GEOLOGY, BS

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

department website: https://www.geology.illinois.edu/
dergraduate (https://www.geology.illinois.edu/undergraduate/)
department faculty: Geology Faculty (https://
www.geology.illinois.edu/cms/One.aspx?
portalid=127672&pageld=225782)
advising: Geology advising (https://www.geology.illinois.edu/cms/
One.aspx?portalld=127672&pageld=258530)
overview of college admissions & requirements: Liberal Arts &
Sciences (http://catalog.illinois.edu/schools/las/academic-units/)
college website: https://las.illinois.edu/
email: geology@illinois.edu

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

for the degree of Bachelor of Science Major in Geology

Specialized Curriculum
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.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 102</td>
<td>General Chemistry I</td>
<td>8-9</td>
</tr>
<tr>
<td>CHEM 103</td>
<td>General Chemistry Lab I</td>
<td></td>
</tr>
<tr>
<td>CHEM 104</td>
<td>General Chemistry II</td>
<td></td>
</tr>
<tr>
<td>CHEM 105</td>
<td>General Chemistry Lab II</td>
<td></td>
</tr>
<tr>
<td>or</td>
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<td></td>
</tr>
<tr>
<td>CHEM 202</td>
<td>Accelerated Chemistry I</td>
<td></td>
</tr>
<tr>
<td>CHEM 203</td>
<td>Accelerated Chemistry Lab I</td>
<td></td>
</tr>
<tr>
<td>CHEM 204</td>
<td>Accelerated Chemistry II</td>
<td></td>
</tr>
<tr>
<td>CHEM 205</td>
<td>Accelerated Chemistry Lab II</td>
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45 hours of Geology Courses:¹

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>GEOL 107</td>
<td>Physical Geology ²</td>
<td>4</td>
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<tr>
<td>GEOL 208</td>
<td>History of the Earth System</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 143</td>
<td>History of Life</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 411</td>
<td>Structural Geol and Tectonics</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 417</td>
<td>Geol Field Methods, Western US ³</td>
<td>6</td>
</tr>
<tr>
<td>GEOL 432</td>
<td>Mineralogy and Mineral Optics</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 436</td>
<td>Petrology and Petrography</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 440</td>
<td>Sedimentology and Stratigraphy</td>
<td>4</td>
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<td>or</td>
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<tr>
<td>GEOL 450</td>
<td>Probing the Earth's Interior</td>
<td>3-4</td>
</tr>
<tr>
<td>or GEOL 452</td>
<td>Introduction to Geophysics</td>
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</tr>
<tr>
<td>GEOL 460</td>
<td>Geochemistry</td>
<td>3</td>
</tr>
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</table>

6 additional hours 300- or 400-level geology

Mathematics

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 220</td>
<td>Calculus</td>
<td>13-15</td>
</tr>
<tr>
<td>or MATH 221</td>
<td>Calculus I</td>
<td></td>
</tr>
<tr>
<td>MATH 231</td>
<td>Calculus II</td>
<td></td>
</tr>
<tr>
<td>MATH 225</td>
<td>Introductory Matrix Theory</td>
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<tr>
<td>or MATH 415</td>
<td>Applied Linear Algebra</td>
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<tr>
<td>MATH 241</td>
<td>Calculus III</td>
<td>8-10</td>
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</tbody>
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Physics. Select one group of courses:

Information listed in this catalog is current as of 09/2021
PHYS 211  University Physics: Mechanics
PHYS 212  University Physics: Elec & Mag

or

PHYS 101  College Physics: Mech & Heat
PHYS 102  College Physics: E&M & Modern

Additional Technical Requirements  3
Select at least 3 hours from the following:

IB 103  Introduction to Plant Biology
IB 104  Animal Biology
CS 101  Intro Computing: Engrg & Sci
CS 125  Introduction to Computer Science
CPSC 440  Applied Statistical Methods I
STAT 400  Statistics and Probability I
MATH 285  Intro Differential Equations
MATH 441  Differential Equations
PHYS 213  Univ Physics: Thermal Physics
PHYS 214  Univ Physics: Quantum Physics

1 Students transferring into the geology concentration from another science or engineering program may substitute up to 8 hours of 300- or 400-level science or engineering credits for 8 hours of 300-or 400-level geology courses with departmental approval.

2 Students who decide to follow the curriculum after first taking GEOL 100 or GEOL 103 should enroll in GEOL 208. GEOL 100 or GEOL 103 will be accepted as a substitute for GEOL 107, but students should be aware that these courses are not intended for science majors.

3 GEOL 417 is a 6-hour summer field course taught off campus.