GEOLOGY (B.S.)

Required course work includes the university requirements (see regulation J-3 (https://catalog.uidaho.edu/general-requirements-academic-procedures/j-general-requirements-baccalaureate-degrees/)) and:

Code	Title	Hours
CHEM 111	General Chemistry I	3
CHEM 111L	General Chemistry I Laboratory	1
ENGL 318	Science Writing	3
GEOG 385	Foundations of GIS	3
GEOL 102	Historical Geology	3
GEOL 102L	Historical Geology Lab	1
GEOL 249	Mineralogy and Optical Mineralogy	4
GEOL 302	Field Geology Methods	3
GEOL 324	Principles of Stratigraphy and Sedimentation	4
GEOL 326	Igneous and Metamorphic Petrology	4
GEOL 345	Structural Geology	4
GEOL 422	Principles of Geophysics	4
GEOL 490	Geology Field Camp	3
MATH 143	College Algebra	3
MATH 170	Calculus I	4
Select one of the following:		4
GEOL 101 & 101L	Physical Geology and Physical Geology Lab	
GEOL 111 & 111L	Physical Geology for Science Majors and Physical Geology for Science Majors Lab	
Select one of the following:		4
PHYS 111 & 111L	General Physics I and General Physics I Lab	
PHYS 211 & 211L	Engineering Physics I and Laboratory Physics I	
Options		
Select one of the following options:		23-34
Energy Resiliency (p.)		
Environmental Hydrogeology (p. 1)		
Geological Education (p. 2)		
Sustainable Mining and Earth Resource Management (p.)		
Total Hours		**78-89**

A. Energy Resiliency Option

Code	Title	Hours
GEOL 212	Dinosaurs and Prehistoric Life	4
GEOL 462	Petroleum Systems and Stratigraphic Concepts	3
GEOL 471	Ore Deposits and Exploration	3
GEOG 313	Global Climate Change	3
GEOG 488	Geography of Energy Systems	3
GEOG 435	Climate Change Mitigation	3
MSE 201	Elements of Materials Science	3
MSE 438	Fundamentals of Nuclear Materials	3
ENVS 484	History of Energy	3
ENVS 485	Energy Efficiency and Conservation	3
ENVS 415	Environmental Lifecycle Assessment	3
GEOL 318 Economic Geology (proposed)		3

Courses to total 120 credits for this degree

B. Environmental Hydrogeology Option

Code	Title	Hours
GEOL 309	Ground Water Hydrology	3
GEOL 361	Geology and the Environment	3
HYDR 409	Quantitative Hydrogeology	3
GEOL 410	Groundwater Field Methods	3
HYDR 412	Environmental Hydrogeology	3
GEOL 428	Geostatistics	3
GEOL 431	Chemical Hydrogeology	3
GEOL 435	Glaciology and the Dynamic Frozen Earth	3
or GEOL 474	Stable Isotopes in the Environment	
Select two courses from the following:		6-7
MATH 175	Calculus II	
STAT 251	Statistical Methods	
STAT 301	Probability and Statistics	
Select one of the following:		4
PHYS 112 & 112L	General Physics II and General Physics II Lab	
PHYS 212 & 212L	Engineering Physics II and Laboratory Physics II	
Select one elective from the following:		6-8
GEOG 301	Meteorology	
GEOG 401	Climatology	
MATH 275	Calculus III	
MATH 310	Ordinary Differential Equations	
MATH 330	Linear Algebra	
CHEM 112 & 112L	General Chemistry II and General Chemistry II Laboratory	
CHEM 275 & CHEM 276	Carbon Compounds and Carbon Compounds Lab	
CHEM 277 & CHEM 278	Organic Chemistry I and Organic Chemistry I: Lab	
Total Hours		**40-43**

Courses to total 120 credits for this degree

C. Sustainable Mining and Earth Resource Management Option

Code	Title	Hours
CE 105	Civil Engineering Drafting	3
CE 211	Engineering Surveying	3
GEOE 465	Excavation and Materials Handling	3
GEOE 499	Directed Study	2
or GEOL 498	Senior Thesis	
or GEOL 400	Seminar	
GEOG 350	Sustainability of Global Development	3-4
GEOL 361	Geology and the Environment	3

