Geography, B.S.

Learning Outcomes

The goal is for geography graduates to demonstrate spatial literacy, systems thinking, critical thinking, research proficiency, and communications skills.

Spatial Literacy

Students will understand the role of spatial information and data in addressing social and environmental questions. They will be aware of the role of geography as a linchpin discipline that bridges social and biophysical sciences.

Systems Thinking

Students will acquire an understanding of the connections and relationships between human and environmental activities and outcomes across space and time, be able to apply spatial analytical techniques to investigate human/environment interaction, and identify the ethical implications associated with outcomes produced by such analyses. This understanding and ability will provide students with the necessary tools to assess the sustainability of current and proposed solutions in a variety of settings across a broad spectrum of social and environmental issues.

Critical Thinking

Students will have the capability to assess various points of view and perspectives while assessing complex social and environmental problems, to evaluate the factual basis of assertions, and to understand trade-offs.

Research Proficiency

Students will be able to formulate testable hypotheses, apply quantitative or qualitative approaches and methodological tools to pertinent questions, and acquire secondary data or construct primary data sets when applicable.

Communication Skills

Students will be able to communicate complex geographical and technical concepts using an appropriate vocabulary to a broad spectrum of audiences. Communication skills include verbal, written, graphic, and cartographic forms of communication.

Requirements

The Bachelor of Science with a major in geography requires a minimum of 120 s.h., including at least 46-49 s.h. of work for the major. Credit required for the major depends on a student’s choice of track. Students must maintain a g.p.a. of at least 2.00 in all courses for the major and in all UI courses for the major. They also must complete the College of Liberal Arts and Sciences GE CLAS Core. Transfer students must earn a minimum of 15 s.h. for the major in residence at the University of Iowa.

Geography majors may not earn the minor in geographic information science.

The major in geography is appropriate preparation for advanced training or careers in geographical and sustainability sciences. Students with strong interest in quantitative analysis and model building should pursue the Bachelor of Science and are encouraged to master an appropriate computer programming language.

Students choose one of three tracks in the major: environmental studies, geographic information science (GISci), or health and society. All students majoring in geography complete a common set of foundation courses in addition to the requirements for their choice of track. Bachelor of Science students take additional mathematics coursework.

Consistent with the College of Liberal Arts and Sciences maximum semester hours rule, students may count a maximum of 56 s.h. earned in their major department toward graduation.

The B.S. with a major in geography requires the following work.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Common Requirements</td>
<td>18-23</td>
</tr>
<tr>
<td></td>
<td>Statistics, Mathematics, or Computer Science Courses</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Track Courses</td>
<td>15-19</td>
</tr>
</tbody>
</table>

Common Requirements

Students may not use a course to fulfill more than one major requirement.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All of these</td>
<td></td>
</tr>
<tr>
<td>GEOG:1020</td>
<td>The Global Environment</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:1021</td>
<td>The Global Environment Lab</td>
<td>1</td>
</tr>
<tr>
<td>GEOG:1050</td>
<td>Foundations of GIS</td>
<td>4</td>
</tr>
<tr>
<td>GEOG:1090</td>
<td>Globalization and Geographic Diversity</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>One of these</td>
<td></td>
</tr>
<tr>
<td>GEOG:1060</td>
<td>Geography of Asia: From Japan to Pakistan</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:1070</td>
<td>Contemporary Environmental Issues</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:2110/GHS:2110</td>
<td>Seven Billion and Counting: Introduction to Population Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:2130</td>
<td>World Cities</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:2910</td>
<td>The Global Economy</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:2950</td>
<td>Environmental Conservation</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>One of these (not required for GISci track students):</td>
<td></td>
</tr>
<tr>
<td>GEOG:3340</td>
<td>Ecosystem Services</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:3500/GPI:3500</td>
<td>Introduction to Environmental Remote Sensing</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:3520/GPI:3520</td>
<td>GIS for Environmental Studies</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:3540/GPI:3540</td>
<td>Geographic Visualization</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:3570</td>
<td>Light Detection and Ranging (LiDAR): Principles and Applications</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:4010</td>
<td>Field Methods in Physical Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:4020</td>
<td>Field Methods: Mapping and Mobile Computing</td>
<td>3</td>
</tr>
</tbody>
</table>
GEOG:4650  Simulation in Environmental Geography  3
One of these:
GEOG:4030  Senior Project Seminar (offered only in spring seminars)  3
GEOG:4995  Honors Thesis (must enroll for 3 s.h. and make arrangements with a faculty advisor)  3
One of these (at least 1 s.h. required):
GEOG:3400  Iowa Environmental Policy in Practice  3
GEOG:3992  Undergraduate Research (including ICIGO or independent research)  arr.
CCP:1201  Academic Internship  1-3
Senior Project Seminar (GEOG:4030) is offered only in spring semesters. Students who choose GEOG:4995 Honors Thesis must make arrangements with a faculty advisor.

