

Northwest Missouri State University Department of Natural Sciences Geology: Environmental Concentration Comprehensive Major – No Minor Required Bachelor of Science

Term 1	Course Title/Description	Pre-requisite	Cr Hrs	Milestone/Notes
17-118	Precalculus Algebra	ACT Math score of 22 or higher or a score of PASS on the NW Algebra Review, or concurrent enrollment with Strategies for Precalculus Algebra	3	
27-110/111 OR	General Geology & Lab OR	General Chemistry & Lab	4	
27-114/115	General Earth Science & Lab	OR General Chemistry I & Lab		
77-101	University Seminar		1	
10-111	Composition I		3	
29-102	Fund of Oral Communication		3	
		Total Hours	14	
Term 2	Course Title/Description	Pre-requisite	Cr Hrs	Milestone/Notes
27-212	Historical Geology	General Geology & Lab OR General Earth Science & Lab	4	Spring
24-112/113 OR 24-114/115	General Chemistry & Lab OR General Chemistry I & Lab	High School Algebra	4	
10-112	Composition II	Composition I	3	
	Social & Behavioral Science	·	3	
		Total Hours	14	
Term 3	Course Title/Description	Pre-requisite	Cr Hrs	Milestone/Notes
27-220	Mineralogy	General Geology & Lab OR General Earth Science &	4	Fall
		Lab AND General Chemistry & Lab		
27-360	Environmental Geology		4	Fall
27-360	Environmental Geology Social & Behavioral Science	Chemistry & Lab General Geology & Lab OR General Earth Science &	3	Fall
27-360	-	Chemistry & Lab General Geology & Lab OR General Earth Science &		Fall
27-360	Social & Behavioral Science	Chemistry & Lab General Geology & Lab OR General Earth Science &	3	Fall
27-360	Social & Behavioral Science Digital Literacy	Chemistry & Lab General Geology & Lab OR General Earth Science &	3	Fall
27-360 Term 4	Social & Behavioral Science Digital Literacy	Chemistry & Lab General Geology & Lab OR General Earth Science & Lab	3 3 2	Fall Milestone/Notes
	Social & Behavioral Science Digital Literacy Elective	Chemistry & Lab General Geology & Lab OR General Earth Science & Lab Total Hours	3 3 2 16	Milestone/Notes Spring
Term 4	Social & Behavioral Science Digital Literacy Elective Course Title/Description	Chemistry & Lab General Geology & Lab OR General Earth Science & Lab Total Hours Pre-requisite	3 3 2 16 Cr Hrs	Milestone/Notes
Term 4	Social & Behavioral Science Digital Literacy Elective Course Title/Description Petrology	Chemistry & Lab General Geology & Lab OR General Earth Science & Lab Total Hours Pre-requisite	3 3 2 16 Cr Hrs 4	Milestone/Notes Spring Peoples & Culture
Term 4	Social & Behavioral Science Digital Literacy Elective Course Title/Description Petrology Humanities Requirement	Chemistry & Lab General Geology & Lab OR General Earth Science & Lab Total Hours Pre-requisite	3 3 2 16 Cr Hrs 4 3	Milestone/Notes Spring Peoples & Culture
Term 4	Social & Behavioral Science Digital Literacy Elective Course Title/Description Petrology Humanities Requirement Civics: History Requirement	Chemistry & Lab General Geology & Lab OR General Earth Science & Lab Total Hours Pre-requisite	3 3 2 16 Cr Hrs 4 3	Milestone/Notes Spring Peoples & Culture Recommended Intro. to Philosophy



= a milestone course completed by end of year 2 to remain on pace to finish degree requirements in four years.