GEOL 447	Geochronology and Thermochronology	3
or GEOL 474	Stable Isotopes in the Environment	
GEOL 462	Petroleum Systems and Stratigraphic Concepts	3
GEOL 471	Ore Deposits and Exploration	3
GEOL 428	Geostatistics	3
HYDR 412	Environmental Hydrogeology	3
FOR 207	Properties of Artificial Growth Media	1
or REM 280	Introduction to Wildland Restoration	
NRS 488	NEPA in Policy and Practice	3
or ENVS 479	Introduction to Environmental Regulations	
GEOL 318 Economic Geology (proposed)		3
GEOL 310 Geological Core Logging (proposed)		1

D. Geological Education Option

Code	Title	Hours
BIOL 115	Cells and the Evolution of Life	3
BIOL 115L	Cells and the Evolution of Life Laboratory	1
GEOG 100	Introduction to Planet Earth	3
GEOG 100L	Introduction to Planet Earth Lab	1
GEOG 401	Climatology	3
GEOL 212	Dinosaurs and Prehistoric Life	4
GEOL 335	Geomorphology	3
PHYS 103	General Astronomy	3
PHYS 104	Astronomy Lab	1
PLSC 205	General Botany	4
Select one of the following:		3-4
MATH 175	Calculus II	
MATH 330	Linear Algebra	
STAT 251	Statistical Methods	
Total Hours		**29-30**

Courses to total 120 credits for this degree

Energy Resiliency Option

Fall Term 1		**Hours**
ENGL 101	Writing and Rhetoric I	3
GEOG 165 or GEOG 200	Human Geography (Recommended - Both courses fulfill Social & Behavioral Ways of Knowing and International requirements) or World Cultures and Globalization	3
MATH 143	College Algebra	3
MATH 144	Analytic Trigonometry	1
(GEOL 101 AND GEOL 101L) OR (GEOL 111 AND GEOL 111L)		4
	Hours	**14**
Spring Term 1		
ENGL 102	Writing and Rhetoric II	3
CHEM 111	General Chemistry I	3
CHEM 111L	General Chemistry I Laboratory	1
GEOL 102	Historical Geology	3
GEOL 102L	Historical Geology Lab	1
MATH 170	Calculus I	4
	Hours	**15**
Fall Term 2		
GEOL 212	Dinosaurs and Prehistoric Life	4
MSE 201	Elements of Materials Science	3
GEOL 318	Economic Geology	3
(PHYS 111 AND PHYS 111L) OR (PHYS 211 AND PHYS 211L)		4
	Hours	**14**
Spring Term 2		
GEOL 249	Mineralogy and Optical Mineralogy	4
GEOL 345	Structural Geology	4
GEOG 385	Foundations of GIS	3
Social and Behavioral Ways of Knowing Course		3
	Hours	**14**
Summer Term 2		
GEOL 302	Field Geology Methods	3
	Hours	**3**
Fall Term 3		
GEOG 313	Global Climate Change	3
GEOL 324	Principles of Stratigraphy and Sedimentation	4
GEOL 326	Igneous and Metamorphic Petrology	4
GEOL 462	Petroleum Systems and Stratigraphic Concepts	3
	Hours	**14**
Spring Term 3		
ENGL 318	Science Writing	3
MSE 438	Fundamentals of Nuclear Materials	3
American Diversity Course		3
Oral Communication Course		3
Humanistic and Artistic Ways of Knowing Course		3
	Hours	**15**
Summer Term 3		
GEOL 490 or GEOL 489	Geology Field Camp or Virtual Field Camp	3
	Hours	**3**
Fall Term 4		
GEOL 471	Ore Deposits and Exploration	3
GEOG 435	Climate Change Mitigation	3
ENVS 485	Energy Efficiency and Conservation	3
GEOG 350	Sustainability of Global Development (Recommended)	3
Humanistic and Artistic Ways of Knowing		3
	Hours	**15**
Spring Term 4		
GEOL 422	Principles of Geophysics	4
ENVS 484	History of Energy	3
GEOG 488	Geography of Energy Systems	3
ENVS 415	Environmental Lifecycle Assessment	3
	Hours	**13**
	Total Hours	**120**

