



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 (15 Credit Hours)</b>							
	MATH 141 Calculus I <sup>3</sup>	4	C		CC-ARP	MATH 115 <i>or</i> Math placement test score	
	GEOL 101 Introduction to the Earth <i>or</i> GEOL 103 Environment of the Earth <i>or</i> GEOL 201 Observing the Earth ( <i>fall only</i> )	4			PR		
	CHEM 111 & 111L – General Chemistry I	4			PR	MATH 115 <i>or</i> Math placement test score	
	UNIV 101 The Student in the University <i>or</i> Carolina Core Requirement <sup>4</sup>	3			PR/CC		
<b>Semester Two (18 Credit Hours)</b>							
!	ENGL 101 Critical Reading and Composition	3	C		CC-CMW		
	MATH 142 Calculus II	4	C		CC-ARP	MATH 141	
	CHEM 112 & 112L – General Chemistry II	4			PR	CHEM 111 <i>or</i> 141 & MATH 111, 115 <i>or</i> higher math; Prereq <i>or</i> Coreq: MATH 122, 141 <i>or</i> higher & CHEM 112L	
	GEOL 302 Rocks and Minerals ( <i>offered spring only</i> )	4	C		MR	GEOL 101, 103, <i>or</i> 201 ( <i>CHEM 111 recommended</i> )	
	Foreign language <sup>6</sup> <i>or</i> other Carolina Core Requirement <sup>4</sup>	3			CC-GFL		
<b>Semester Three (17 Credit Hours)</b>							
!	ENGL 102 Rhetoric and Composition	3	C		CC-CMW CC-INF	C <i>or</i> better in ENGL 101	
	GEOL 345 Igneous & Metamorphic Processes ( <i>offered fall only</i> ) <i>or</i> GEOL 315 <i>or</i> 325 ( <i>if offered</i> )	4	C		MR	GEOL 302 & MATH 122 <i>or</i> 141	
	MATH 241 Vector Calculus <sup>7</sup>	3	C		PR	C <i>or</i> better in MATH 142	
	PHYS 211 & 211L – Essentials of Physics I	4			CC-SCI	MATH 141	
	Foreign language <sup>6</sup> <i>or</i> other Carolina Core Requirement <sup>4</sup>	3			CC-GFL		
<b>Semester Four (16 Credit Hours)</b>							
	GEOL 556 Seismic Reflection Interpretation ( <i>offered even years spring</i> ) <i>or</i> GEOL 575 Numerical Modeling for Earth Sci. Apps. ( <i>offered odd years spring</i> )	3	C		MR	MATH 142 ( <i>MATH 241 recommended</i> ) ( <i>GEOL 575</i> )	
	MATH 242 Elementary Differential Equations <sup>7</sup>	3	C		PR	C <i>or</i> better in MATH 142	
	PHYS 212 & 212L – Essentials of Physics II	4			CC-SCI	C <i>or</i> better in PHYS 211 & MATH 142	
	History <sup>5</sup>	3			CR		
	Foreign language <sup>6</sup> <i>or</i> Carolina Core Requirement <sup>4</sup>	3			CR/CC		
<b>Semester Five (16 Credit Hours)</b>							
	GEOL 355 Struct. Geol. & Tectonics ( <i>offered fall only</i> )	4	C		MR	GEOL 302 & PHYS 201 <i>or</i> 211	
	GEOL 531 Plate Tectonics <i>or</i> STAT 509 Statistics for Engineers <i>or</i> STAT 515 Statistical Methods I	3	C		MR/CR	Completion of 2 GEOL courses 300-level <i>or</i> above ( <i>GEOL 531</i> ); MATH 142 ( <i>STAT 509</i> ); MATH 141 <i>or</i> 115 & any stat. class ( <i>STAT 515</i> )	
	GEOL 554 Applied Seismology ( <i>offered odd years fall</i> ) <i>or</i> GEOL 555 Elem. Seismology ( <i>offered even years fall</i> )	3	C		MR	MATH 141 & PHYS 201 <i>or</i> 211 ( <i>GEOL 554</i> ); MATH 241 ( <i>GEOL 555</i> )	
	CSCE 206 Scientific Applications Programming <i>or</i> CSCE 207 UNIX System Administration	3			CR	MATH 122 <i>or</i> 141 ( <i>CSCE 206</i> ); CSCE 145 <i>or</i> 206 ( <i>CSCE 207</i> )	
	Carolina Core Requirement <sup>4</sup>	3			CC		
<b>Semester Six (16 Credit Hours)</b>							
	GEOL 556 Seismic Reflection Interpretation ( <i>offered even years spring</i> ) <i>or</i> GEOL 575 Numerical Modeling for Earth Sci. Apps. ( <i>offered odd years spring</i> )	3	C		MR	MATH 142 ( <i>MATH 241 recommended</i> ) ( <i>GEOL 575</i> )	
	MATH 344 & 344L Applied Linear Algebra <sup>7</sup>	4	C		PR	C <i>or</i> better in MATH 142	
	Social Science	3			CR		
	Carolina Core Requirement <sup>4</sup>	3			CC		
	Carolina Core Requirement <sup>4</sup> <i>or</i> Approved Elective <sup>8</sup>	3			CC/PR		

