Bachelor of Arts in Geology

Why study geology?
In Geology you get to apply techniques and knowledge from chemistry, physics, biology and math to answer important questions about Earth processes, history and future. Geologists are in demand to evaluate geologic hazards, evaluate natural resources, and understand the environment.

The B.A. program ([http://geo.ku.edu/overview-1](http://geo.ku.edu/overview-1)) allows many free electives for background courses in the sciences or liberal arts. The program permits study of traditional geology (with emphasis on the solid earth, the earth’s surface, or environmental geology and natural resources), environmental geology (with emphasis on water or urban environmental geology), or an individually tailored program.

Undergraduate Admission

Admission to KU
All students applying for admission must send high school and college transcripts to the Office of Admissions. Unless they are college transfer students with at least 24 hours of credit, prospective students must send ACT or SAT scores to the Office of Admissions. Prospective first-year students should be aware that KU has qualified admission requirements that all new first-year students must meet to be admitted. Consult the Office of Admissions ([http://admissions.ku.edu](http://admissions.ku.edu)) for application deadlines and specific admission requirements.

Visit the Office of International Student and Scholar Services ([http://www.iss.ku.edu](http://www.iss.ku.edu)) for information about international admissions.

Students considering transferring to KU may see how their college-level course work will transfer on the Office of Admissions ([http://credittransfer.ku.edu](http://credittransfer.ku.edu)) website.

Admission to the College of Liberal Arts and Sciences
Admission to the College is a different process from admission to a major field. Some CLAS departments have admission requirements. See individual department/program sections for departmental admission requirements.

Geology Programs
The B.A. program allows many free electives for background courses in the sciences or liberal arts. The program permits study of traditional geology (with emphasis on the solid earth, the earth’s surface, or environmental geology and natural resources), environmental geology (with emphasis on water or urban environmental geology), or an individually tailored program.

Degree requirements may be altered to suit particular needs of a student upon petition to the undergraduate studies committee and in consultation with a geology faculty advisor. Special consideration is given to students with strong backgrounds in supporting sciences and students with superior records who decide to major in geology late in their programs.

First- and Second-Year Preparation
Students interested in geology should see a department advisor as soon as possible. They should enroll in mathematics, chemistry, and English in addition to Introduction to Geology and electives. Students should take GEOL 360 as soon as possible.

Advising
Developing a strong relationship with a faculty advisor helps students get the most out of their educational programs in the shortest time. Most courses for majors are offered in only one semester each year. Advisors can guide the student through complexities of the curriculum or into a specialized program.

Requirements for the B.A. Major

Geology Major Course Requirements

| Geology Prerequisite or Co-requisite Knowledge (24-27) |
|---------------------------------------------|-----------------|
| Majors must complete courses as specified in each of the following areas. Majors are advised to take honors courses when eligible. These hours do not contribute to the minimum number of hours required for the major. |

<table>
<thead>
<tr>
<th>Course</th>
<th>Satisfied by:</th>
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<tbody>
<tr>
<td>Calculus I. Satisfied by:</td>
<td></td>
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<tr>
<td>MATH 115</td>
<td>Calculus I (or equivalent)</td>
</tr>
<tr>
<td>or MATH 121</td>
<td>Calculus I</td>
</tr>
<tr>
<td>Foundations of Chemistry I. Satisfied by:</td>
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<tr>
<td>CHEM 130</td>
<td>General Chemistry I</td>
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<tr>
<td>Physics. Satisfied by one of the following:</td>
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<tr>
<td>PHSX 111</td>
<td>Introductory Physics</td>
</tr>
<tr>
<td>PHSX 114</td>
<td>College Physics I</td>
</tr>
<tr>
<td>PHSX 211 &amp; PHSX 216</td>
<td>General Physics I and General Physics I Laboratory</td>
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<tr>
<td>Biology. Satisfied by:</td>
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<tr>
<td>BIOL 100 &amp; BIOL 102</td>
<td>Principles of Biology and Principles of Biology Laboratory (or higher level biology course)</td>
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<tr>
<td>Information Technology. Satisfied by:</td>
<td></td>
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<tr>
<td>EECS 138</td>
<td>Introduction to Computing: ______</td>
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Geology Core Knowledge and Skills (24)

Majors must complete the following core courses:

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>GEOL 101</td>
<td>The Way The Earth Works</td>
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<tr>
<td>GEOL 103</td>
<td>Geology Fundamentals Laboratory</td>
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<tr>
<td>GEOL 107</td>
<td>Mineralogy and Structure of the Earth</td>
</tr>
<tr>
<td>GEOL 311</td>
<td>Sedimentology and Stratigraphy</td>
</tr>
<tr>
<td>GEOL 360</td>
<td>Field Investigation</td>
</tr>
<tr>
<td>GEOL 521</td>
<td>Paleontology</td>
</tr>
<tr>
<td>GEOL 560</td>
<td>Introductory Field Geology</td>
</tr>
</tbody>
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Structural Geology, Satisfied by:
Bachelor of Arts in Geology

GEOL 562 Structural Geology 4

Geology Required Electives (15)
Majors must complete a minimum of 15 hours in geology or related courses. Several possible tracks of upper-level course work are given below.

General Geology Options
Concentrate on traditional geology with emphasis on the solid earth and the earth’s interior, earth surface processes, or environmental geology and natural resources.

Solid Earth (15)
GEOL 312 Mineral Structures and Equilibria Laboratory 1
GEOL 512 Igneous and Metamorphic Petrology 3
GEOL 513 Petrology Laboratory 1
GEOL 532 Stratigraphy 4
GEOL 572 Geophysics 3
GEOL 573 Geodynamics and Plate Tectonics 3

Surface Earth (17)
GEOL 171 Earthquakes and Natural Disasters 3
GEOL 351 Environmental Geology 3
GEOL 532 Stratigraphy 4
GEOL 541 Geomorphology 4
GEOL 722 Paleoecology 3

Geology and Natural Resources (14-19)
GEOL 351 Environmental Geology 3
GEOL 391 Special Studies in Geology 1-6
GEOL 541 Geomorphology 4
GEOL 572 Geophysics 3
EVRN 332 Environmental Law (prerequisite: EVRN 148) 3

Environmental Geology Options
Concentrate on environmental geology with emphasis on water and the environment or urban environmental geology.

Water, Geology, and the Environment (21-26)
GEOL 302 Oceanography 4
GEOL 351 Environmental Geology 3
GEOL 391 Special Studies in Geology 1-6
GEOL 541 Geomorphology 4
GEOL 552 Introduction to Hydrogeology 3
CE 477 Introduction to Environmental Engineering and Science 3
BIOL 661 Ecology of Rivers and Lakes 3

Urban Environmental Geology (12)
GEOL 351 Environmental Geology 3
ATMO 525 Air Pollution Meteorology 3
CE 477 Introduction to Environmental Engineering and Science 3
GEOG 304 Environmental Conservation 3

Other Elective Courses (16)
GEOL 532 Stratigraphy 4
ATMO 105 Introductory Meteorology 5
BIOL 414 Principles of Ecology 3
GEOG 558 Intermediate Geographical Information Systems 4

Major Hours & Major GPA
While completing all required courses, majors must also meet each of the following hour and grade-point average minimum standards:

Major Hours
Satisfied by 30 hours of major courses.

Major Hours in Residence
Satisfied by a minimum of 15 hours of KU resident credit in the major.

Major Junior/Senior Hours
Satisfied by a minimum of 12 hours from junior/senior courses (300+) in the major.

Major Junior/Senior Graduation GPA
Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all junior/senior courses in the field of study including F’s and repeated courses. See the Semester/Cumulative GPA Calculator (http://clas.ku.edu/undergrad/tools/gpa).

Sample 4-year plans for the BA degree in Geology with the following concentrations can be found here: General Geology (http://catalog.ku.edu/liberal-arts-sciences/geology/ba/general-geology) and Environmental Geology (http://catalog.ku.edu/liberal-arts-sciences/geology/ba/environmental-geology), or by using the left-side navigation.

Departmental Honors
Pursuit of departmental honors in Geology is by invitation from the Department of Geology honors coordinator.

Requirements include:
- 3.25 or higher KU GPA at graduation.
- 3.50 or higher KU geology-courses GPA at graduation.
- Completion of at least 2 credit hours of GEOL 399.

Completion and successful defense of an honor’s thesis.
Additional requirements and more information may be obtained from the Department of Geology honors coordinator and web site.