Environmental Hydrogeology Option

Fall Term 1		**Hours**
ENGL 101	Writing and Rhetoric I	3
GEOL 101 or GEOL 111	Physical Geology or Physical Geology for Science Majors	3
GEOL 101L or GEOL 111L	Physical Geology Lab or Physical Geology for Science Majors Lab	1
MATH 143	College Algebra	3
MATH 144	Analytic Trigonometry	1
Humanistic and Artistic Ways of Knowing Course		3
Oral Communication Course		3
	Hours	**17**
Spring Term 1		
CHEM 111	General Chemistry I	3
CHEM 111L	General Chemistry I Laboratory	1
ENGL 102	Writing and Rhetoric II	3
GEOL 102	Historical Geology	3
GEOL 102L	Historical Geology Lab	1

MATH 170	Calculus I	4
	Hours	**15**
Fall Term 2		
GEOL 309	Ground Water Hydrology	3
MATH 175 or STAT 251 or STAT 301	Calculus II or Statistical Methods or Probability and Statistics	4
(PHYS 111 AND PHYS 111L) OR (PHYS 211 AND PHYS 211L)		4
Social and Behavioral Ways of Knowing Course		3
	Hours	**14**
Spring Term 2		
GEOL 249	Mineralogy and Optical Mineralogy	4
GEOL 345	Structural Geology	4
STAT 251 or MATH 175 or STAT 301	Statistical Methods or Calculus II or Probability and Statistics	3
(PHYS 112 AND PHYS 112L) OR (PHYS 211 AND PHYS 211L)		4
	Hours	**15**
Summer Term 2		
GEOL 302	Field Geology Methods	3
	Hours	**3**
Fall Term 3		
GEOL 324	Principles of Stratigraphy and Sedimentation	4
GEOL 326	Igneous and Metamorphic Petrology	4
GEOL 361	Geology and the Environment	3
ENGL 318	Science Writing	3
	Hours	**14**
Spring Term 3		
GEOL 474 or GEOL 435	Stable Isotopes in the Environment or Glaciology and the Dynamic Frozen Earth	3
HYDR 412	Environmental Hydrogeology	3
GEOG/MATH/CHEM, Major Elective Course		3
Social and Behavioral Ways of Knowing Course		3
American Diversity Course		3
	Hours	**15**
Summer Term 3		
GEOL 490 or GEOL 489	Geology Field Camp or Virtual Field Camp	3
	Hours	**3**
Fall Term 4		
GEOL 410	Groundwater Field Methods	3
HYDR 409	Quantitative Hydrogeology	3
GEOG 385	Foundations of GIS	3
Humanistic and Artistic Ways of Knowing		3
GEOG/MATH/CHEM, Major Elective Course		3
	Hours	**15**
Spring Term 4		
GEOL 422	Principles of Geophysics	4
GEOL 428	Geostatistics	3
GEOL 431	Chemical Hydrogeology	3
International Course (GEOG 350 recommended)		3
	Hours	**13**
	Total Hours	**124**

Sustainable Mining and Earth Resource Management Option

Freshman		
Fall Term 1		**Hours**
ENGL 101	Writing and Rhetoric I	3
MATH 143	College Algebra	3
MATH 144	Analytic Trigonometry	1
GEOL 101 or GEOL 111	Physical Geology or Physical Geology for Science Majors	3
GEOL 101L or GEOL 111L	Physical Geology Lab or Physical Geology for Science Majors Lab	1
GEOG 165 or GEOG 200	Human Geography (Recommended - Both courses fulfill Social & Behavioral Ways of Knowing and International requirements) or World Cultures and Globalization	3
Oral Communication Course		3
	Hours	**17**
Spring Term 1		
ENGL 102	Writing and Rhetoric II	3
CHEM 111	General Chemistry I	3
CHEM 111L	General Chemistry I Laboratory	1
GEOL 102	Historical Geology	3
GEOL 102L	Historical Geology Lab	1
MATH 170	Calculus I	4
	Hours	**15**
Sophomore		
Fall Term 2		
GEOL 318	Economic Geology	3
GEOL 324	Principles of Stratigraphy and Sedimentation	4
PHYS 111 or PHYS 211	General Physics I or Engineering Physics I	3
PHYS 111L or PHYS 211L	General Physics I Lab or Laboratory Physics I	1
Humanistic and Artistic Ways of Knowing Course		3
	Hours	**14**
Spring Term 2		
GEOL 249	Mineralogy and Optical Mineralogy	4
GEOL 345	Structural Geology	4
GEOG 385	Foundations of GIS	3
CE 105	Civil Engineering Drafting	3
	Hours	**14**
Summer Term 2		
GEOL 302	Field Geology Methods	3
	Hours	**3**
Junior		
Fall Term 3		
CE 211	Engineering Surveying	3
GEOL 326	Igneous and Metamorphic Petrology	4
GEOL 361	Geology and the Environment	3
GEOL 462	Petroleum Systems and Stratigraphic Concepts	3
	Hours	**13**
Spring Term 3		
ENGL 318	Science Writing	3
FOR 207 or REM 280	Properties of Artificial Growth Media or Introduction to Wildland Restoration	1
GEOL 498 or GEOL 400 or GEOE 499	Senior Thesis (or internship) or Seminar or Directed Study	2
American Diversity Course		3
Social and Behavioral Ways of Knowing Course		3
	Hours	**12**
Summer Term 3		
GEOL 490 or GEOL 489	Geology Field Camp or Virtual Field Camp	3
	Hours	**3**
Senior		
Fall Term 4		
GEOE 465	Excavation and Materials Handling	3
GEOL 310	Geological Core Logging	1
GEOL 471	Ore Deposits and Exploration	3

