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.

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Subject and Title</th>
<th>Credit Hours</th>
<th>Min. Grade</th>
<th>Program GPA</th>
<th>Code</th>
<th>Prerequisites</th>
<th>Notes</th>
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<tr>
<td><strong>Semester One (15 Credit Hours)</strong></td>
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<tr>
<td><strong>ENGL 101 Critical Reading and Composition</strong></td>
<td>3</td>
<td>C</td>
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<td>CC-CMW</td>
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<tr>
<td>![MATH 141 Calculus I ](MATH 141)</td>
<td>4</td>
<td>C</td>
<td></td>
<td>CC-ARP</td>
<td></td>
<td>C or better in MATH 112/115/116 or Math placement test score</td>
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<tr>
<td>![CSCE 145 Algorithmic Design I](CSCE 145)</td>
<td>4</td>
<td>C</td>
<td>*</td>
<td>PR</td>
<td></td>
<td>Prereq or Coreq: MATH 111 or 115</td>
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<tr>
<td>![CSCE 190 Computing in the Modern World](CSCE 190)</td>
<td>1</td>
<td>C</td>
<td>*</td>
<td>PR</td>
<td></td>
<td>Prereq or Coreq: CSCE 145, 204, 205, or 206</td>
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<tr>
<td>![CHEM 111 &amp; CHEM 111L – General Chem. I](CHEM 111)</td>
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<td>C or better in MATH 111/115/122/141 or higher math or Math placement test score</td>
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<td>![ENGL 102 Rhetoric and Composition](ENGL 102)</td>
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<td>CC-CMW CC-INF</td>
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<td>C or better in ENGL 101</td>
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<td>C or better in MATH 141</td>
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<td>![CSCE 146 Algorithmic Design II](CSCE 146)</td>
<td>4</td>
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<td>C or better in CSCE 145, Prereq or Coreq: MATH 122 or 141</td>
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<td>![CSCE 215 UNIX/Linux Fundamentals](CSCE 215)</td>
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<td>CSCE 145</td>
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<td>Caroline Core AIU*</td>
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<td><strong>Semester Three (15 Credit Hours)</strong></td>
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<td>![CSCE 211 Digital Logic Design](CSCE 211)</td>
<td>3</td>
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<td>![CSCE 274 Robotic Applications &amp; Design](CSCE 274)</td>
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<td>![MATH 241 Vector Calculus](MATH 241)</td>
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<td>CC-SCI</td>
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<td>C or better in MATH 122</td>
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<tr>
<td>![PHYS 211 &amp; PHYS 211L – Essentials of Phys. I](PHYS 211)</td>
<td>4</td>
<td>C</td>
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<td>CC-SCI</td>
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<td>C or better in MATH 141</td>
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<tr>
<td>![ELCT 102 Electrical Science](ELCT 102)</td>
<td>3</td>
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<tr>
<td>![CSCE 212 Intro. to Computer Architecture](CSCE 212)</td>
<td>3</td>
<td>C</td>
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<td></td>
<td>CSCE 211 &amp; either CSCE 145 or 206</td>
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<tr>
<td>![CSCE 240 Advanced Programming Techniques](CSCE 240)</td>
<td>3</td>
<td>C</td>
<td>*</td>
<td>PR</td>
<td></td>
<td>D or better in CSCE 215 &amp; C or better in CSCE 146</td>
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<tr>
<td>![PHYS 212 &amp; PHYS 212L – Essentials of Phys. II](PHYS 212)</td>
<td>4</td>
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<td></td>
<td>C or better PHYS 211 and MATH 142</td>
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<td>![MATH 242 Elementary Differential Equations](MATH 242)</td>
<td>3</td>
<td>C</td>
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<td>PR</td>
<td></td>
<td>C or better in MATH 142</td>
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<td>![ELCT 221 Circuits](ELCT 221)</td>
<td>3</td>
<td>C</td>
<td>*</td>
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<td>C or better in MATH 142 &amp; ELCT 102 or D or better in ELCT 220</td>
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<td><strong>Semester Four (15 Credit Hours)</strong></td>
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<td>![CSCE 311 Operating Systems](CSCE 311)</td>
<td>3</td>
<td>C</td>
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<td>CSCE 240 &amp; CSCE 210 or 212</td>
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<tr>
<td>![MATH 374 Discrete Structures](MATH 374)</td>
<td>3</td>
<td>C</td>
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<td></td>
<td>C or better in MATH 142 &amp; CSCE 146</td>
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<tr>
<td>![ELCT 222 Signals &amp; Systems](ELCT 222)</td>
<td>3</td>
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<td>C or better in ELCT 221 &amp; MATH 242</td>
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<td>![STAT 509 Statistics for Engineers](STAT 509)</td>
<td>3</td>
<td>PR</td>
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<td>C or better in MATH 142</td>
