Major Map: Geological Sciences - Bachelor of Science (B.S.)



Environmental Geosciences Concentration College of Arts and Sciences School of Earth, Ocean & Environment Bulletin Year: 2019-2020

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.

4: - 1			Min.		C3	D	NI .
tical	,	Hours	Grade ¹	GPA ²	Code	Prerequisites	Notes
mest	ter One (13-14 Credit Hours)			ı			
!	ENGL 101 Critical Reading and Composition	3	С		CC-CMW		
	MATH 122 Calculus for Bus. Admin. & Soc. Sciences	3-4	С		CC-ARP	MATH 111/111I/115 <i>(MATH 122)</i> ;	
	or MATH 141 Calculus I ³					MATH 115 <i>(MATH 141)</i> ; <i>or</i> Math	
						placement test score	
	GEOL 101 Introduction to the Earth	4			PR		
	or GEOL 103 Environment of the Earth						
	or GEOL 201 Observing the Earth (fall only)						
	UNIV 101 The Student in the University	3			PR/CC		
	or Carolina Core Requirement ⁴	3			TR/CC		
	ter Two (17-18 Credit Hours)						
		2	6	ı	CC CMW	C 1 ENGL 404	
į.	ENGL 102 Rhetoric and Composition	3	С		CC-CMW	C or better in ENGL 101	
					CC-INF		
	MATH 170 Finite Mathematics	3-4	С		CC-ARP	MATH 111/1111 or 112 or Math	
	or MATH 142 Calculus II					placement test score (MATH 170);	
						MATH 141 <i>(MATH 142)</i>	
	CHEM 111 & 111L – General Chemistry I	4			CC-SCI	MATH 115 or Math placement test score	
	GEOL 302 Rocks and Minerals (fall only)	4	С		MR	GEOL 101, 103, or 201 (CHEM 111	
	5151 502 Rocks and minicials (jan only)	T			1711	recommended)	
	Foreign language ⁵ or other Carolina Core Requirement ⁴	3			CC-GFL	recommenueu)	
		3			CC-GFL		
nesi	ter Three (14 Credit Hours)						
	GEOL 325 Stratigraphy & Sed. Basins (fall only)	4	С		MR	D or better in GEOL 302	
	PHYS 201 & 201L – General Physics I	4			CC-SCI	C or better in MATH 111/111i/112/	
	or PHYS 211 & 211L – Essentials of Physics I					115/116/122/141 or higher (PHYS 201);	
						MATH 141 <i>(PHYS 211)</i>	
	Carolina Core Requirement ⁴	3			CC	,	
	Foreign language ⁵ or other Carolina Core Requirement ⁴	3			CC-GFL		
2001	ter Four (17 Credit Hours)	5	<u> </u>	ļ	CC OI L		
iics	GEOL 315 Surface & Near Surface Proc. (spring only)	4	С		MR	PHYS 201 or 211 (GEOL 315)	
		4	C		IVIIX	F1113 201 (GLOL 717)	
	or GEOL 335 Processes of Global Envr. Change (cross-						
	listed: MSCI 335)						
	PHYS 202 & 202L – General Physics II	4			PR	See Bulletin listing.	
	or PHYS 212 & 212L – Essentials of Physics II						
	or CHEM 112 & 112L – General Chemistry II						
	or BIOL 101 & 101L – Biological Principles I						
	Cognate Course ⁶	3			PR		
	Humanities or Fine Arts	3			CR		
	Foreign language ⁵ or Carolina Core Requirement ⁴	3			CR/CC		
		J	L	L	CIV/CC		
iest	ter Five (14 Credit Hours)	4			3.622	OFOI 400 0 PHR70 201 211	
	GEOL 355 Struct. Geol. & Tectonics (fall only)	4	С		MR	GEOL 302 & PHYS 201 or 211	
	PHYS 202 & 202L – General Physics II	4			PR	See Bulletin listing.	
	or PHYS 212 & 212L – Essentials of Physics II						
	or CHEM 112 & 112L – General Chemistry II						
	,						
	or BIOL 102 & 102L – Biological Principles I	3			PR		
	or BIOL 102 & 102L – Biological Principles I Cognate Course ⁶	3			PR CC		
	or BIOL 102 & 102L – Biological Principles I Cognate Course ⁶ Carolina Core Requirement ⁴	3 3			PR CC		
nest	or BIOL 102 & 102L – Biological Principles I Cognate Course ⁶ Carolina Core Requirement ⁴ ter Six (13 Credit Hours)	3			CC		
nest	or BIOL 102 & 102L – Biological Principles I Cognate Course ⁶ Carolina Core Requirement ⁴ ter Six (13 Credit Hours) GEOL 315 Surface & Near Surface Proc. (spring only)		С			PHYS 201 or 211 (GEOL 315)	