ENVS 479 or NRS 488	Introduction to Environmental Regulations or NEPA in Policy and Practice	3
HYDR 412	Environmental Hydrogeology	3
	Hours	**13**
Spring Term 4		
GEOG 350	Sustainability of Global Development (International Course)	3
GEOL 428	Geostatistics	3
GEOL 422	Principles of Geophysics	4
GEOL 474	Stable Isotopes in the Environment	3
Humanistic and Artistic Ways of Knowing		3
	Hours	**16**
	Total Hours	**120**

Geological Education Option

Fall Term 1		**Hours**
ENGL 101	Writing and Rhetoric I	3
MATH 143	College Algebra	3
MATH 144	Analytic Trigonometry	1
(GEOL 101 AND GEOL 101L) OR (GEOL 111 AND GEOL 111L)		4
Oral Communication Course		3
	Hours	**14**
Spring Term 1		
CHEM 111	General Chemistry I	3
CHEM 111L	General Chemistry I Laboratory	1
ENGL 102	Writing and Rhetoric II	3
GEOL 102	Historical Geology	3
GEOL 102L	Historical Geology Lab	1
MATH 170	Calculus I	4
	Hours	**15**
Fall Term 2		
BIOL 115	Cells and the Evolution of Life	3
BIOL 115L	Cells and the Evolution of Life Laboratory	1
GEOL 249	Mineralogy and Optical Mineralogy	4
(PHYS 111 AND PHYS 111L) OR (PHYS 211 AND PHYS 211L)		4
Humanistic and Artistic Ways of Knowing Course		3
	Hours	**15**
Spring Term 2		
GEOG 100	Introduction to Planet Earth	3
GEOG 100L	Introduction to Planet Earth Lab	1
GEOL 212	Dinosaurs and Prehistoric Life	4
GEOL 326	Igneous and Metamorphic Petrology	4
Social and Behavioral Ways of Knowing Course		3
	Hours	**15**
Summer Term 2		
GEOL 302	Field Geology Methods	3
	Hours	**3**
Fall Term 3		
ENGL 318	Science Writing	3
GEOG 385	Foundations of GIS	3
GEOL 324	Principles of Stratigraphy and Sedimentation	4
GEOL 345	Structural Geology	4
MATH 175 OR MATH 330 OR STAT 251		3
	Hours	**17**
Spring Term 3		
GEOL 335	Geomorphology	3
GEOL 422	Principles of Geophysics	4
Social and Behavioral Ways of Knowing Course		3
International Course		3
	Hours	**13**
Summer Term 3		
GEOL 490	Geology Field Camp	3
or GEOL 489	or Virtual Field Camp	
	Hours	**3**
Fall Term 4		
GEOL 423	Principles of Geochemistry	3
PHYS 103	General Astronomy	3
PHYS 104	Astronomy Lab	1
American Diversity Course		3
Elective Course		3
	Hours	**13**
Spring Term 4		
GEOG 401	Climatology	3
PLSC 205	General Botany	4
Humanistic and Artistic Ways of Knowing Course		3
Elective Course		2
	Hours	**12**
	Total Hours	**120**

The degree map is a guide for the timely completion of your curricular requirements. Your academic advisor or department may be contacted for assistance in interpreting this map. This map is not reflective of your academic history or transcript and it is not official notification of completion of degree or certificate requirements. Please contact the Registrar's Office regarding your official degree/certificate completion status.