



**SCHOOL OF BIOMEDICAL
AND CHEMICAL ENGINEERING**
COLORADO STATE UNIVERSITY

**Bachelor of Science in
Biomedical Engineering +
Computer Engineering**

1st Semester 15 Credit Hours	ENGR 111 Fundamentals of Engineering 3 cr hr	CS 150B Culture and Coding: Python 3cr hr	CHEM 111 General Chemistry I 4 cr hr <i>MATH 118 or MATH 127</i>	CHEM 112 General Chemistry Lab I 1 cr hr CHEM 111	MATH 160 Calculus I 4 cr hr <i>B- in MATH 120 or MATH 124 & MATH 126</i>
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 <i>MATH 120 or MATH 124 MATH 160</i>
3rd Semester 17 Credit Hours	BIOM 200 Fundamentals of Biomedical Engineering 3 cr hr MATH 160 LIFE 102	CS 165 (CS2) Data Structures 4 cr hr Any of these: CS 162, 163, 164	ECE 205 Analog Circuits 2 cr hr MATH 160 ENGR 114 or 123	LIFE 102 Attributes of Living Systems 4 cr hr	MATH 261 Calculus III 4 cr hr MATH 161
4th Semester 14 Credit Hours	ECE 206 Analog Circuits II 3 cr hr ECE 205, MATH 161	ECE 232 Intro to Project Practices 1 cr hr ECE 202	ECE 252 Intro to Digital Circuits 3 cr hr ENGR 114 or 123	CHEM 113 General Chemistry II 3cr hr CHEM 111 Any MATH 160, 161, 261	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/STAT 303 Intro to Communications Principles 3 cr hr MATH 261 MATH 340	PH 141 Physics for Scientists & Engineers I 5 cr hr MATH 160	CPE Tech Elective 4 cr hr	
6th Semester 15 Credit Hours	BIOM 300 Problem-Based Learning BME Lab 4 cr hr BIOM 200 or CBE 205	CS 220 Discrete Struct and their Applications 4 cr hr Any of these: CS 152, 162, 162, 164 and MATH 160	ECE 253 Intro to IoT, Microcontrollers & C 3 cr hr ECE 252	PH 142 Physics for Scientists & Engineers II 5 cr hr PH 141 MATH 161	
7th Semester 16 Credit Hours	BMS 300 Principles of Human Physiology 4 cr hr LIFE 102, CHEM 111	CS 214 Software Development 3 cr hr CS 165	MATH 369 or DSCI 369 Linear Algebra or Linear Algebra for Data Science 3 cr hr MATH 161	MECH 339 Thermodynamics I for Engineers 3 cr hr MATH 261, PH 141	CO 301B or JTC 300 Advanced Writing Course 3 cr hr
8th Semester 17 Credit Hours	BIOM 431 Biomedical Signal and Image Processing 3 cr hr ECE/STAT 303, ECE 311, PH 142	BIOM 362 Biomechanics 3 cr hr ENGR 114 or 123 MATH 161	CT 301 Foundations of C++ 2 cr hr CS 162 or 163 or 164	CHEM 245 Fundamentals of Organic Chemistry 4 cr hr CHEM 113	CPE Tech Elective 4 cr hr
9th Semester 17 Credit Hours	BIOM 486A Biomedical Design Practicum: Capstone Design I 4 cr hr BIOM 300 Pick 2 ECE 450+451 452, 456	CPE Tech Electives 4 cr hr	AUCC Requirement 3 cr hr	AUCC Requirement 3 cr hr	AUCC Requirement 3 cr hr
10th Semester 16 Credit Hours	BIOM 486B Biomedical Design Practicum: Capstone Design II 4cr hr BIOM 486A	BME Tech Elective 3 cr hr	CPE Tech Elective 3 cr hr	CPE Tech Elective 3 cr hr	AUCC Requirement 3 cr hr

Engineering First-Year Coursework	157 Total Credit Hours
Dept./Major Coursework	
Coursework Outside Department	
Science Technical Elective*	
Engineering Technical Elective*	
Technical Elective*	
All-University Core Curriculum**	Course Prefix & Number Course Title # Credit Hours <i>Co-requisite</i> <i>Prerequisite</i>
<div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> <div style="border: 1px solid black; padding: 2px 10px;">Course</div> <div style="font-size: 2em; color: #006633;">←</div> <div style="border: 1px solid black; padding: 2px 10px;">Lab associated with course</div> </div>	

***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*.

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.