BACHELOR OF SCIENCE IN GEOGRAPHY

Why study geography?
Because people, places, and environments interact and evolve in a changing world.

Why study atmospheric science?
The study of atmospheric processes enables us to understand human interactions with the environment.

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) for application deadlines and specific admission requirements.

Visit the Office of International Student and Scholar Services (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) 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.

Geography Programs
The B.A., B.G.S., and B.S. in geography provide general liberal arts enrichment, preparation for graduate work, and training for careers in geography and related fields. Geography may be combined with another program as a double major, or courses in another area may simply be added to those in geography.

First- and Second-Year Preparation
Students should begin the major by meeting the core requirements and preparing for major courses.

Requirements for the B.S. Degree
Geography B.S. General Education Requirements

Written Communication – Core Skill and Critical Inquiry.
Composition (0)
Satisfied by one of the following. Requirement must be completed during initial term of admission at KU.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition</td>
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</tbody>
</table>

ACT English score of 27 or above or SAT English score of 600 or above
AP English Literature & Composition score of 3 or above
Equivalent transfer course

Critical Reading and Writing (0)
Satisfied by one of the following. Requirement must be completed during initial term of admission at KU.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>ENGL 102</td>
<td>Critical Reading and Writing</td>
</tr>
<tr>
<td>or ENGL 105 Freshman Honors English</td>
<td></td>
</tr>
</tbody>
</table>

AP English Literature & Composition score of 4 or above
Equivalent transfer course

Sophomore Reading and Writing II (0)
Satisfied by one of the following:

<table>
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<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>ENGL 203</td>
<td>Topics in Reading and Writing: _____</td>
</tr>
<tr>
<td>or ENGL 205 Freshman-Sophomore Honors Proseminar: _____</td>
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</tbody>
</table>

ENGL 209 Introduction to Fiction
ENGL 210 Introduction to Poetry
ENGL 211 Introduction to the Drama
ENGL 362 Foundations of Technical Writing (recommended)
AP English Literature & Composition score of 5 or above
Equivalent

Communications. Satisfied by COMS 130 (COMS 230, PHIL 148, PHIL 310 or exemption).

History or philosophy of science.
Select one of the following or consult undergraduate committee for approval of alternatives:

<table>
<thead>
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<th>Course</th>
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<tbody>
<tr>
<td>HIST 103</td>
<td>Environment and History</td>
</tr>
<tr>
<td>HIST 136</td>
<td>Early Science to 1700</td>
</tr>
<tr>
<td>HIST 305</td>
<td>The Scientific Revolution</td>
</tr>
<tr>
<td>HIST 306</td>
<td>Science and Western Culture</td>
</tr>
<tr>
<td>HIST 311</td>
<td>Great Lives in Science</td>
</tr>
<tr>
<td>HIST 347</td>
<td>Environmental History of North America</td>
</tr>
<tr>
<td>HIST 360</td>
<td>Science and Religion</td>
</tr>
<tr>
<td>HIST 407</td>
<td>History of Science in the United States</td>
</tr>
<tr>
<td>PHIL 370</td>
<td>Moral Issues in Medicine</td>
</tr>
<tr>
<td>PHIL 375</td>
<td>Moral Issues in Computer Technology</td>
</tr>
<tr>
<td>PHIL 380</td>
<td>Environmental Ethics</td>
</tr>
<tr>
<td>PHIL 620</td>
<td>Philosophy of Natural Science</td>
</tr>
<tr>
<td>PHIL 622</td>
<td>Philosophy of Social Science</td>
</tr>
<tr>
<td>GEOG 357</td>
<td>History and Philosophy of Geographic Information Science</td>
</tr>
</tbody>
</table>

Humanities - Understanding the Human Condition. Satisfied by completing 2 principal courses in the humanities. Approved courses may be searched for availability through the Kyou portal.

Social and Behavioral Sciences - Understanding Society and Behavior. Satisfied by completing 2 principal courses in the social sciences. Approved courses may be searched for availability through the Kyou portal.
**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 50 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).

**Physical Geography Option**

**Geography Prerequisite or Co-requisite Knowledge (29-31)**

Calculus I. Satisfied by one of the following:
- MATH 125 Calculus I
- MATH 126 Calculus II

Calculus II. Satisfied by one of the following:
- MATH 220 Calculus I
- MATH 221 Calculus II
- MATH 222 Calculus II

(MATH 220 and 320 are also recommended)

Physics I. Satisfied by one of the following:
- PHSX 211 General Physics I
- PHSX 216 General Physics I Laboratory (recommended)
- PHSX 114 College Physics I
- PHSX 201 and Calculus Supplement to College Physics I
- PHSX 216 and General Physics I Laboratory

Physics II. Satisfied by one of the following:
- PHSX 212 General Physics II
- PHSX 236 and General Physics II Laboratory
- PHSX 115 College Physics II
- PHSX 202 and Calculus Supplement to College Physics II
- PHSX 236 and General Physics II Laboratory

Biology. Satisfied by:
- BIOL 150 & BIOL 152 Principles of Molecular and Cellular Biology and Principles of Organismal Biology

Chemistry. Satisfied by:
- CHEM 130 General Chemistry I
- CHEM 135 General Chemistry II (or CHEM 190 and CHEM 195)

