

BACHELOR OF ARTS IN GEOLOGY

Students may choose to major in Geology for the degree of Bachelor of Science or Bachelor of Arts.

The Bachelor of Science and the Bachelor of Arts in Geology both prepare students for professional employment. The Bachelor of Science degree also prepares students for graduate study in geology and related fields. The dominant fields of employment include:

- environmental geology
- engineering geology
- hydrogeology
- geophysics
- government compliance and regulation
- mining
- petroleum geology
- other fields within the energy industry

The Bachelor of Science and the Bachelor of Arts degrees in Geology can be completed in eight semesters if students average 16 hours of coursework per semester.

For more information, visit the Department of Geological and Environmental Sciences. (<http://catalog.ysu.edu/undergraduate/colleges-programs/college-science-technology-engineering-mathematics/department-geological-environmental-sciences>)

The Bachelor of Arts degree requires the successful completion of a minimum of 72 s.h. of core and elective courses.

COURSE	TITLE	S.H.
General Education Requirements		
Core Competencies		12
ENGL 1550	Writing 1	
ENGL 1551	Writing 2	
CMST 1545	Communication Foundations	
Mathematics Requirement		
Arts and Humanities		6
Natural Sciences		6
Social Science		6
Social and Personal Awareness		6
General Education Elective / First Year Experience		3
Major Requirements		
GEOL 1505 & 1505L	Physical Geology and Physical Geology Laboratory	4
ENST 2600 & 2600L	Foundations of Environmental Studies and Foundations of Environmental Studies Laboratory	4
GEOL 2605	Historical Geology	4
GEOL 3700	Mineralogy	4
GEOL 3701	Geomorphology	3
GEOL 3704 & 3704L	Structural Geology and Structural Geology Laboratory	3
GEOL 3718	Igneous and Metamorphic Petrology	4
GEOL 3750	Geoscience Seminar	1
GEOL 5802	Sedimentology and Stratigraphy (Capstone course)	3
MATH 1570	Applied Calculus 1	4
Electives		
Science Electives I:		

Select a minimum of 18 s.h. from the following: 18

ASTR 2609	Moon and Planets
BIOL 2601 & 2601L	General Biology: Molecules and Cells and General Biology: Molecules and Cells Laboratory
BIOL 2602 & 2602L	General Biology: Organisms and Ecology and General Biology: Organisms and Ecology Laboratory
CHEM 1515 & 1515L	General Chemistry 1 and General Chemistry 1 Laboratory
CHEM 1516 & 1516L	General Chemistry 2 and General Chemistry 2 Laboratory
GEOG 2630	Weather
MATH 2670	Applied Calculus 2
PHYS 1501 & 1501L	Fundamentals of Physics 1 and Fundamentals of Physics Laboratory 1
GEOL 2602	Introduction to Oceanography
GEOL 2615	Geology and the Environment 1
PHYS 1502 & 1502L	Fundamentals of Physics 2 and Fundamentals of Physics Laboratory 2
STAT 3717	Statistical Methods

Science Electives II:

Select a minimum of 20 s.h. from the following: 20

ENST 3700 & 3700L	Environmental Chemistry and Environmental Chemistry Lab
GEOL 3702	Glacial Geology
GEOL 3706	Geology of Economic Mineral Deposits
GEOL 3709	Subsurface Investigations
GEOL 3714	Principles of Paleontology
GEOL 3716	Environmental Impact of Abandoned Mines
GEOL 3720	Field Investigations in Geology
ENST 3751 & 3751L	Water Quality Analysis and Water Quality Analysis Lab
ENST 3780	Environmental Research
ENST 3781	Environmental Sampling Methods
GEOL 4804	Ground Water
GEOL 4824	Tectonics
GEOL 4825	Geophysical Well Log Analysis
GEOL 4899	Special Topics
GEOL 48XX	Geology Field Camp (4 s.h. minimum)
GEOL 5805	Special Problems in Geology
ENST 5810	Environmental Safety
GEOG 5810	Geographic Information Science 1
GEOG 5811	Geographic Information Science 2
GEOL 5810	Groundwater Resource Evaluation
GEOL 5815	Geology and the Environment 2
GEOL 5817	Environmental Geochemistry
ENST 5860	Environmental Regulations

Total Prescribed Semester Hours: 108-111 s.h.

Course	Title	S.H.
Year 1		
Fall		
GEOL 1505 & 1505L	Physical Geology and Physical Geology Laboratory	4
ENGL 1550	Writing 1	3
CHEM 1515 & 1515L	General Chemistry 1 and General Chemistry 1 Laboratory	4
GER Arts and Humanities Elective		3

GEOL 3750	Geoscience Seminar	1
Semester Hours		15
Spring		
GEOL 2605	Historical Geology	4
ENGL 1551	Writing 2	3
CHEM 1516 & 1516L	General Chemistry 2 and General Chemistry 2 Laboratory	4
GEOG 2626	World Geography	3
Semester Hours		14

Year 2**Fall**

GEOL 3700	Mineralogy	4
MATH 1570	Applied Calculus 1	4
GEOG 5810	Geographic Information Science 1	3
ENST 2600 & 2600L	Foundations of Environmental Studies and Foundations of Environmental Studies Laboratory	4
GEOL 3750	Geoscience Seminar (Optional)	1
Semester Hours		16

Spring

GEOL 3718	Igneous and Metamorphic Petrology	4
Science Elective II		3-5
CMST 1545	Communication Foundations	3
Science Elective I		3-5
Science Elective I		3-5
Semester Hours		16

Year 3**Fall**

GEOL 3701	Geomorphology	3
FNLG 1550	Elementary Foreign Language	4
GER Social Science Elective		3
GEOL/ENST 3700+	Science Elective II	3-4
GEOL 3750	Geoscience Seminar (Optional)	1
Science Elective I		3-5
Semester Hours		17

Spring

GEOL 3704 & 3704L	Structural Geology and Structural Geology Laboratory	3
FNLG 2600	Intermediate Foreign Language	4
GER Arts and Humanities		3
GEOL/ENST	Science Elective II	3-4
ENST 5810	Environmental Safety	1
Semester Hours		14

Year 4**Fall**

GEOL 3750	Geoscience Seminar (Optional)	1
GER Social Personal Awareness		3
GEOL/ENST 3700+	Science Elective II	3-4
GEOL/ENST 3700+	Science Elective II	3-4
Elective Course		3
Elective Course		3
Semester Hours		16

Spring

GEOL 5802	Sedimentology and Stratigraphy (Capstone Course)	3
Science Elective I		3-5
GEOL/ENST 3700+	Science Elective II	3-4

PHIL 2631	Environmental Ethics (GER Social and Personal Awareness)	3
Elective Course		3
Semester Hours		15
Total Semester Hours		123

Request a Graduation Evaluation after completing 80-85 s.h. from the STEM Advising Center, 2325 Moser Hall, (330) 941-2512.

LEARNING OUTCOMES

The learning outcomes for the Bachelor of Science in Geology are as follows:

- Communicate effectively using the language, concepts, and models of geology in written, visual, and numerical formats.
- Properly apply the scientific method to research a geologic problem and formulate conclusions.
- Demonstrate ability to apply appropriate field- and laboratory-based methods (of acquiring, quantitatively and qualitatively analyzing, and interpreting geologic data and information).
- Demonstrate understanding of plate tectonics regarding the petrologic, stratigraphic, and structural evolution of continents and oceans.