

B.S. in Geology: Applied Geology Specialization

Revised March 09

Students with this degree would find opportunities in the traditional geologic industries such as petroleum or mineral exploration, research science, and graduate school, as well as opportunities in environmental science or consulting.

FRESHMAN YEAR		<i>Second Semester</i>	
<i>First Semester</i>		<u> </u> GEOE 322 Structural Geology	(2-1) 3
<u> </u> MATH 123	Calculus I (4-0) 4	<u> </u> GEOL 403	Regional Field Geology (0-1) 1
<u> </u> CHEM 112	General Chemistry (3-0) 3	<u> </u> GEOE 324	Engr. Geophysics I (2-1) 3
<u> </u> CHEM 112L	Exper. Gen. Chemistry I (0-1) 1	<u> </u> GEOL 442	Optical Petrology** (2-1) 3
<u> </u> ENGL 101	Composition I (3-0) 3	<u> </u> _____	Geology Elective <u> </u> 3
<u> </u> GEOL 201	Physical Geology (3-0) 3		13
<u> </u> GEOL 201L	Physical Geology Lab (0-1) 1	Summer	
<u> </u> IS 110	Explorations <u> </u> 2	<u> </u> GEOL 410 Field Geology	<u>(0-6) 6</u>
	17		6
<i>Second Semester</i>		SENIOR YEAR	
<u> </u> CHEM 114	General Chemistry II (3-0) 3	<i>First Semester</i>	
<u> </u> CHEM 114L	Exper. Gen. Chemistry II (0-1) 1	<u> </u> GEOL 464	Senior Research I (1-0) 1
<u> </u> MATH 125	Calculus II (4-0) 4	<u> </u> GEOE 475	Ground Water (2-1) 3
<u> </u> PHYS 211	Univ. Physics I (3-0) 3	<u> </u> GEOE 461	Petroleum Production 3
<u> </u> _____	Gen Ed Humanities/Social Science Elective ¹ <u> </u> 6	<u> </u> _____	Free electives 4
	17	<u> </u> _____	Humanities/Social Science elective <u> </u> 3
SOPHOMORE YEAR			14
<i>First Semester</i>		<i>Second Semester</i>	
<u> </u> GEOL 331	Stratig. and Sedimentation (2-1) 3	<u> </u> GEOL 465	Senior Research II ² 3
<u> </u> MATH 225	Calculus III (4-0) 4	<u> </u> GEOE 482	Applied Geomorph** (2-1) 3
<u> </u> PHYS 213	Univ. Physics II (3-0) 3	<u> </u> GEOE 451	Economic Geology (2-1) 3
<u> </u> MEM 201	Mine Surveying (1-2) 3	<u> </u> _____	Geology electives ³ 3
<u> </u> GEOL 321	Search for Our Past <u>(3-0) 3</u>	<u> </u> _____	Free electives <u> </u> 3
	16		15
<i>Second Semester</i>		128 semester credits are required.	
<u> </u> ENGL 279	Technical Communications I (3-0) 3	**Courses offered alternate years.	
<u> </u> GEOL 212	Mineral. and Crystallog. (2-1) 3	Critical sequence, must be taken in the specified semester.	
<u> </u> GEOE 211	Erth Sys. Eng. Anal. (1-1) 2	Curriculum Notes	
<u> </u> _____	Gen Ed Humanities/Social Science Elective ¹ 6	¹ Students must complete 27 credits of the general education core in their first 64 credit hours, including 6 credits of science, 3 cr math, 6 cr English/Technical Communication, 6 cr humanities, and 6 cr social science. ENGL 289 yields an addition 3 general education credits, for a total of 30.	
<u> </u> PE	Physical Education <u> </u> 1	² Under exceptional circumstances, a student may petition the department chair to substitute geology electives for senior research.	
	15	³ A Geology elective is any class with a GEOL or GEOE prefix.	
JUNIOR YEAR		Additional course work in mathematics and statistics is encouraged, especially for students planning to go to graduate school.	
<i>First Semester</i>			
<u> </u> ENGL 289	Technical Communications II ¹ 3		
<u> </u> GEOL 341	Elementary Petrology (2-1) 3		
<u> </u> GEOL 316	Intro. to GIS (2-1) 3		
<u> </u> GEOL 461	Invert. Paleo* * (2-1) 3		
<u> </u> _____	Humanities/Social Science Elective 1		
<u> </u> PE	Physical Education <u> </u> 1		
	14		

Suggested electives

This list is not intended to be restrictive. Many other courses are available.

ATM 406 Global Environmental Change	GEOL 420 Intro to Remote Sensing
BIOL 330 Environmental Science	CHEM 316 Fundamentals of Organic Chemistry
GEOE 419 Advanced Geospatial Analysis	GEOE 475 Ground Water
GEOL 351 Earth Resources and the Environment	GEOL 361 Oceanography
GEOL 417 Geospatial Database Development	MATH 321 Differential Equations
MATH 441 Engineering Statistics	

List GE Hum Electives (6 cr)

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List GE Soc Sci Electives (6 cr)

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List Hum/SS Electives (4 cr)

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List Geology Electives (7 cr)

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 _____ ()
 _____ ()
 _____ ()

List Free Electives (7 cr)

_____ ()
 _____ ()
 _____ ()
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