

BS in Geology (694022) MAP Sheet

Physical and Mathematical Sciences, Geological Sciences

For students entering the degree program during the 2022-2023 curricular year.

The basic degree in geology prepares graduates for professional employment in industry or government or for advanced studies in geology, business, or law.



University Core and Graduation Requirements				Suggested Sequence of Courses		
University Core Requirements:						
Requirements	#Classes	Hours	Classes			
Religion Cornerstones				FRESHMAN YEAR		
Teachings and Doctrine of The Book of Mormon	1	2.0	REL A 275	1st Semester		
Jesus Christ and the Everlasting Gospel	1	2.0	REL A 250	First-year Writing	3.0	
Foundations of the Restoration	1	2.0	REL C 225	GEOL 111 (FW)	4.0	
The Eternal Family	1	2.0	REL C 200	CHEM 105 or CHEM 111	4.0	
The Individual and Society				Religion Cornerstone course	2.0	
American Heritage	1-2	3-6.0	from approved list	Total Hours	13.0	
Global and Cultural Awareness	1	3.0	from approved list	JUNIOR YEAR		
Skills				2nd Semester		
First Year Writing	1	3.0	from approved list	American Heritage	3.0	
Advanced Written and Oral Communications	1	3.0	WRTG 316*	CHEM 106, 107 (FWSpSu) or CHEM 112	3-4.0	
Quantitative Reasoning	1	3-4.0	MATH 112* or 113*, or STAT 121*	GEOL 112	4.0	
Languages of Learning (Math or Language)	1	3-4.0	MATH 112* or 113*, or STAT 121*	MATH 112	4.0	
Arts, Letters, and Sciences				Total Hours	14-15.0	
Civilization 1	1	3.0	from approved list	SOPHOMORE YEAR		
Civilization 2	1	3.0	from approved list	3rd Semester		
Arts	1	3.0	from approved list	GEOL 210 (F) (Begins meeting before start of Fall semester)	3.0	
Letters	1	3.0	from approved list	GEOL 230 (F)	3.0	
Biological Science	1	3-4.0	from approved list	GEOL 351 (F)	4.0	
Physical Science	1	3.0	GEOL 210*	MATH 113	4.0	
Social Science	1	3.0	from approved list	Religion Cornerstone course	2.0	
Core Enrichment: Electives				Total Hours	16.0	
Religion Electives	3-4	6.0	from approved list	4th Semester		
Open Electives	Variable	Variable	personal choice	General Elective	3.0	
*THESE CLASSES CAN FILL BOTH UNIVERSITY CORE AND PROGRAM REQUIREMENTS (9-14 hours overlap)				GEOL 352 (W)	3.0	
Graduation Requirements:				GEOL 370 (W)	3.0	
Minimum residence hours required		30.0		PHSCS 105	3.0	
Minimum hours needed to graduate		120.0		Religion Cornerstone course	2.0	
				Total Hours	14.0	
				5th Semester		
				WRTG 316 (FWSpSu)	3.0	
				GEOL 491R (FW)	0.5	
				PHSCS 106	3.0	
				Civilization 1	3.0	
				Religion Cornerstone course	2.0	
				STAT 121	3.0	
				Total Hours	14.5	
				6th Semester		
				GEOL 405	3.0	
				GEOL 491R (F)	0.5	
				GEOL 375	3.0	
				Civilization 2	3.0	
				Religion elective	2.0	
				General electives	2.5	
				Total Hours	14.0	
				Spring/Summer		
				GEOL 420	2.0	
				GEOL 421	2.0	
				GEOL 422	2.0	
				Total Hours	6.0	
				SENIOR YEAR		
				7th Semester		
				GEOL 400-level elective	3.0	
				GEOL 400-level elective	3.0	
				GEOL 491R (FW)	0.5	
				Global & Cultural Awareness	3.0	
				Letters	3.0	
				Religion Elective	2.0	
				Total Hours	14.5	
				8th Semester		
				GEOL 400-level elective	3.0	
				GEOL 491R (FW)	0.5	
				Social Science	3.0	
				Arts	3.0	
				Religion Elective	2.0	
				Biological Science	3.0	
				Total Hours	14.5	
				**Note: The sequence of courses suggested may not fit the circumstances of every student. Students should contact their college advisement center for help in outlining an efficient schedule.		
				Note: Students are encouraged to complete an average of 15 credit hours each semester or 30 credit hours each year, which could include spring and/or summer terms. Taking fewer credits substantially increases the cost and the number of semesters to graduate.		

