



## Arapahoe Community College (ACC) 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.](#)

### ACC Course Options: (the following courses will apply directly to the degree)

| <u>Core Curriculum:</u> (Please consult <a href="#">CU Denver Core Curriculum</a> and <a href="#">Transferology</a> ) |  | <u>ACC 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)        |
| <br><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)        |
| <br><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)        |
| <br><u>Engineering/Computer Science:</u>  |  |                    |
| CSC 160   | Computer Science I                       | (4 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

### Arapahoe Community College (ACC) first two years

#### Fall Semester 1

| Course  | Course Title          | Credits   |
|---------|-----------------------|-----------|
| MAT 121 | College Algebra*      | 4         |
| ENG 121 | English Composition 1 | 3         |
|         | Art/Hum/SS/BS/Hi      | 3         |
|         | Art/Hum/SS/BS/Hi      | 3         |
|         | <b>Total Credits</b>  | <b>13</b> |

#### 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            |
|                | Art/Hum/SS/BS/Hi               | 3            |
|                | <b>Total Credits</b>           | <b>14-16</b> |

#### Fall Semester 2

| Course           | Course Title          | Credits   |
|------------------|-----------------------|-----------|
| MAT 201          | Calculus 1            | 5         |
| CSC 160          | Computer Science 1    | 4         |
| <b>ELEC 1510</b> | <b>Logic Design**</b> | <b>3</b>  |
|                  | Art/Hum/SS/BS/Hi      | 3         |
|                  | <b>Total Credits</b>  | <b>15</b> |

#### Spring Semester 2

| Course           | Course Title                 | Credits   |
|------------------|------------------------------|-----------|
| MAT 202          | Calculus 2                   | 5         |
| PHY 211          | Physics 1                    | 5         |
| <b>ELEC 2520</b> | <b>Embedded Systems II**</b> | <b>3</b>  |
|                  | <b>Total Credits</b>         | <b>13</b> |

### CU-Denver (last three years)

#### Fall Semester 3

| Course    | Course Title                    | Credits   |
|-----------|---------------------------------|-----------|
| MATH 2421 | Calculus 3                      | 4         |
| PHYS 2331 | Physics II                      | 4         |
| ELEC 1201 | Intro to Electrical Engineering | 1         |
| ELEC 2132 | Circuits I**                    | 3         |
| ELEC 3651 | Digital Hardware Design         | 3         |
| ELEC 2531 | Logic Lab                       | 1         |
|           | <b>Total Credits</b>            | <b>15</b> |

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

#### Spring Semester 3

| Course    | Course Title                              | Credits   |
|-----------|---|-----------|
| MATH 3195 | Linear Alg./Differential Eq.              | 4         |
| ELEC 2142 | Circuits Analysis II                      | 3         |
| ELEC 2552 | Sophomore circuits lab                    | 1         |
| MECH 3012 | ENGR Science Elective (see program guide) | 3         |
| ENGR 3400 | Cultural Diversity                        | 3         |
|           | <b>Total Credits</b>                      | <b>14</b> |

#### Fall Semester 4

| Course    | Course Title               | Credits   |
|-----------|----------------------------|-----------|
| ELEC 3817 | Probability and Statistics | 3         |
| ELEC 3215 | Electronics I              | 3         |
| ELEC 3715 | Electronics Lab            | 1         |
| ELEC 3133 | Electromagnetic Fields     | 3         |
| ELEC 3316 | Linear Systems             | 3         |
|           | Art/Hum/SS/BS/Hi           | 3         |
|           | <b>Total Credits</b>       | <b>16</b> |

#### Spring Semester 4

| Course    | Course Title              | Credits   |
|-----------|---------------------------|-----------|
| ELEC 3225 | Electronics II            | 3         |
| ELEC 3735 | Junior Lab                | 1         |
| ELEC 3164 | Energy Conversion         | 3         |
| ELEC 3724 | Energy Conversion Lab     | 1         |
|           | ELEC Specialty 4xxx & Lab | 4         |
|           | <b>Total Credits</b>      | <b>12</b> |

#### 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         |
|           | <b>Total Credits</b>    | <b>12</b> |

#### Spring Semester 5

| Course    | Course Title              | Credits   |
|-----------|---------------------------|-----------|
| ELEC 4319 | Senior Design II Project  | 3         |
|           | ELEC Specialty 4xxx & Lab | 4         |
|           | Professional Elective     | 3         |
|           | ELEC Specialty 4xxx       | 3         |
|           | <b>Total Credits</b>      | <b>13</b> |