

MAJOR: GEOLOGICAL SCIENCES, B.S.

DEPARTMENT OF GEOLOGICAL SCIENCES

The B.S. degree in geological sciences is designed for students interested in careers in geoscience. The study of geology requires a broad base of knowledge in related sciences (chemistry and physics) and mathematics. In addition, the program includes a solid core of geology courses, including a course in field mapping.

FIRST YEAR			
FALL SEMESTER		SPRING SEMESTER	
GEOL 1110 Geology and Earth Systems ²	4 cr	GEOL 2110 Earth History	3 cr
MATH 1290 Calculus for the Natural Sciences ^{1^}	5 cr	GEOL 2111 Earth History lab	1 cr
CHEM 1151 General Chemistry I ³	<u>5 cr</u>	MATH 1297 Calculus II [^]	5 cr
	Total: 14 cr	CHEM 1152 General Chemistry II ³	5 cr
		WRIT 1120 College Writing	<u>3 cr</u>
			Total: 17 cr
SECOND YEAR			
GEOL 2120 The Earth's Dynamic Interior	3 cr	GEOL 2312 Petrology	5 cr
GEOL 2311 Mineralogy	4 cr	PHYS 2012 General Physics II	4 cr
PHYS 2011 General Physics I	4 cr	Liberal education or minor field courses	<u>6 cr</u>
Liberal education or minor field course	<u>3 cr</u>		Total: 15 cr
	Total: 14 cr		
THIRD YEAR			
GEOL 3420 Sedimentology and Stratigraphy	4 cr	GEOL 4450 Structural Geology	5 cr
GEOL upper division elective ⁴	3 cr	GEOL upper division elective ⁴	3 cr
WRIT 3150 Advanced Writing: Science	3 cr	Liberal education or minor field courses	<u>7 cr</u>
Liberal education or minor field courses	<u>3 cr</u>		Total: 15 cr
	Total: 13 cr		
SUMMER SEMESTER			
GEOL 4500 Field Geology	6 cr		
	Total: 6 cr		
FOURTH YEAR			
GEOL upper division elective ⁴	3 cr	GEOL upper division elective ⁴	3 cr
GEOL upper division elective ⁴	3 cr	Liberal education or minor field courses	<u>11 cr</u>
Liberal education or minor field courses	<u>8 cr</u>		Total: 14 cr
	Total: 14 cr		

[^]First math course is determined by ACT math score or math placement exam. This schedule presupposes placement into MATH 1290. Students may take MATH 1296 Calculus I in place of MATH 1290 Calculus for the Natural Sciences.

¹ Students may take MATH 1596 and 1597 Honors Calculus I and II in place of MATH 1290/1296 and 1297.

² or GEOL 1130 or GEOL 1610 or GEOG 1414

³ Students may take CHEM 1161 and 1162 Honors General Chemistry I and II in place of CHEM 1151 and 1152.

⁴Take 15 credits of upper division geology electives. With the exception of GEOL 4110, geology electives (3xxx and above) are selected from yearly geological sciences offerings. Six credits of limnology courses may be substituted for geological sciences courses. GEOG 4563 and 4564 (5-credit total) may be substituted for three credits of geological sciences electives.

FOR ADDITIONAL INFORMATION:

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MAJOR REQUIREMENTS	CREDITS	PREREQUISITES	SEMESTER TO BE COMPLETED	GRADE	
YEAR 1					
WRIT 1120 College Writing	3				
CHEM 1151 General Chemistry I	5	1 yr HS chemistry, HS algebra, Math ACT \geq 21 or MATH 1005 with \geq a 'C-' or math placement			
and CHEM 1152 General Chemistry II	5				
OR					
CHEM 1161 Honors General Chemistry I	5	Placement CHEM 1161			
and CHEM 1162 Honors Gen. Chemistry II	5				
GEOL 1110 Geology and Earth Systems	4				
or GEOL 1130 Intro to Env. Science	4				
or GEOL 1610 Oceanography	3				
or GEOG 1414 Physical Geography	4				
GEOL 2110 Earth History	3	1110 or 1130 or 2610 or AST 1040 or GEOG 1414			
GEOL 2111 Earth History lab	1		1110 or 1130 or 2610 or AST 1040 or GEOG 1414		
MATH 1290 Calculus for the Natural Sciences	5	Math ACT \geq 25 or Math placement or MATH 1250 with C- grade or higher			
or MATH 1296 Calculus I	5		Math ACT \geq 25 or Math placement or MATH 1250 with C- grade or higher		
MATH 1297 Calculus II	5	MATH 1290 or 1296 with C- grade or higher			
YEAR 2					
GEOL 2120 Earth's Dynamic Interior	3	GEOL 1110 or 1130 or 2110 or 1610 or Geog 1414			
GEOL 2311 Mineralogy	4		GEOL 1110 or 2110, 1 semester college chemistry		
GEOL 2312 Petrology	5		GEOL 2311		
PHYS 2011 General Physics I	4	MATH 1290 or 1296			
PHYS 2012 General Physics II	4	PHYS 2011; MATH 1297			
YEAR 3					
WRIT 3150 Advanced Writing: Science	3	WRIT 1120; 60 credits			
GEOL 3420 Sedimentology & Stratigraphy	4	GEOL 2110, 2311			
GEOL 4450 Structural Geology	5	GEOL 2312			
Geology upper division elective*	3	See course description			
Geology upper division elective*	3	See course description			
YEAR 4					
Geology upper division elective*	3	See course description			
Geology upper division elective*	3	See course description			
Geology upper division elective*	3	See course description			
SUMMER SESSION (AFTER YEARS 3 OR 4)					
GEOL 4500 Field Geology	6	GEOL 4450; Geology department approval			

* Fifteen credits of 3xxx level or above Geology electives are required. With the exception of GEOL 4110 Advanced Earth Science for Teachers, electives (3xxx and above) are selected from yearly geological sciences offerings. Six credits of limnology classes may be substituted for geological sciences classes. Geog 4563 and 4564 (5-credit total) may be substituted for 3 credits of geological sciences electives.

NOTE: In addition to the above requirements, students must complete a minor (or second major) and the liberal education program to earn a B.S. degree