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2022-2023 Program Requirements (74 - 75 Credit Hours)

<p>No D credit is allowed in major courses.</p> <p>REQUIREMENT 1 Complete 12 courses</p> <p>GEOL 111 - Physical Geology 4.0 GEOL 112 - Historical Geology 4.0 *GEOL 210 - Field Studies 3.0 GEOL 230 - Earth Data Vis 3.0 GEOL 351 - Mineralogy 4.0 GEOL 352 - Petrology 3.0 GEOL 370 - Sedimentology and Stratigraphy 3.0 GEOL 375 - Structural Geology 3.0 GEOL 405 - Applied Mathematics in the Geological Sciences 3.0 GEOL 420 - Geological Field Methods 2.0 GEOL 421 - Geological Mapping 2.0 GEOL 422 - Geologic Writing 2.0</p> <p>REQUIREMENT 2 Complete 2.0 hours from the following course(s) TAKE 4 TIMES. GEOL 491R - Geology Seminar 0.5 <i>You may take this course up to 4 times.</i></p> <p>REQUIREMENT 3 Complete 3 courses GEOL 411 - Geomorphology and Remote Sensing 3.0 GEOL 435 - Groundwater 3.0 GEOL 440 - Solid Earth Geophysics 3.0 GEOL 445 - Geochemistry 3.0 GEOL 452 - Petrography to Petrogenesis 3.0 GEOL 460 - Economic and Resource Geology 3.0 GEOL 476 - Introduction to Seismic Interpretation 3.0 GEOL 480 - Paleontology 3.0</p> <p>REQUIREMENT 4 Complete 1 option</p> <p>OPTION 4.1 Complete 3 courses CHEM 105 - General College Chemistry 1 with Lab (Integrated) 4.0 CHEM 106 - General College Chemistry 2 3.0 CHEM 107 - General College Chemistry Laboratory 1.0</p> <p>OPTION 4.2 Complete 2 courses</p>	<p>CHEM 111 - Principles of Chemistry 1 4.0 CHEM 112 - Principles of Chemistry 2 3.0</p> <p>REQUIREMENT 5 Complete 1 course STAT 121 - Principles of Statistics 3.0 STAT 201 - Statistics for Engineers and Scientists 3.0</p> <p>REQUIREMENT 6 Complete 5 courses MATH 112 - Calculus 1 4.0 MATH 113 - Calculus 2 4.0 PHSCS 105 - General Physics 1 3.0 PHSCS 106 - General Physics 2 3.0 *WRTG 316 - Technical Communication 3.0</p> <p>THE DISCIPLINE</p> <p>Geological sciences consist of a number of disciplines aimed at understanding the Earth's origin and development and the natural processes that have operated upon it and within it from the time of formation of the solar system. With the development of remote sensing technology and the exploration of the solar system by spacecraft, geological sciences have become increasingly important for understanding not only the Earth but the Moon, other planets and their moons, and small bodies that orbit the sun.</p> <p>Understanding the dynamic processes of Earth and other planets is relevant to many societal needs, such as assessment and forecasting of natural hazards, environmental change, and discovery of energy and mineral resources. Some of the diverse disciplines that can be studied in this department include general geology, plate tectonics, volcanology, geochemistry, geophysics, paleontology, environmental geology, petroleum geology, hydrogeology, paleoclimatology, and planetary geology.</p> <p>CAREER OPPORTUNITIES</p> <p>Graduates have the opportunity to work both outdoors and in the laboratory, pursuing careers in energy, mineral, and water resources or in environmental evaluation with industry, government, or</p>	<p>consulting firms. The substantial preparation in basic sciences and mathematics also leads to a broad spectrum of teaching opportunities. Some scholarship money is available for those who pursue a geological sciences degree as a pre-law track.</p> <p>The most marketable terminal degree in geological sciences is the MS. Starting salaries for this degree are often very competitive with any other discipline.</p> <p>MAP DISCLAIMER</p> <p>While every reasonable effort is made to ensure accuracy, there are some student populations that could have exceptions to listed requirements. Please refer to the university catalog and your college advisement center/department for complete guidelines.</p> <p>DEPARTMENT INFORMATION</p> <p>Department of Geological Sciences Brigham Young University S-389 ESC Provo, UT 84602 Telephone: (801) 422-3918</p> <p>ADVISEMENT CENTER INFORMATION</p> <p>Physical and Mathematical Sciences College Advisement Center Brigham Young University N-181 ESC Provo, UT 84602 Telephone: (801) 422-2674</p>
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