Semester Seven (16 Credit Hours)						
	GEOL 531 Plate Tectonics <i>or</i> STAT 509 Statistics for Engineers <i>or</i> STAT 515 Statistical Methods I	3	C		MR/CR	Completion of 2 GEOL courses 300-level or above ( <i>GEOL 531</i> ); MATH 142 ( <i>STAT 509</i> ); MATH 141 <i>or</i> 115 & any stat. class ( <i>STAT 515</i> )
	GEOL 548 Environmental Geophysics <sup>9</sup> ( <i>offered fall only</i> )	4	C		MR	MATH 141 & PHYS 201 <i>or</i> 211
	GEOL 554 Applied Seismology ( <i>offered odd years fall</i> ) <i>or</i> GEOL 555 Elem. Seismology ( <i>offered even years fall</i> )	3	C		MR	MATH 141 & PHYS 201 <i>or</i> 211 ( <i>GEOL 554</i> ); MATH 241 ( <i>GEOL 555</i> )
	Choose <u>one</u> course from <sup>7</sup> : MATH 520-522, 524-527, 550 <i>or</i> 552	3	C		PR	See Bulletin listing.
	Carolina Core Requirement <sup>4</sup> <i>or</i> Approved Elective <sup>8</sup>	3			CC/PR	
Semester Eight (14 Credit Hours)						
	GEOL 546 Marine Geophysics ( <i>offered even years spring</i> ) <i>or</i> GEOL 582 Marine Hydrodyn. ( <i>cross-listed: MSCI 582</i> )	3	C		MR	PHYS 201 <i>or</i> 211 ( <i>GEOL 582</i> )
	Humanities or Fine Arts	3			CR	
	Approved Electives <sup>8</sup>	8			PR	

### Graduation Requirements Summary

Minimum Total Hours	Minimum Major Requirements Hours	College & Program Requirements Hours	Carolina Core Hours	Minimum Institutional GPA
128	34	48-60	34-46	2.000

- Regardless of individual course grades, students must maintain a minimum 2.000 cumulative GPA.
- Some colleges require a minimum GPA for major courses. Courses indicated in this column are included in the major GPA for this program of study.
- Students who place into MATH 115 will be required to complete it successfully before taking MATH 141. MATH 115 may be used as an approved elective. Students who start with MATH 115 should use the following sequence for the first three semesters:

Semester One	Semester Two	Semester Three
ENGL 101	ENGL 102	GEOL 302
GEOL 101, 103 <i>or</i> 201	MATH 141	MATH 142
MATH 115	CHEM 111 & 111L	PHYS 211 & 211L
UNIV 101 <i>or</i> Carolina Core Requirement	History	CHEM 112 & 112L
	Foreign Language <i>or</i> other Carolina Core Req.	Foreign language <i>or</i> other Carolina Core Req.

- The [Carolina Core](#) provides the common core of knowledge, skill and academic experience for all Carolina undergraduate students.
- The College of Arts and Sciences requires one U.S. History and one non-U.S. History course, both of which must be chosen from the approved Carolina Core GHS courses. Whichever is not fulfilled through the Carolina Core GHS requirement must be fulfilled through this college requirement.
- Students in the College of Arts and Sciences are required to demonstrate proficiency in one foreign language equivalent to the 122 course through course credit or the corresponding foreign language placement score.
- These courses fulfill the cognate requirement.
- No courses of a remedial, developmental, skill-acquiring, or vocational nature may apply as credit toward degrees in the College of Arts and Sciences. The College of Arts and Sciences allows the use of the Pass-Fail option on elective courses. Further clarification on inapplicable courses can be obtained from the College of Arts and Sciences.
- Senior Capstone Experience (4 hours) –An approved field course may substitute as the Capstone Experience.

### Program Notes:

- Courses identified as “critical” must be completed in the student’s first 60 semester hours of work in order for these courses to be credited toward graduation.
- Degree with Distinction in Geophysics: Available to students majoring in Geophysics who wish to participate in significant research activities in the major field under the supervision of a faculty mentor. Requirements:
  - A minimum GPA of 3.5 in the major and 3.3 overall.
  - Written sponsorship agreement from the faculty mentor on file in the department.
  - A public presentation of the Senior Thesis research accompanied by a written document approved by the faculty mentor and a second reader that follows the guidelines of the Department of Geological Sciences.
  - 2 courses in addition to the general major requirements, including: GEOL 498 or 499 and GEOL 699.
- The last 30 credit hours toward your degree 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:			
<b>CC</b>	Carolina Core	<b>CC-INF</b>	Carolina Core – Information Literacy
<b>CC-AIU</b>	Carolina Core-Aesthetic and Interpretive Understanding	<b>CC-INT</b>	Carolina Core – Integrative Course
<b>CC-ARP</b>	Carolina Core-Analytical Reasoning and Problem-Solving	<b>CC-SCI</b>	Carolina Core – Scientific Literacy
<b>CC-CMS</b>	Carolina Core-Effective, Engaged, and Persuasive Communication: Spoken Component	<b>CC-VSR</b>	Carolina Core – Values, Ethics, and Social Responsibility
<b>CC-CMW</b>	Effective, Engaged, and Persuasive Communication: Written Component	<b>CR</b>	College Requirement
<b>CC-GFL</b>	Carolina Core-Global Citizenship and Multicultural Understanding: Foreign Language	<b>MR</b>	Major Requirement
<b>CC-GHS</b>	Carolina Core – Historical Thinking	<b>PR</b>	Program Requirement
<b>CC-GSS</b>	Carolina Core – Social Sciences		

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.