

Computer Engineering

Bachelor of Science

Curriculum Year 2022-2023

FRESHMAN YEAR

| Fall Semester | | Cr | Term Completed | Spring Semester | | Cr | Term Completed |
|----------------|--|----|----------------|-----------------|--|----|----------------|
| ENGR 1020/1021 | Engineering Disciplines and Skills ¹ | 3 | | ENGR 1410/1411 | Programming and Problem Solving ⁴ | 3 | |
| CH 1010/1011 | General Chemistry | 4 | | MATH 1080 | Calculus II | 4 | |
| ENGL 1030/1031 | Composition and Rhetoric | 3 | | PHYS 1220 | Physics with Calculus I | 3 | |
| MATH 1060 | Calculus I ² | 4 | | | Arts & Humanities/Social Science Req. ³ | 3 | |
| | Arts & Humanities/Social Science Req. ³ | 3 | | | Arts & Humanities/Social Science Req. ³ | 3 | |
| | | 17 | | | | 16 | |

SOPHOMORE YEAR

| Fall Semester | | Cr | Term Completed | Spring Semester | | Cr | Term Completed |
|----------------|------------------------------|----|----------------|-----------------|-------------------------------|----|----------------|
| CPSC 1110/1111 | Intro to Programming in C | 3 | | ECE 2120 | Electrical Engineering Lab II | 1 | |
| ECE 2010 | Logic and Computing Devices | 3 | | ECE 2220 | Systems Programming | 3 | |
| ECE 2020 | Electric Circuits I | 3 | | ECE 2620 | Electric Circuits II | 3 | |
| ECE 2090 | Logic Lab | 1 | | ECE 2720 | Computer Organization | 3 | |
| ECE 2110 | Electrical Engineering Lab I | 1 | | ECE 2730 | Computer Organization Lab | 1 | |
| MATH 2060 | Calculus III | 4 | | MATH 2080 | Differential Equations | 4 | |
| PHYS 2210 | Physics with Calculus II | 3 | | | | | |
| | | 18 | | | | 15 | |

JUNIOR YEAR

| Fall Semester | | Cr | Term Completed | Spring Semester | | Cr | Term Completed |
|---------------|---------------------------------|----|----------------|-----------------|-----------------------------------|----|----------------|
| ECE 2230 | Computer Systems Engineering | 3 | | ECE 3170 | Random Signal Analysis | 3 | |
| ECE 3110 | Electrical Engineering Lab III | 1 | | ECE 3220 | Introduction to Operating Systems | 3 | |
| ECE 3200 | Electronics I | 3 | | ECE 3270 | Digital Computer Design | 3 | |
| ECE 3300 | Signals, Systems & Transforms | 3 | | ECE 3520 | Programming Systems | 3 | |
| ECE 3710 | Microcontroller Interfacing | 3 | | MATH 4190 | Discrete Mathematics | 3 | |
| ECE 3720 | Microcontroller Interfacing Lab | 1 | | | | | |
| MATH 3110 | Linear Algebra | 3 | | | | | |
| | | 17 | | | | 15 | |

SENIOR YEAR

| Fall Semester | | Cr | Term Completed | Spring Semester | | Cr | Term Completed |
|---------------|--|----|----------------|-----------------|--|----|----------------|
| ECE 4090 | Intro to Linear Control Systems | 3 | | ECE 4960 | Integrated Systems Design II | 2 | |
| ECE 4950/4951 | Integrated Systems Design I | 2 | | | Arts & Humanities/Social Science Req. ³ | 3 | |
| ENGL 3140 | Technical Writing ⁵ | 3 | | | CpE Technical Elective ⁶ | 3 | |
| | CpE Technical Elective ⁶ | 3 | | | CpE Technical Elective ⁶ | 3 | |
| | CpE Probability & Statistics Req. ⁷ | 3 | | | Special Requirement ⁹ | 3 | |
| | Communications Requirement ⁸ | 3 | | | | | |
| | | 17 | | | | 14 | |

Total credit hours = 129

¹ Or ENGR 1050/1060 or ENGR 1510/1520. Satisfies three credits of the Global Challenges requirement if met by ENGR 1020 and taken at Clemson. (Otherwise, three credits of the Global Challenges requirement must be met with three additional credits.)

² Or MATH 1040/1070.

³ See General Education section of the *Undergraduate Announcements*. Three of these credits must also satisfy the South Carolina REACH Act Requirement (if the requirement is not already satisfied upon admission to Clemson).

⁴ Or ENGR 1070/1080/1090 or ENGR 1640.

⁵ Or AS 4090.

⁶ Select from approved Technical Elective listing found on ECE website https://www.clemson.edu/cecas/departments/ece/resources/undergrad_resources/curriculum.html.

⁷ ECE 4270, ECE 4300, or ECE 4400.

⁸ COMM 1500/1501 or COMM 2500/2501 or HON 1950 or HON 2230 or AS 3090/3100/4090/4100 or ML 1010/1020.

⁹ Three additional Global Challenges credits at the 3000 or 4000 level with a course prefix other than ENGR; or, if the six Global Challenges credits are satisfied by other requirements such as ENGR 1020 and a qualifying CpE Technical Elective, any of the following: (1) A 3-credit approved Humanities/Social Sciences course (see listing in the current Undergraduate Catalog: <http://catalog.clemson.edu/>); (2) An additional 3-credit, 4000-level course from the EE Technical Elective List or the CpE Technical Elective List; (3) MATH 4120 or MATH 4340 or MATH 4350 or MATH 4400 or MATH 4410 or MATH 4530.