nest	or BIOL 102 & 102L – Biological Principles I Cognate Course ⁶ Carolina Core Requirement ⁴ ter Six (13 Credit Hours) GEOL 315 Surface & Near Surface Proc. (spring only) or GEOL 335 Processes of Global Envr. Change (cross-	3	С		CC	PHYS 201 or 211 (GEOL 315)	
nest	or BIOL 102 & 102L – Biological Principles I Cognate Course ⁶ Carolina Core Requirement ⁴ ter Six (13 Credit Hours) GEOL 315 Surface & Near Surface Proc. (spring only)	3	С		CC	PHYS 201 or 211 (GEOL 315)	
nest	or BIOL 102 & 102L – Biological Principles I Cognate Course ⁶ Carolina Core Requirement ⁴ ter Six (13 Credit Hours) GEOL 315 Surface & Near Surface Proc. (spring only) or GEOL 335 Processes of Global Envr. Change (cross-listed: MSCI 335)	3	С		CC	PHYS 201 or 211 (GEOL 315)	
nest	or BIOL 102 & 102L – Biological Principles I Cognate Course ⁶ Carolina Core Requirement ⁴ ter Six (13 Credit Hours) GEOL 315 Surface & Near Surface Proc. (spring only) or GEOL 335 Processes of Global Envr. Change (cross-listed: MSCI 335) Cognate Course ⁶	3 4 3	С		CC MR PR		
nest	or BIOL 102 & 102L – Biological Principles I Cognate Course ⁶ Carolina Core Requirement ⁴ ter Six (13 Credit Hours) GEOL 315 Surface & Near Surface Proc. (spring only) or GEOL 335 Processes of Global Envr. Change (cross-listed: MSCI 335) Cognate Course ⁶ STAT 201 Elementary Statistics	3	С		CC MR	MATH 111, 115 or STAT 110 (STAT	
nesi	or BIOL 102 & 102L – Biological Principles I Cognate Course ⁶ Carolina Core Requirement ⁴ ter Six (13 Credit Hours) GEOL 315 Surface & Near Surface Proc. (spring only) or GEOL 335 Processes of Global Envr. Change (cross-listed: MSCI 335) Cognate Course ⁶ STAT 201 Elementary Statistics or STAT 509 Statistics for Engineers	3 4 3	С		CC MR PR	MATH 111, 115 or STAT 110 (STAT 201); MATH 142 (STAT 509); MATH	
nesi	or BIOL 102 & 102L – Biological Principles I Cognate Course ⁶ Carolina Core Requirement ⁴ ter Six (13 Credit Hours) GEOL 315 Surface & Near Surface Proc. (spring only) or GEOL 335 Processes of Global Envr. Change (cross-listed: MSCI 335) Cognate Course ⁶ STAT 201 Elementary Statistics or STAT 509 Statistics for Engineers or STAT 515 Statistical Methods I	3 3 3	С		CC MR PR CR	MATH 111, 115 or STAT 110 (STAT	
	or BIOL 102 & 102L – Biological Principles I Cognate Course ⁶ Carolina Core Requirement ⁴ ter Six (13 Credit Hours) GEOL 315 Surface & Near Surface Proc. (spring only) or GEOL 335 Processes of Global Envr. Change (cross-listed: MSCI 335) Cognate Course ⁶ STAT 201 Elementary Statistics or STAT 509 Statistics for Engineers or STAT 515 Statistical Methods I Carolina Core Requirement ⁴ or Approved Elective ⁷	3 4 3	С		CC MR PR	MATH 111, 115 or STAT 110 (STAT 201); MATH 142 (STAT 509); MATH	
	or BIOL 102 & 102L – Biological Principles I Cognate Course ⁶ Carolina Core Requirement ⁴ ter Six (13 Credit Hours) GEOL 315 Surface & Near Surface Proc. (spring only) or GEOL 335 Processes of Global Envr. Change (cross-listed: MSCI 335) Cognate Course ⁶ STAT 201 Elementary Statistics or STAT 509 Statistics for Engineers or STAT 515 Statistical Methods I Carolina Core Requirement ⁴ or Approved Elective ⁷ er (4-6 Credit Hours)	3 3 3			CC MR PR CR CC/PR	MATH 111, 115 or STAT 110 (STAT 201); MATH 142 (STAT 509); MATH 141 or 115 & a stat. class (STAT 515)	
	or BIOL 102 & 102L – Biological Principles I Cognate Course ⁶ Carolina Core Requirement ⁴ ter Six (13 Credit Hours) GEOL 315 Surface & Near Surface Proc. (spring only) or GEOL 335 Processes of Global Envr. Change (cross-listed: MSCI 335) Cognate Course ⁶ STAT 201 Elementary Statistics or STAT 509 Statistics for Engineers or STAT 515 Statistical Methods I Carolina Core Requirement ⁴ or Approved Elective ⁷	3 3 3	С		CC MR PR CR	MATH 111, 115 or STAT 110 (STAT 201); MATH 142 (STAT 509); MATH	

