

# GEOLOGY: ENVIRONMENTAL GEOLOGY, BS

for the degree of Bachelor of Science Major in Geology, Environmental Geology Concentration (Specialized Curriculum)

The **Specialized Curriculum in Geology (BS)** is designed for students who plan to pursue graduate study in geology or geophysics or who wish to work professionally in the environmental field upon obtaining the bachelor's degree. It consists of geology, geophysics, and environmental geology areas, and offers more training in geology and related science than is required of students who make geology their major in the Sciences and Letters Curriculum. Students must choose one of the following: Geology, Geophysics, or Environmental Geology.

## Undergraduate Degree Programs in Geology

### For the Degree of Bachelor of Science in Liberal Arts and Sciences

Students select one of the following in consultation with an adviser:

- Major in Geology (Sciences and Letters) (<http://catalog.illinois.edu/undergraduate/las/geology-bslas/>)
- Major in Geology (Sciences and Letters), Earth and Environmental Sciences Concentration (<http://catalog.illinois.edu/undergraduate/las/geology-bslas/earth-environmental-sciences/>)
- Major in Geology (Sciences and Letters), Earth Science Teaching Concentration (<http://catalog.illinois.edu/undergraduate/las/geology-bslas/earth-science-teaching/>)

### For the Degree of Bachelor of Science in Geology

Students select one of the following in consultation with an adviser:

- Major in Geology (Specialized Curriculum) (<http://catalog.illinois.edu/undergraduate/las/geology-bs/>)
- Major in Geology (Specialized Curriculum), Environmental Geology Concentration (p. 1)
- Major in Geology (Specialized Curriculum), Geophysics Concentration (<http://catalog.illinois.edu/undergraduate/las/geology-bs/geophysics/>)

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Graduation requires a grade point average of at least 2.0 overall and a 2.0 average in all required science and technical courses (geology, physics, mathematics, chemistry, and technical requirements listed below). The Department of Geology will supply upon request a Guide for Geology Undergraduates giving more information about the curriculum.

**Departmental Distinction:** Students majoring in Geology can earn distinction, high distinction, and highest distinction upon graduation. The requirements for these awards are:

**Distinction:** A minimum cumulative grade point average of 3.3, and have also completed an approved independent study project, approved senior thesis, or approved capstone

**High Distinction:** A minimum cumulative grade point average of 3.5, and have also completed an approved independent study project, approved senior thesis, or approved capstone

**Highest Distinction:** A minimum cumulative grade point average of 3.7, and also completed an approved senior thesis or approved research capstone

**General education: Students must complete the Campus General Education** (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT/>) **requirements including the campus general education language requirement.**

**Minimum hours required for graduation: 126 hours.**

Code	Title	Hours
<b>Chemistry- Select one group of courses:</b>		
CHEM 102	General Chemistry I	8-9
CHEM 103	General Chemistry Lab I	
CHEM 104	General Chemistry II	
CHEM 105	General Chemistry Lab II	
or		
CHEM 202	Accelerated Chemistry I	8-9
CHEM 203	Accelerated Chemistry Lab I	
CHEM 204	Accelerated Chemistry II	
CHEM 205	Accelerated Chemistry Lab II	
or		

### 24 hours of Geology Courses

GEOL 107	Physical Geology (Students who decide to follow the curriculum after first taking GEOL 100 should enroll in GEOL 208. GEOL 100 will be accepted as a substitute for GEOL 107, but students should be aware that these courses are not intended for science majors.)	4
GEOL 208	History of the Earth System	4
GEOL 380	Environmental Geology	4
GEOL 401	Geomorphology	4
GEOL 451	Environmental Geophysics	4
or GEOL 452	Introduction to Geophysics	4
GEOL 470	Introduction to Hydrogeology	4

<b>Mathematics</b>		11-12
MATH 220	Calculus	11-12
or MATH 221	Calculus I	
MATH 231	Calculus II	
MATH 241	Calculus III	

<b>Physics</b>		8-10
PHYS 211 & PHYS 212	University Physics: Mechanics and University Physics: Elec & Mag	8-10
or		
PHYS 101 & PHYS 102	College Physics: Mech & Heat and College Physics: E&M & Modern	

<b>Statistics- Select one of the following:</b>		4
CPSC 440	Applied Statistical Methods I	4
STAT 400	Statistics and Probability I	

