



University of Colorado
Boulder

RRCC to CU-Boulder Transfer Advising Guide for Electrical Engineering (B.S.)

College of Engineering and Applied Science

[Electrical Engineering Department Website](#)

Program Overview:

Computer engineers (or computer hardware engineers) research, design, develop, test, and oversee the manufacture and installation of computer hardware, including computer chips, circuit boards, computer systems, and related equipment such as keyboards, routers, and printers. This field should not be confused with computer software engineers, who design and develop the software systems that control computers.

Admission Requirements:

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

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

**BOLD denotes admission requirement courses (only ONE science course needed for admission)*

Mathematics:

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

Science:

| | | |
|-----------------|-----------------------------|--------------------|
| PHY 211* | Calc-based Physics 1 | (5 credits) |
| PHY 212 | Calc-based Physics 2 | (5 credits) |
| CHE 111 | General Chemistry 1 | (5 credits) |

^CHE 111 will also count for admission requirement in place of PHY 211

Engineering/Computer Science:

| | | |
|---------|-----------------------------|-------------|
| CSC 160 | Computer Science 1 | (4 credits) |
| EGT 140 | IDEA (engineering projects) | (3 credits) |

Humanities and Social Sciences (H/SS):

- Up to nine (9) credit hours at the lower division (100-200) level
 - Six (6) credit hours at the upper-division level – *typically taken at CU Boulder*
- Please consult our [CCCS humanities and social science list](#) when selecting these classes

Suggested Five-Year Course Plan for Electrical Engineering

This is a suggested guide of coursework only and is subject to change. Always consult with your academic advisor for graduation planning purposes.

*denotes courses that do not apply directly to degree, other than as free electives

Red Rocks Community College (first two years)

Fall Semester 1

| Course | Course Title | Credits |
|---------|---|-----------|
| MAT 121 | College Algebra* | 4 |
| CHE 101 | Intro to Chemistry* | 5 |
| ENG 121 | English Composition 1 * | 3 |
| | Humanities/Social Science | 3 |
| | Total Credits | 13 |

Spring Semester 1

| Course | Course Title | Credits |
|---------|--|-----------|
| MAT 122 | Trigonometry* | 3 |
| CHE 111 | College Chemistry 1 (with lab) | 5 |
| CSC 119 | Intro to Programming* | 3 |
| ENG 122 | English Composition 2 (H/SS) | 3 |
| | Total Credits | 14 |

Fall Semester 2

| Course | Course Title | Credits |
|---------|---|-----------|
| MAT 201 | Calculus 1 | 5 |
| CSC 160 | Computer Science 1 | 4 |
| EGT 140 | IDEA (engineering projects) | 3 |
| | Humanities/Social Science | 3 |
| | Total Credits | 15 |

Spring Semester 2

| Course | Course Title | Credits |
|---------|---|-----------|
| MAT 202 | Calculus 2 | 5 |
| PHY 211 | Physics 1 | 5 |
| | Humanities/Social Science | 3 |
| | Total Credits | 13 |

CU-Boulder (last three years)

Fall Semester 3

| Course | Course Title | Credits |
|-----------|------------------------------|-----------|
| APPM 2360 | Differential Eq./Linear Alg. | 4 |
| PHYS 1120 | Physics 2 | 4 |
| PHYS 1140 | Experimental Physics | 1 |
| ECEN 2250 | Intro to Circuits | 3 |
| | Sophomore Elective 1 | 3 |
| | Total Credits | 15 |

Spring Semester 3

| Course | Course Title | Credits |
|-----------|------------------------|-----------|
| APPM 2350 | Calculus 3 | 4 |
| ECEN 2260 | Circuits as Systems | 3 |
| ECEN 2270 | Electronics Design Lab | 3 |
| ECEN 2350 | Digital Logic | 3 |
| | Sophomore Elective 2 | 3 |
| | Total Credits | 16 |

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

Fall Semester 4

| Course | Course Title | Credits |
|-----------|---|-----------|
| ECEN 2810 | Probability | 3 |
| ECEN 3350 | Prog. Of Digital Systems | 3 |
| | Advanced Analog Elec. 1 | 3 |
| | Advanced Analog Elec. 2 | 3 |
| | Humanities/Social Science | 3 |
| | Total Credits | 15 |

Spring Semester 4

| Course | Course Title | Credits |
|-----------|----------------------------|-----------|
| ECEN 3360 | Digital Design Lab | 3 |
| | Track Course 1 | 3 |
| | Advanced Analog Elec. 3 | 3 |
| | Track Course 2 | 3 |
| | Engineering Writing Course | 3 |
| | Total Credits | 15 |

Fall Semester 5

| Course | Course Title | Credits |
|-----------|--|-----------|
| ECEN 4610 | Capstone 1 | 3 |
| | Track Course 3 | 3 |
| | Track Course 4 | 3 |
| | Technical Elective | 3 |
| | UD Humanities/Social Science | 3 |
| | Total Credits | 15 |

Spring Semester 5

| Course | Course Title | Credits |
|-----------|--|-----------|
| ECEN 4620 | Capstone 2 | 3 |
| | Technical Elective | 3 |
| | Technical Elective | 3 |
| | Technical Elective | 3 |
| | UD Humanities/Social Science | 3 |
| | Total Credits | 15 |