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Term 5	Course Title/Description	Pre-requisite	Cr Hrs	Milestone/Notes
10-220	Intro to Literature		3	
	Fine Art		3	
34-102	Intro. to American Gov't and Politics		3	
	Geology Elective		3-4	See List Below
	Collateral Elective		3-4	See List Below
	•	Total Hours	15-17	
Term 6	Course Title/Description	Pre-requisite	Cr Hrs	Milestone/Notes
04-102/103	General Biology & Lab		4	
27-340	Intro to Hydrogeology	General Geology & Lab OR General Earth Science & Lab	3	Spring, even years
	Collateral Elective		3	See List Below
	Geology Elective		3-4	See List Below
	Elective		3	
	·	Total Hours	16-17	
Term 7	Course Title/Description	Pre-requisite	Cr Hrs	Milestone/Notes
27-455 OR 27-990	Geological Field Methods OR Field Camp	Geology Major or Minor with 20 hours in geology	3	Field Methods: Summer, odd years. Field Camp: taught at other institution
		Total Hours	3	
Term 8	Course Title/Description	Pre-requisite	Cr Hrs	Milestone/Notes
27-498	Senior Seminar	Senior Standing as Geology, Environmental Geology or Unified Science in Earth Science and a GPA of at least 2.0 in the major	1	Fall
	Geology Elective		3-4	See List Below
	Collateral Elective		3	See List Below
	Elective		6	
		Total Hours	13-14	
Term 9	Course Title/Description	Pre-requisite	Cr Hrs	Milestone/Notes
	Geology Elective		3-4	See List Below
	Collateral Elective		3	See List Below
	Elective		8	
		Total Hours	14-15	

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Required	Required Geology Electives – 15 credit hours minimum				
Course #	Course Name	Prerequisites	Hours	Semesters Offered	
27-326	Geology of Natural Parks	General Geology & Lab OR General Earth Science & Lab	3	Fall, even years	
27-335	Physical Oceanography	Completion of NW Science Core	3	Spring, even years	
27-423	Economic Geology	Mineralogy	4	Fall, odd years	
27-424	Geochemistry	Mineralogy	3	Fall, even years	
27-440	Stratigraphy	Historical Geology	4	Fall, odd years	
27-450	Structural Geology	Historical Geology & Petrology	4	Spring	
27-510	Geomorphology	General Geology & Lab OR General Earth Science & Lab	3	Spring, even years	
27-530	Sedimentology	Historical Geology	4	Fall, odd years	
27-540	Paleontology	Historical Geology	4	Spring	
27-555	X-Ray Analysis	Mineralogy	3	Spring, even years	
27-560	Optical Mineralogy	Mineralogy	3	Fall, even years	

Course #	Course Name	Prerequisites	Hours	Semesters Offered
03-234	Fundamentals of Soil Science	General Chemistry & Lab OR General Chemistry I & Lab	4	Fall and Spring
04-420	Environmental Issues	Principles of Biology & Lab (min. grade of C) AND General Chemistry I & Lab	4	Spring
24-242/243	Organic Chemistry/Organic Chemistry Lab	General Chemistry & Lab (min. grade of C)	3	Fall
27-515	Environmental Regulations	Environmental Geology OR Environmental Issues	2	Spring, odd years
32-201	Maps and Spatial Reasoning		3	Fall and Summer
32-207	GPS Fundamentals		3	Fall and Spring
32-221	Economic Globalization		3	Spring
32-360	Dynamic and Synoptic Meteorology		3	Spring, even years
32-361	Climatology		3	Spring, odd years
32-362	Web Mapping	Maps and Spatial Reasoning	3	Spring
32-365	Geographic Information Systems	Maps and Spatial Reasoning	3	Fall and Spring
32-370	Natural Disasters		3	Spring
32-401	Conservation of Natural Resources		3	Fall
32-462	Digital Cartography and Geovisualization	Maps and Spatial Reasoning	3	Fall
32-463	Remote Sensing	Maps and Spatial Reasoning	3	Fall
32-522	Cities and Urban Design		3	Spring, even years
32-565	Advanced Geographic Information Systems	Geographic Information Systems	3	Spring
17-114	General Statistics	ACT Math score of 22 or higher, high school GPA of 3.00 or higher, or min. grade of C in MATH 17082, or concurrent enrollment in MATH 17014	3	Fall and Spring

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