plan based on the evaluation of previously completed college coursework (e.g., AP, IB, CLEP, dual/concurrent enrollment, and transfer credit), course availability, individual preferences related to course load, summer term courses, part-time or full-time student status, or add-on programs such as minors or double-majors.

Students deviating from this plan must fulfill course prerequisites and must meet with the faculty advisor in their department to confirm degree requirements. Students intending to transfer to CU Denver to pursue a Electrical Engineering (B.S.) degree should note the following:

1. The College of Engineering, Design and Computing has a competitive admissions process. Student may be admitted to CU Denver but not the College of Engineering, Design and Computing. Such students may work with CU Denver's Academic Success and Advising Center to identify an alternative major and/or program of study.
2. Colorado Community College students should transfer to CU Denver once they have met the College of Engineering, Design and Computing's admission requirements. They should not necessarily complete an associate's degree.

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Fall	CRS
ELEC 1510 Digital Logic	3
ELEC 2132 Circuits I	3
ELEC 2520 Embedded Systems	3
ELEC 2651 Signal Processing	3
ELEC 3817 Engineering Prob & Stats	
TOTAL	12

Spring	CRS
ELEC 2142 Circuits II	3
ELEC 3520 AI- IoT spring only	3
ELEC 3133 Electromagnetic Fields	3
ELEC 2531 Logic Lab	1
ENGR 3400-online only	3
TOTAL	13

Fall	CRS
ELEC 3900 Circuit Design and Fab	3
ELEC 3164 Energy Systems	3
ELEC 3225 Electronics	4
ELEC 3316 Signals and Systems	3
Elec 4309 Senior Design I fall only	3
TOTAL	16

Spring	CRS
ELEC 3724 Energy Systems Lab	1
Elec 3701 Machine Learning -spring only	3
Elec 4xxx Specialty Course and Elec 4xxx lab	4
ELEC 4XXX Specialty Course	3
ELEC 4319 Senior Design II spring only	3
TOTAL	14

Fall	CRS
ELEC 4XXX Specialty course and Elec 4xxx Lab	4
Professional Elective	3
ELEC 4XXX Specialty Course	3
ELEC 4XXX Specialty Course	3
TOTAL	13

Total Hours at CU Denver: 71