



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 <sup>1</sup>	Major GPA <sup>2</sup>	Code	Prerequisites	Notes
<b>Semester One (17 Credit Hours)</b>							
!	ENGL 101 Critical Reading and Composition	3	C		CC-CMW		
!	MATH 141 Calculus 1 <sup>3</sup>	4	C		CC-ARP	C or better in MATH 112/115/116 <i>or</i> Math placement test score	
	CHEM 111 & CHEM 111L – General Chem. I	4			CC-SCI	C or better in MATH 111/115/122/141 <i>or</i> Math placement test score	
!	ELCT 101 Electrical & Electronics Engineering	3		*	PR		
	Carolina Core Requirement <sup>4</sup>	3			CC		
<b>Semester Two (18 Credit Hours)</b>							
!	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	
!	PHYS 211 & PHYS 211L – Essentials of Phys. I	4	C		CC-SCI	C or better in MATH 141	
!	ELCT 102 Electrical Science	3		*	PR	Prereq or Coreq: MATH 141	
!	CSCE 145 Algorithmic Design I	4	C	*	PR	Prereq or Coreq: MATH 111 <i>or</i> 115	
<b>Semester Three (16-17 Credit Hours)</b>							
!	CSCE 211 Digital Logic Design	3	C	*	PR	MATH 141	
	CSCE 146 Algorithmic Design II <i>or</i> EMCH 201 Intro. to Applied Num. Methods <i>(cross-listed: ENCP 201, PHYS 311)</i> <i>or</i> PHYS 306 Principles of Physics III	3-4			PR	C or better in CSCE 145, Prereq or Coreq: MATH 122 <i>or</i> 141 ( <i>CSCE 146 only</i> ); MATH 141, Prereq or Coreq: MATH 142 ( <i>EMCH 201 only</i> ); C or better in PHYS 207 <i>or</i> 212 & MATH 142, Coreq: MATH 241 ( <i>PHYS 306 only</i> )	
!	ELCT 221 Circuits	3	C	*	PR	MATH 142 & ELCT 102 <i>or</i> 220	
	PHYS 212 & PHYS 212L – Essentials of Phys. II	4			PR	C or better PHYS 211 <i>and</i> MATH 142	
!	MATH 242 Elem. Differential Equations	3			PR	C or better in MATH 142	
<b>Semester Four (18 Credit Hours)</b>							
!	CSCE 212 Intro. to Computer Architecture	3		*	PR	CSCE 211 & either CSCE 145 <i>or</i> 206	
	EMCH 220 Mech. Engr. Fund. for Non-Majors	3			PR	MATH 142 & PHYS 211	
!	ELCT 201 Introductory Elect. Engr. Laboratory	3		*	PR	CSCE 211, ELCT 102; Prereq or Coreq: ELCT 222	
!	ELCT 222 Signals & Systems	3		*	PR	C or better in ELCT 221 & MATH 242	
!	MATH 241 Vector Calculus	3			PR	C or better in MATH 142	
	STAT 509 Statistics for Engineers	3			PR	MATH 142	
	Carolina Core Requirement <sup>4</sup>	3			CC		
<b>Semester Five (18 Credit Hours)</b>							
!	ELCT 301 Electronics Laboratory	3		*	MR	ELCT 201; Prereq or Coreq: ELCT 371	
	ELCT 321 Digital Signal Processing	3		*	MR	ELCT 222	
	ELCT 363 Intro. to Microelectronics	3		*	MR	PHYS 212 & MATH 241	
!	ELCT 371 Electronics	3		*	MR	CSCE 211 & ELCT 222	
	ECON 421 Engineering Economics	3			PR		
	Carolina Core Requirement <sup>4</sup>	3			CC		
<b>Semester Six (15 Credit Hours)</b>							
!	ELCT 302 Real-Time Systems Laboratory	3		*	MR	ELCT 301; Prereq or Coreq: ELCT 331	
!	ELCT 331 Control Systems	3		*	MR	ELCT 222	
	ELCT 350 Computer Modeling of Elect. Systems	3		*	MR	ELCT 222 & CSCE 145	
	ELCT 361 Electromagnetics	3		*	MR	PHYS 212 & MATH 241	
	Carolina Core Requirement <sup>4</sup>	3			CC		
<b>Semester Seven (12 Credit Hours)</b>							
!	ELCT 403 Capstone Design Project I	3		*	MR/CC-INT	ELCT 302	
	Career Plan Elective <sup>5</sup>	3			PR		
	Career Plan Elective <sup>5</sup>	3			PR		
	Carolina Core Requirement <sup>4</sup>	3			CC		
<b>Semester Eight (12 Credit Hours)</b>							
!	ELCT 404 Capstone Design Project II	3		*	MR	ELCT 403	
	Career Plan Elective <sup>5</sup>	3			PR		
	Career Plan Elective <sup>5</sup>	3			PR		
	Career Plan Elective <sup>5</sup>	3			PR		

## Graduation Requirements Summary

Minimum Total Hours	Major Requirements Hours	Minimum College & Program Requirements Hours	Minimum Carolina Core Hours	Minimum Overall GPA
126	30	62	34	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 two Carolina Core overlay courses. Additional hours may be required to meet all Carolina Core requirements if no overlay courses are taken.
- Career Plan Electives: The student, in consultation with his or her advisor, will select 15 hours of electives that support the student's defined career plan. Not more than 6 hours of these electives may be from another discipline, and all must be at or above the 300-level.

### Program Notes:

- Courses identified as "critical" must be completed in the semester in which they are listed in order to ensure a timely graduation due to prerequisite requirements for subsequent required courses.
- As career plan electives have 300-level prerequisites, there may be career plans for which one or more of the 300-level classes are critical, even though they are not listed as critical in this document.
- 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.

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