

CURRICULUM SHEET 2025-2026

Computer Engineering

Degree requirements - 126 credits

| | | Fall - 15 credits | Credits | Spring - 14 credits | Credits | |
|-------------------|---------------------|---|---------|---------------------|--|---|
| FIRST YEAR | ENGR 111 | Fundamentals of Engineering (F,S) | 3 | ENGR114 | Engineering for Grand Challenges (F,S; ENGR 111 or CBE104A or CIVE101A or CIVE102 or MECH103 or MECH104A) | 3 |
| | MATH160 | Calculus for Physical Scientists I (F,S,SU; MATH124 with a B or higher; MATH126 with a B or higher or MATH127 with a B or higher) | 4 | MATH161 | Calculus for Physical Scientists II (F,S,SU; MATH124 or MATH127; MATH159 or MATH160) | 4 |
| | CHEM111 and CHEM112 | General Chemistry I (F,S,SU; MATH118 or MATH127 or MATH160 or MATH161 or MATH229 or MATH261) and General Chemistry Lab I (F,S,SU; CHEM111 or concurrent registration or CHEM120 or concurrent registration) | 5 | CS164 ¹ | CS1 - Computational Thinking with Java (F,S; CS150B with a B or higher or CS152 with a B or higher or ENGR111 with a B or higher or ENGR123 with a B or higher or CS163) | 4 |
| | University Core | AUCC Category 1C, 3B, 3C, 3D (F,S,SU) ***Recommend CS150B ¹ - Culture and Coding: Python (AUCC 3B) | 3 | CO150 ² | College Composition (F,S,SU; CO130 or Placement) | 3 |

| | | Fall - 17 credits | Credits | Spring - 16 credits | Credits | |
|--------------------|-----------------|---|---------|---------------------|---|---|
| SECOND YEAR | ECE205 | Analog Circuits I (F,S; MATH159 with a C or higher or MATH160 with a C or higher) | 3 | ECE206 | Analog Circuits II (S,SU; ECE103 with a C or higher or ECE205 with a C or higher; MATH161 with a C or higher) | 3 |
| | ECE252 | Intro to Digital Circuits (F,S) | 3 | ECE253 | Microcontrollers and C for Internet-of-Things (F,S; ECE102 with a C or higher or ECE252 with a C or higher) | 3 |
| | CS165 | CS2 - Data Structures (F,S; CS162 with a C or higher or CS163 with a C or higher or CS164 with a C or higher) | 4 | ECE232 | Introduction to Project Practices (F,S; ECE202 or concurrent registration or ECE206 or concurrent registration or ECE395B or concurrent registration) | 1 |
| | MATH261 | Calculus for Physical Scientists III (F,S,SU; MATH161) | 4 | MATH340 | Intro to Ordinary Differential Equations (F,S,SU; MATH261) | 4 |
| | University Core | AUCC Category 1C, 3B, 3C, 3D (F,S,SU) | 3 | PH141 | Physics for Scientists and Engineers I (F,S,SU; MATH159 or concurrent registration or MATH160 or concurrent registration) | 5 |

| | | Fall - 13-17 credits | Credits | Spring - 12-16 credits | Credits | |
|-------------------|---|---|---------|---|---|-----|
| THIRD YEAR | ECE311 | Linear Systems Analysis I (F; ECE202 with a C or higher or ECE206 with a C or higher; MATH340 with a C or higher; ECE451 or ECE528 or CS356 or concurrent registration) | 3 | MATH369 or DSCI369 | Linear Algebra I (F,S,SU; MATH 161) or Linear Algebra for Data Science (S; MATH159 or MATH160 or MATH161) | 3-4 |
| | Computer Engineering Electives ³ | See Approved List - Group 1 (F,S) | 4-8 | Computer Engineering Electives ³ | See Approved List - Group 1 (F,S) | 3-7 |
| | ECE303 | Introduction to Communications Principles (S; MATH261 with a C or higher; MATH340 or concurrent registration) | 3 | CT301 | C++ Fundamentals (F,S; CS162 with a C or higher or CS163 with a C or higher or CS164 with a C or higher) | 2 |
| | CS214 | Software Development (F,S; CS165 with a C or higher) | 3 | CS220 | Discrete Structures (F,S; CS152 with a B or higher or CS162 with a C or higher or CS163 with a C or higher or CS164 with a C or higher; MATH159 or MATH160) | 4 |

| | | Fall - 18 credits | Credits | Spring - 17 credits | Credits | |
|--------------------|--|--|---------|--|--|---|
| FOURTH YEAR | ECE401 | Senior Design Project I (F,S; ECE232 with a C or higher; ECE311 with a C or higher; four (4) courses from the following: ECE452, ECE456, ECE451, ECE528, CS356, ECE312 with a C or higher, ECE331 with a C or higher, ECE332 with a C or higher) | 3 | ECE402 | Senior Design Project II (F,S; ECE401) | 3 |
| | Computer Engineering Electives ³ and Technical Electives ³ | See Approved List - Group 2 and Group 3 (F,S) and See Approved List (F,S,SU) | 9 | Computer Engineering Electives ³ and Technical Electives ³ | See Approved List - Group 2 and Group 3 (F,S) and See Approved List (F,S,SU) | 8 |
| | University Core | AUCC Category 1C, 3B, 3C, 3D (F,S,SU) | 3 | University Core | AUCC Category 1C, 3B, 3C, 3D (F,S,SU) | 6 |
| | CO301B or JTC300 | Writing in the Disciplines-Sciences (F,S; CO150 or HONR193) or Strategic Writing and Communication (F,S,SU; CO150 or HONR193) | 3 | | | |

¹ Students may also choose one of the following: 1) CS150B + CS164; or 2) CS152 + CS162; or 3) CS163

² College Composition must be completed within the first 60 (CSU and transfer) credits taken

³ See list of approved courses on the ECE website: <https://www.engr.colostate.edu/ece/undergraduates/degree-programs/computer-engineering-undergrad/>

ECE prefix courses required for the major at the 100, 200, and 300 level must be passed with a C or higher; grades below a C will require the student to retake the course. ECE courses designated as an elective are exempt from the C or higher minimum grade requirement.