



This course plan is a recommended sequence for this major. Courses designated as critical (!) may have a deadline for completion and/or affect time to graduation. Please see the Program Notes section for details regarding "critical courses" for this particular Program of Study.

| Critical | Course Subject and Title | Credit Hours | Min. Grade ¹ | Major GPA ² | Code | Prerequisites | Notes |
|---|--|--------------|-------------------------|------------------------|------------------|--|-------|
| Semester One (15 Credit Hours) | | | | | | | |
| | ENGL 101 Critical Reading and Composition | 3 | C | | CC-CMW | | |
| ! | MATH 141 Calculus 1 ³ | 4 | C | | CC-ARP | C or better in MATH 112/115/116 <i>or</i> Math placement test score | |
| ! | CSCE 145 Algorithmic Design I | 4 | C | * | PR | Prereq or Coreq: MATH 111 <i>or</i> 115 | |
| | CSCE 190 Computing in the Modern World | 1 | C | * | PR | Prereq or Coreq: CSCE 145, 204, 205, <i>or</i> 206 | |
| | Carolina Core Requirement ⁴ | 3 | | | CC | | |
| Semester Two (16 Credit Hours) | | | | | | | |
| | ENGL 102 Rhetoric and Composition | 3 | C | | CC-CMW CC-INF | C or better in ENGL 101 | |
| ! | MATH 142 Calculus II | 4 | C | | CC-ARP | C or better in MATH 141 | |
| | CHEM 111 & CHEM 111L – General Chem. I <i>or</i> PHYS 211 & PHYS 211L – Essentials of Phys. I | 4 | C | | CC-SCI | C or better in MATH 111/115/122/141 <i>or</i> Math placement test score (<i>CHEM 111 only</i>); C or better in MATH 141 (<i>PHYS 211 only</i>) | |
| ! | CSCE 146 Algorithmic Design II | 4 | C | * | PR | C or better in CSCE 145, Prereq or Coreq: MATH 122 <i>or</i> 141 | |
| ! | CSCE 215 UNIX/Linux Fundamentals | 1 | C | * | PR | CSCE 145 | |
| Semester Three (16 Credit Hours) | | | | | | | |
| ! | CSCE 211 Digital Logic Design | 3 | C | * | PR | MATH 141 | |
| ! | CSCE 240 Introduction to Software Engineering | 3 | C | * | PR | CSCE 215 & C or better in CSCE 146 | |
| ! | MATH 374 Discrete Structures | 3 | C | | PR | C or better in MATH 142 & CSCE 146 | |
| | CHEM 112 & CHEM 112L – General Chem. II PHYS 212 & PHYS 212L – Essentials of Phys. II | 4 | | | CC-SCI | C or better in CHEM 111 <i>or</i> 141 & MATH 111/115/122/141 <i>or</i> higher math (<i>CHEM 112 only</i>); C or better PHYS 211 <i>and</i> MATH 142 (<i>PHYS 212 only</i>) | |
| | SPCH 140 Public Communication | 3 | | | CC-CMS | | |
| Semester Four (16 Credit Hours) | | | | | | | |
| ! | CSCE 212 Intro. to Computer Architecture | 3 | C | * | PR | CSCE 211 & either CSCE 145 <i>or</i> 206 | |
| | Laboratory Science Elective ⁵ | 4 | | | PR | See course listing in Bulletin . | |
| | MATH 241 Vector Calculus | 3 | | | PR | C or better in MATH 142 | |
| | Carolina Core Requirement ⁴ | 3 | | | CC | | |
| | Carolina Core Requirement ⁴ | 3 | | | CC | | |
| Semester Five (16 Credit Hours) | | | | | | | |
| ! | CSCE 311 Operating Systems | 3 | C | * | MR | CSCE 240 & CSCE 210 <i>or</i> 212 | |
| | CSCE 330 Programming Language Structures | 3 | C | * | MR | CSCE 240 & MATH 174 <i>or</i> 374 | |
| | CSCE 350 Data Structures & Algorithms | 3 | C | * | MR | CSCE 146 & MATH 174 <i>or</i> 374 | |
| | CSCE 390 Prof. Issues in Computer Science Engr. | 1 | C | * | CC-VSR | | |
| | ENGL 462 Technical Writing <i>or</i> ENGL 463 Business Writing | 3 | | | PR | ENGL 101 & 102 | |
| | Application Area Elective ⁶ | 3 | | | PR | See course listing in Bulletin . | |
| Semester Six (15 Credit Hours) | | | | | | | |
| | CSCE 416 Introduction to Computer Networks | 3 | C | * | MR | CSCE 311 | |
| | STAT 509 Statistics for Engineers | 3 | | | PR | MATH 142 | |
| | Liberal Arts Elective ⁷ | 3 | | | PR | See course listing in Bulletin . | |
| | Liberal Arts Elective ⁷ | 3 | | | PR | See course listing in Bulletin . | |
| | Application Area Elective ⁶ | 3 | | | PR | See course listing in Bulletin . | |
| Semester Seven (16 Credit Hours) | | | | | | | |
| ! | CSCE 490 Capstone Computing Project I | 3 | C | * | MR CC-INT | CSCE 240, 311, & ENGL 462 <i>or</i> 463 | |
| | CSCE 355 Foundations of Computation | 3 | C | * | MR | CSCE 211, 212, & 350 | |
| | CSCE Major Elective ⁸ | 3 | C | * | MR | See course listing in Bulletin . | |
| | MATH 344 & MATH 344L – Applied Linear Alg. | 4 | | | PR | C or better in MATH 142 | |
| | Application Area Elective ⁶ | 3 | | | PR | See course listing in Bulletin . | |
| Semester Eight (12 Credit Hours) | | | | | | | |
| | CSCE 492 Capstone Computing Project II | 3 | C | * | MR | CSCE 490 | |
| | CSCE Major Elective ⁸ | 3 | C | * | MR | See course listing in Bulletin . | |
| | CSCE Major Elective ⁸ | 3 | C | * | MR | See course listing in Bulletin . | |
| | Liberal Arts Elective ⁷ | 3 | | | PR | See course listing in Bulletin . | |