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<td>![SPCH 140 Public Communication](SPCH 140)</td>
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<td>CC-CMS</td>
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<td><strong>Semester Five (15 Credit Hours)</strong></td>
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<td>![CSCE 313 Embedded Systems](CSCE 313)</td>
<td>3</td>
<td>C</td>
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<td>CSCE 211 &amp; 212</td>
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<tr>
<td>![CSCE 350 Data Structures &amp; Algorithms](CSCE 350)</td>
<td>3</td>
<td>C</td>
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<td>CSCE 240 &amp; MATH 174 or 374 or 574</td>
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<td>![CSCE 390 Prof. Issues in Computer Science Engr.](CSCE 390)</td>
<td>1</td>
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<td>CC-VSR</td>
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<tr>
<td>![CSCE 611 Advanced Digital Design](CSCE 611)</td>
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<td>CSCE 212</td>
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<td>![ELCT 201 Introductory Electrical Engr. Lab.](ELCT 201)</td>
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<td>C or better in ENGL 102 &amp; CSCE 211; Prereq or Coreq: ELCT 222</td>
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<td>![ENGL 462 Technical Writing](ENGL 462)</td>
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<td>ENGL 101 &amp; 102</td>
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<tr>
<td><strong>Semester Six (15 Credit Hours)</strong></td>
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<td>![CSCE 490 Capstone Computing Project I](CSCE 490)</td>
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<td>C</td>
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<td>CSCE 240 &amp; ENGL 462 or 463; Prereq or Coreq: CSCE 350</td>
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<tr>
<td>![CSCE 416 Introduction to Computer Networks](CSCE 416)</td>
<td>3</td>
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<td>![CSCE 491 Capstone Computer Engr. Project](CSCE 491)</td>
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<td>D or better in CSCE 240, 313, 611</td>
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<tr>
<td>![Computer Engineering Major Elective*](Computer Engineering)</td>
<td>3</td>
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<td></td>
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<td>See Bulletin listing.</td>
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<tr>
<td>![Carolina Core GSS*](Carolina Core)</td>
<td>3</td>
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<td>CC-GSS</td>
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<tr>
<td><strong>Semester Seven (15 Credit Hours)</strong></td>
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<tr>
<td>![CSCE 492 Capstone Computing Project II](CSCE 492)</td>
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<td>CSCE 490</td>
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<tr>
<td>![Computer Engineering Major Elective*](Computer Engineering)</td>
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<td>See Bulletin listing.</td>
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<tr>
<td>![Computer Engineering Major Elective*](Computer Engineering)</td>
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<td>MR</td>
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<td>See Bulletin listing.</td>
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<tr>
<td>![MATH 344 &amp; MATH 344L – Applied Linear Alg.](MATH 344)</td>
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<td>C or better in MATH 142 (MATH 344); Prereq or Coreq or concurrent; C or better in MATH 344 (MATH 344L)</td>
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<tr>
<td>Carolina Core GHS*</td>
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<td>CC-GHS</td>
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<td><strong>Take during any semester (0-6 Credit Hours)</strong></td>
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<tr>
<td>![Carolina Core GFL*](Carolina Core)</td>
<td>0-6</td>
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<td>CC-GFL</td>
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</tbody>
</table>

* M. Thatcher
Graduation Requirements Summary

<table>
<thead>
<tr>
<th>Minimum Total Hours</th>
<th>Minimum Major Requirements Hours</th>
<th>College &amp; Program Requirements Hours</th>
<th>Minimum Carolina Core Hours</th>
<th>Minimum Institutional GPA</th>
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<tbody>
<tr>
<td>125</td>
<td>33</td>
<td>57</td>
<td>35</td>
<td>2.00</td>
</tr>
</tbody>
</table>

1. Regardless of individual course grades, students must maintain a minimum 2.00 cumulative GPA.
2. Some colleges require a minimum GPA for major courses. Courses indicated in this column are included in the Computer Engineering program GPA of 2.00.
3. Students who place into MATH 115 will be required to successfully complete it before taking MATH 141.
4. 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.
5. Computer Engineering Major Electives (9 hours): CSCE 330, 355, ELCT 321, ELCT 331, and other approved CSCE courses numbered 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.
- Disclaimer: Prerequisites on courses are subject to change. Please refer to Bulletin.

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.

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

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.