<b>Additional Technical Requirements</b>		24
Select from the following courses. At least 9 hours must be geology courses and at least 9 hours must be non-geology courses.		24

CEE 330	Environmental Engineering
CHEM 232	Elementary Organic Chemistry I
CS 101	Intro Computing: Engrg & Sci
CS 125	Introduction to Computer Science
ENVS 431	
GGIS 477	Introduction to Remote Sensing
GEOL 411	Structural Geol and Tectonics
GEOL 417	Geol Field Methods, Western US (GEOL 417 is a 6-hour summer field course taught off campus.)
GEOL 432	Mineralogy and Mineral Optics
GEOL 436	Petrology and Petrography
GEOL 440	Sedimentology and Stratigraphy
GEOL 460	Geochemistry
MATH 225	Introductory Matrix Theory
MATH 415	Applied Linear Algebra
MATH 285	Intro Differential Equations
MATH 441	Differential Equations
MCB 100	Introductory Microbiology
MCB 101	Intro Microbiology Laboratory
PHYS 213	Univ Physics: Thermal Physics
PHYS 214	Univ Physics: Quantum Physics
STAT 420	Methods of Applied Statistics
TAM 210	Introduction to Statics
TAM 211	Statics

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**Sample Sequence**

This sample sequence is intended to be used only as a guide for degree completion. All students should work individually with their academic advisors to decide the actual course selection and sequence that works best for them based on their academic preparation and goals. Enrichment programming such as study abroad, minors, internships, and so on may impact the structure of this four-year plan. Course availability is not guaranteed during the semester indicated in the sample sequence.

Students must fulfill their Language Other Than English requirement by successfully completing a third level of a language other than English. See the corresponding section on the Degree and General Education Requirements page (<http://catalog.illinois.edu/general-information/degree-general-education-requirements/>).

**First Year**

First Semester	Hours	Second Semester	Hours
Free elective course		1 GEOL 208	4
CHEM 102 (or CHEM 202)		3 CHEM 104 (or CHEM 204)	3
CHEM 103 (or CHEM 203)		2 CHEM 105 (or CHEM 205)	1
Language Other than English (3rd level)		4 GEOL 107	4

Composition I or General Education course	3 General Education course or Composition 1	3
Free elective course		3
		<b>16</b>
		<b>15</b>

**Second Year**

First Semester	Hours	Second Semester	Hours
MATH 220 (or MATH 221)		4 GEOL 401	4
Technical Geology or non Geology course		3 Technical Geology course	3
Technical non Geology course		3 GEOL 470	4
General Education course		3 MATH 231	3
General Education Course		3 General Education course	3
		<b>16</b>	<b>17</b>

**Third Year**

First Semester	Hours	Second Semester	Hours
GEOL 380		4 Technical non Geology course	3
MATH 241		4 Technical Geology course	3
PHYS 211 (or PHYS 101)		4 PHYS 212 (or PHYS 102)	5
Technical Geology course		3 Free elective course	3
		<b>15</b>	<b>14</b>

**Fourth Year**

First Semester	Hours	Second Semester	Hours
Technical Geology or non Geology course		3 Technical non Geology course	3
CPSC 440 (or STAT 400)		4 General Education Course	3
GEOL 451 (or GEOL 452)		4 General Education Course	3
General Education Course		3 General Education course	3
Free elective course		3 Free elective course	4
		<b>17</b>	<b>16</b>

**Total Hours 126**

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**Geology**

Geology website (<https://www.geology.illinois.edu/undergraduate/>)  
 Geology email (<http://catalog.illinois.edu/undergraduate/las/geology-bs/environmental-geology/geology@illinois.edu>)

Geology Faculty (<https://www.geology.illinois.edu/cms/One.aspx?portalId=127672&pageId=225782>)

**College of Liberal Arts & Sciences**

LAS College website (<https://las.illinois.edu/>)

**Advising**

Geology advising (<https://www.geology.illinois.edu/cms/One.aspx?portalId=127672&pageId=258530>)

**Admissions**

Liberal Arts & Sciences Admissions & Requirements (<http://catalog.illinois.edu/schools/las/academic-units/>)

University of Illinois Undergrad Admissions (<https://www.admissions.illinois.edu/>)