CCA to CU Boulder Transfer Advising Guide for
Electrical & Computer Engineering (B.S.)

[Electrical & Computer 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](#)

CCA Course Summary: (the following courses will apply directly to the degree)
__BOLD__ denotes admission requirement courses
*__**denotes recommended requirement before transferring__*

Mathematics:

MAT 201*	**Calculus 1**	**(5 credits)**
MAT 202*	**Calculus 2**	**(5 credits)**
MAT 204	Calculus 3 w/Engineering Applications	(5 credits)
MAT 266	Differential Equations/Linear Algebra	(4 credits)

Science:

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

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

Engineering/Computer Science:

EGG 106	Robotics	(1 credit)
EGG 151	Experimental Design	(2 credits)
CSC 160**	Computer Science 1	(4 credits)
CSC 161**	Computer Science 2	(4 credits)

^these CSC courses can also be taken through CCC Online

Humanities and Social Sciences (H/SS):

- Minimum of 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 & Computer 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

Community College of Aurora
(first two years)

Fall Semester 1

Course	Course Title	Credits
MAT 121	College Algebra*	4
CHE 101	Intro to Chemistry (with Lab)*	5
ENG 121	English Composition*	3
	Intro to Engineering Workshop*	0
	Total Credits	**12**

Spring Semester 1

Course	Course Title	Credits
MAT 166	Pre-Calculus*	5
ENG 122	English Composition 2 (H/SS)	3
CSC 119	Intro to Programming*	3
EGG 106	Robotics	1
	Total Credits	**12**

Fall Semester 2

Course	Course Title	Credits
MAT 201	Calculus 1	5
CSC 160	Computer Science 1	4
	Humanities/Social Science	3
EGG 151	Experimental Design	2
	Total Credits	**14**

Spring Semester 2

Course	Course Title	Credits
MAT 202	Calculus 2	5
PHY 211	Physics 1	5
CSC 161	Computer Science 2	4
	Total Credits	**14**

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
ECEN 2703	Discrete Math for Comp. Eng.	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	3
	Total Credits	**16**

CU-Boulder (last three years)…continued

Fall Semester 4

Course	Course Title	Credits
GEEN 3400	Projects (if no EGG 140)	3
ECEN 2810	Probability	3
ECEN 3350	Prog. Of Digital Systems	3
	Advanced Analog Elec. 1	3
	Humanities/Social Science	3
	Total Credits	**15**

Spring Semester 4

Course	Course Title	Credits
ECEN 3360	Digital Design Lab	3
ECEN 4593	Computer Organization	3
	Advanced Analog Elec. 2	3
	Track Course 1	3
	Engineering Writing Course	3
	Total Credits	**15**

Fall Semester 5

Course	Course Title	Credits
ECEN 4610	Capstone 1	3
	Track Course 2	3
	Technical Elective	3
	Software 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**