mester Seven (13 Credit Hours)					
Cognate Course ⁶	3		PR		
History ⁹	3		CR		
Carolina Core Requirement ⁴ or Approved Elective ⁷	3		CC/PR		
Approved Elective ⁷	4		PR		•
nester Eight (15-16 Credit Hours)					
GEOL 305 Earth Systems through Time (spring only) or GEOL 371 A view of the River or GEOL 548 Environmental Geophysics	3-4	С	MR	GEOL 101, 103, or 201 (GEOL 371); MATH 141 & PHYS 201 or 211 (GEOL 548)	
CSCE 102 General Applications Programming	3		CR		
Social Science	3		CR		•
Approved Elective ⁷	3		PR		•
Approved Elective ⁷	3		PR		

Graduation Requirements Summary

Minimum Total Hours	Minimum Major Requirements Hours	College & Program Requirements Hours	Carolina Core Hours	Minimum Institutional GPA
120	27	49-61	32-44	2.000

- 1. Regardless of individual course grades, students must maintain a minimum 2.000 cumulative GPA.
- 2. 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.
- 3. Students who place into MATH 111 or 115 will be required to complete it successfully before taking MATH 122 or 141. MATH 111/115 may be used as an approved elective. Students who start with MATH 111/115 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 or 201	MATH 122 or 141	MATH 170 or 142
MATH 111 or 115	CHEM 111 & 111L	PHYS 201 & 201L or 211 & 211L
UNIV 101 or Carolina Core Requirement	History	Carolina Core Requirement
Foreign language or other Carolina Core Req.	Foreign Language <i>or</i> other Carolina Core Req.	Foreign language or Carolina Core Req.

- 4. The Carolina Core provides the common core of knowledge, skill and academic experience for all Carolina undergraduate students.
- 5. 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.
- 6. The cognate is intended to support the course work in the major. The cognate must consist of twelve hours of courses at the advanced level, outside of, but related to the major. A second major eliminates the minor/cognate requirement.
- 7. 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.
- 8. GEOL 500 is a summer course, which takes place in Colorado. Students must indicate to the SEOE undergraduate office their plans to attend field camp in January, which is prior to registering GEOL 500.
- 9. 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.

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.
- A Degree with Distinction is available to students majoring in Geological Sciences who wish to participate in significant research activities in their major field under the supervision of a faculty mentor. Requirements include: 1) a minimum GPA of 3.5 in the major and 3.3 overall; 2) written sponsorship agreement from the faculty mentor on file in the SEOE Undergraduate Student Services office; 3) 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; and 4) three courses in addition to the general major requirements, including: GEOL 498 or GEOL 499, GEOL 699, and a minimum of one GEOL 500-level course appropriate to the research.
- The last 30 credit hours toward your degree must be earned in residence at the University of South Carolina-Columbia. However, please note that GEOL 500, while considered "in residence," occurs in Colorado.

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