Information Technology. Satisfied by:
- EECS 138 Introduction to Computing: ____

**Geography Overview Courses (8)**

Principles of Physical Geography. Satisfied by:
- GEOG 104 Principles of Physical Geography
- or GEOG 107 Principles of Physical Geography, Honors

Introductory Laboratory in Physical Geography. Satisfied by:
- GEOG 105 Introductory Laboratory in Physical Geography

One course in Human or Regional Geography

**Core System Courses (16)**

**Climate:**
- GEOG 321 Climate and Climate Change
- GEOG 331 Regional Geomorphology of the United States
- GEOG 335 Introduction to Soil Geography
- or GEOG 535 Soil Geography

**Hydrology and Glaciology:**
- GEOG 332 Glaciers and Landscape
- or CE 455 Hydrology

**Biogeography:**
- BIOI 414 Principles of Ecology

**Techniques Courses (11)**

Methods of Analyzing Geographical Data. Satisfied by:
- GEOG 316 Methods of Analyzing Geographical Data
- Principles of Geographic Information Systems. Satisfied by:
- GEOG 358 Principles of Geographic Information Systems
- One 500-level or above course from GIS Studies. (GEOG 526 Remote Sensing of Environment I recommended)

**Senior Capstone (3)**

Satisfied by one of the following:
- GEOG 500 Senior Capstone in Geography
- or GEOG 714 Field Experience

**Elective Courses (9)**

Select two or more of the following:
- GEOG 537 Elements of Plant Geography
- Climate:
  - GEOG 521 Microclimatology
- Geomorphology:
  - GEOG 532 Geoarchaeology
  - GEOG 541 Geomorphology
- Soil Geography:
  - GEOG 538 Soil Chemistry
  - GEOG 735 Soil Geomorphology
- Other advanced courses in Physical Geography

**Geographical Information and Analysis Option**

**Geography Prerequisite or Co-requisite Knowledge (21)**

Calculus I. Satisfied by one of the following:
- MATH 125 Calculus I
- or MATH 145 Calculus I, Honors

Calculus II. Satisfied by one of the following:
- MATH 126 Calculus II
- or MATH 146 Calculus II, Honors

General Physics I. Satisfied by one of the following:
- PHSX 211 General Physics I
- PHSX 114 College Physics I
- & PHSX 201 and Calculus Supplement to College Physics I

General Physics II. Satisfied by one of the following:
- PHSX 212 General Physics II
Bachelor of Science in Geography

Overview Geography Courses (0)

Principles of Physical Geography or Scientific Principles of Environmental Studies. Satisfied by one of the following:

- GEOG 104 & GEOG 105: Principles of Physical Geography and Introductory Laboratory in Physical Geography
- GEOG 107 & GEOG 105: Principles of Physical Geography, Honors and Introductory Laboratory in Physical Geography
- GEOG 140: Global Environment I: The Discovery of Environmental Change

Maps and Mapping or Computers, Maps, and Geographical Analysis. Satisfied by:

- GEOG 111: Mapping Our Changing World
- or GEOG 210: Computers, Maps, and Geographical Analysis

Principles of Human Geography. Satisfied by:

- GEOG 102: People, Place, and Society
- or GEOG 103: Principles of Human Geography, Honors

2 GEOG 300+ courses. One in Physical and one in Human and/or Regional Geography

Core Geographic Information Science Courses (0)

Six courses, at least one from each category:

Cartography and Visualization. Satisfied by:

- GEOG 311: Introductory Cartography and Geovisualization
- GEOG 513: Cartographic Design
- GEOG 517: Data Handling and Map Symbolization

Geographical Information Systems. Satisfied by:

- GEOG 358: Principles of Geographic Information Systems
- GEOG 558: Intermediate Geographical Information Systems
- GEOG 758: Geographic Information Science

Remote Sensing. Satisfied by:

- GEOG 526: Remote Sensing of Environment I
- GEOG 726: Remote Sensing of Environment II

Statistics. Satisfied by:

- GEOG 316: Methods of Analyzing Geographical Data
- GEOG 516: Applied Multivariate Analysis in Geography
- GEOG 716: Advanced Geostatistics

Senior Capstone in Geography (0)

Satisfied by:

- GEOG 500: Senior Capstone in Geography
- or GEOG 714: Field Experience

Geographic Information Science Electives (0)

Two other courses from geographic information science

Allied Field (9)

Three courses and nine hours minimum in one field (or a minor) (area studies, atmospheric science, biology, computer science, design, environmental studies, engineering, geology, psychology, urban planning).

Electives (14-23)

14-23 credit hours of any university courses.

Geography 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 50 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 (300+) Hours
Satisfied by a minimum of 12 hours from junior/senior courses (300+) in the major.

Major Junior/Senior (300+) 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).

Departmental Honors in Geography

To be accepted as a candidate for honors, an undergraduate major must have completed at least 9 hours of upper-division credit in geography with a grade-point average of 3.5 in all geography courses and of at least 3.25 overall. In addition to outstanding work in geography, the program requires GEOG 499, an independent study course consisting of an honors paper.

The student presents the results of this paper in an oral examination to a committee of at least 2 faculty members, normally from the geography department, chaired by the GEOG 499 supervisor. To graduate with honors, the student must complete the paper and the examination and maintain the 3.5 and 3.25 grade-point averages.