Graduation Requirements Summary

| Minimum Total Hours | Major Requirements Hours | College & Program Requirements Hours | Minimum Carolina Core Hours | Minimum Overall GPA |
|---------------------|--------------------------|--------------------------------------|-----------------------------|---------------------|
| 122 | 30 | 57 | 35 | 2.00 |

- Regardless of individual course grades, students must maintain a minimum 2.00 cumulative GPA.
- Some colleges require a minimum GPA for major courses. Courses indicated in this column are included in the major GPA of 2.00 for this program.
- Students who place into MATH 115 will be required to successfully complete it before taking MATH 141.
- The [Carolina Core](#) provides the common core of knowledge, skill and academic experience for all Carolina undergraduate students. Students in the College of Engineering and Computing are required to demonstrate proficiency in one foreign language equivalent to the 121 course by 1) a score of two or better on the foreign language placement test; or 2) completion of the 109 and 110 courses in FREN, GERM, LATN, or SPAN or completion of the 121 course in another foreign language. Students who do not place out of the GFL requirement may need to take additional hours to meet this requirement. This major map also assumes that students complete one Carolina Core overlay course. Additional hours may be required to meet all Carolina Core requirements if no overlay course is taken.
- Laboratory Science Elective** (4 hours): **BIOL** 101 & 101L; **CHEM** 111 & 111L; **GEOL** 101, 201, 302; **MSCI** 101, 102; **PHYS** 211 & 211L
- Application Area Electives:** An application area consists of three courses (9 hours) in a single area offered by another department. This coursework must display a distinct curriculum pattern. If a defined minor exists in the discipline of the application area, then a good set of suggested courses for the application area would be a subset of the minor. A minor (18 hours) can replace the application area electives. Students should consult their advisor to ensure their application area courses will meet this graduation requirement.
- A list of acceptable **Liberal Arts Elective** courses is maintained in the department office and on its [website](#).
- CSCE Major Electives** (9 hours): CSCE 317 or any CSCE course 510 or higher.

Program Notes:

- Courses identified as “critical” may affect time to graduation due to prerequisite requirements for subsequent required courses.
- No Carolina Core, Lower Division Computing, Computer Science Major, or Computer Science Elective course may be counted toward a minor or application area. All other degree-required courses and electives may be used for a minor as appropriate.
- A student cannot repeat courses from the College of Engineering and Computing in which they earned a grade of C or better. In addition, a student cannot repeat any course from the College a second time. No more than four courses from the College of Engineering and Computing may be repeated in order to satisfy the requirements for any degree from the College, regardless of satisfactory work. For this purpose, withdrawal from a course with a grade of **W** is not regarded as enrollment in that course. A student that does not satisfactorily complete a degree-required College course within two attempts must change major or transfer out of the College of Engineering and Computing.
- The last 30 credit hours toward your degree and at least half of the major must be earned in residence at the University of South Carolina-Columbia.

University Requirements: Bachelor’s degree-seeking students must meet Carolina Core (general education) requirements. For more information regarding these requirements, please visit the [Carolina Core](#) page on the University website.

| Codes: | |
|---------------|--|
| CC | Carolina Core |
| CC-AIU | Carolina Core-Aesthetic and Interpretive Understanding |
| CC-ARP | Carolina Core-Analytical Reasoning and Problem-Solving |
| CC-CMS | Carolina Core-Effective, Engaged, and Persuasive Communication: Spoken Component |
| CC-CMW | Effective, Engaged, and Persuasive Communication: Written Component |
| CC-GFL | Carolina Core-Global Citizenship and Multicultural Understanding: Foreign Language |
| CC-GHS | Carolina Core – Historical Thinking |
| CC-GSS | Carolina Core – Social Sciences |
| CC-INF | Carolina Core – Information Literacy |
| CC-INT | Carolina Core – Integrative Course |
| CC-SCI | Carolina Core – Scientific Literacy |
| CC-VSR | Carolina Core – Values, Ethics, and Social Responsibility |
| CR | College Requirement |
| MR | Major Requirement |
| PR | Program Requirement |

Disclaimer: Major maps are only a suggested or recommended sequence of courses required in a program of study. Please contact your academic advisor for assistance in the application of specific coursework to a program of study and course selection and planning for upcoming semesters.