ELECTRICAL AND COMPUTER ENGINEERING
COLORADO STATE UNIVERSITY

Bachelor of Science in Computer Engineering

1st Semester 15 Credit Hours

ENGR 111 Fundamentals of Engineering — *3 cr hr*	**CHEM 111** General Chemistry I — *4 cr hr* — ***MATH 118 or MATH 127***	**CHEM 112** General Chemistry Lab I — *1 cr hr* — *CHEM 111*	**AUCC Arts and Humanities** (Recomm. CS 150B) or **CO 150** College Composition — *3 cr hr*	**MATH 160** Calculus I — *4 cr hr* — *B- or better: in MATH 124 & MATH 126*

2nd Semester 14 Credit Hours

ENGR 114 Engineering for Grand Challenges — *3 cr hr* — ***ENGR 111***	**CS 164** CS1 - Computational Thinking with Java — *4cr hr* — ***B- or better in CS 150B or 152 or 163***	**AUCC Requirement** — *3 cr hr*		***MATH 161*** *Calculus II* — *4 cr hr* — ***MATH 160*** *MATH 120 or MATH 124*

3rd Semester 16 Credit Hours

ECE 205 Analog Circuits — *2 cr hr* — ***MATH 160*** *ENGR 114 or 123*	**ECE 252** Intro to Digital Circuits — *3 cr hr*	**CS 165** (CS2) Data Structures — *4 cr hr* — ***Any of these: CS 162, 163, 164***	**AUCC Requirement** — *3 cr hr*	**MATH 261** Calculus III — *4 cr hr* — ***MATH 161***

4th Semester 16 Credit Hours

ECE 206 Analog Circuits II — *3 cr hr* — ***ECE 205, MATH 161***	**ECE 253** Intro to IoT, Microcontrollers & C — *3 cr hr* — ***ECE 252***	**ECE 232** Intro to Project Practices — *1 cr hr* — *ECE 202*	**PH 141** Physics for Scientists & Engineers I — *5 cr hr* — *MATH 160*	**MATH 340** Differential Equations — *4 cr hr* — ***MATH 261***

5th Semester 16 Credit Hours

ECE 311 Linear Systems Analysis — *3 cr hr* — ***ECE 206, MATH 340 ECE 331, 341***	**ECE 303** Intro to Communications Principles — *3 cr hr* — ***MATH 261*** *MATH 340*	***CE Electives*** *See Approved list - Group 1* *Need 14 credits total Choose between 4-8 cr hr this semester*	**CS 214** Software Development — *3 cr hr* — ***CS 165***

6th Semester 16 Credit Hours

MATH 369 or DSCI 369 Linear Algebra or Linear Algebra for Data Science — *3 cr hr* — ***MATH 161***	**CT 301** Foundations of C++ — *2 cr hr* — ***CS 162 or 163 or 164***	***CE Electives*** *See Approved list - Group 1* *Need 14 credits total Choose between 4-8 cr hr this semester*	**CS 220** Discrete Struct and their Applications — *4 cr hr* — ***Any of these: CS 152, 162, 164 and MATH 160***

7th Semester 18 Credit Hours

ECE 401 Senior Design Project 1 — *3 cr hr* — ***ECE232,311; 4 courses from ECE 452, 456, 451, 528, CS 356, ECE 312 & ECE 331, ECE 332***	**CE & TE** See Approved List - Group 2 and 3, and See approved list *Needs a total of 14 CE Electives, and 18 more CE electives or TE Choose 9 this semester*	**CO 301B or JTC 300** Advanced Writing Course — *3 cr hr*	**AUCC Requirement** — *3 cr hr*

8th Semester 18 Credit Hours

ECE 402 Senior Design Project II — *3 cr hr* — **ECE401**	**CE & TE** See Approved List - Group 2 and 3, and See approved list *Needs a total of 14 CE Electives, and 18 more CE electives or TE Choose 9 this semester*	**AUCC Requirement** — *3 cr hr*	**AUCC Requirement** — *3 cr hr*

126 Total Credit Hours

- Engineering First-Year Coursework
- Dept./Major Coursework
- Coursework Outside Department
- Computer Engineering Electives
- Computer Engineering and Technical Electives
- All-University Core Curriculum**

Course Prefix & Number
Course Title
 # Credit Hours — ***Prerequisite*** / *Co-Requisite*

Course ← Lab associated with course

***All Technical Electives**: Course options can be found in the *CSU Catalog*. Note: Some technical electives may require department approval.

****All-University Core Curriculum**: Course options available in the *CSU Catalog*.

Concentrations offered in Computer Engineering:
Please speak with an Advisor to learn more about these options and the requirements to complete them.

Computer Engineering Concentrations
- Aerospace Systems
- Embedded & Io T Systems
- Networks & Data

Please refer to curriculum sheets or the CSU catalog to know what is required for final grades for courses within the CPE curriculum.

This flowchart is provided as a guide only. Programs of study, course offerings, and prerequisites may change during the year. The CSU catalog is the official source of academic information. Honors Track 1 and Honors Track 2 check in with your major and honors advisors for your individual plan.

Undergraduate students interested in a CSU graduate degree in engineering could use up to 9 credits of 500-level class work towards an Accelerated Master's Program. Please contact your advisor for additional information.

*[1] Students may also choose one of the following: 1) CS150B + CS164; or 2) Arts/Humanities AUCC + CS152 + CS162; or 3) Arts/Humanities AUCC + CS163