The Department of Geographical and Sustainability Sciences is a participant in the University's internship program, which provides opportunities for students to participate in paid and unpaid activities related to their academic programs. The Pomerantz Career Center works with students to develop appropriate internships.

Statistics, Mathematics, or Computer Science Courses

Students must earn a minimum of 10 s.h. in statistics, mathematics, or computer science coursework by completing the following. Equivalent courses and courses with a higher course number also may be selected in consultation with, and approval by, an advisor.

Students who complete the GIS track may not double count their required computer science courses for the statistics, mathematics, or computer science course requirements.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT:2010</td>
<td>Statistical Methods and Computing</td>
<td>3</td>
</tr>
<tr>
<td>STAT:3200/ IGPI:3200/ISE:3760</td>
<td>Applied Linear Regression</td>
<td>3</td>
</tr>
<tr>
<td>One of these:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS:1210</td>
<td>Computer Science I: Fundamentals</td>
<td>4</td>
</tr>
<tr>
<td>CS:2110</td>
<td>Programming for Informatics</td>
<td>4</td>
</tr>
<tr>
<td>CS:2230</td>
<td>Computer Science II: Data Structures</td>
<td>4</td>
</tr>
<tr>
<td>MATH:1380</td>
<td>Calculus and Matrix Algebra for Business</td>
<td>4</td>
</tr>
<tr>
<td>MATH:1460</td>
<td>Calculus for the Biological Sciences</td>
<td>4</td>
</tr>
</tbody>
</table>

Tracks

All geography majors must complete one of the three tracks described below: environmental studies, geographic information science (GISci), or health and society. Students should pay close attention to prerequisites for the upper-level courses in each track in order to develop a study plan that allows them to complete their major in a timely way.

Students in the environmental studies or health and society track who wish to gain additional experience in theory and application of geographic information systems (GIS) should take GIS-based courses offered by the Department of Geographical and Sustainability Sciences, as described for each track below.

Students may use GEOG:3001 Special Topics to fulfill a track requirement if the course content is applicable.

Environmental Studies Track

The environmental studies track requires a minimum of 15 s.h. It is designed for students interested in the interrelationships among social and natural processes that affect the environment. The track prepares students for careers or pursuit of personal interests in resource management, landscape ecology, water resources, environmental policy or law, global environmental change, sustainable development, or other complex environmental issues. Graduates may find employment in an environmental profession such as conservation, environmental planning and regulation, or environmental law, policy, and politics.

The environmental studies track offers training in field observation, remote sensing, geographical information systems, quantitative analysis/computing, and cartographic representation. It also provides a sound foundation for graduate or professional-level studies in the natural or social aspects of the environment.

In addition to the common requirements, students in the environmental studies track complete a common track course (3 s.h.) and at least 12 s.h. of upper-level geographical and sustainability sciences courses.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG:1070</td>
<td>Contemporary Environmental Issues</td>
<td>3</td>
</tr>
</tbody>
</table>

Students choose a total of four upper-level courses (at least 12 s.h.) from the following, in consultation with their advisor. Those who wish to gain additional experience in theory and application of GIS systems should take GEOG:3520 GIS for Environmental Studies and GEOG:4520 GIS for Environmental Studies: Applications, or they should earn 6 s.h. in other GIS-based geographical and sustainability sciences courses.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG:3520/ IGPI:3500</td>
<td>GIS for Environmental Studies</td>
<td>3</td>
</tr>
</tbody>
</table>

At least one of these:
Geographical Information Science Track

The geographic information science track (GISci) requires a minimum of 18-19 s.h. It is designed for students preparing for positions in government agencies, nongovernment organizations, international development agencies, and business. It also provides preparation for graduate study in geography, planning, and other disciplines. The track focuses on the design, implementation, and use of geographic information systems. Courses address how geographic data are acquired, stored, accessed, displayed, managed, and analyzed.

Students in the geographic information science track learn to address problems involved in modeling environmental systems, identifying the best locations for service facilities, assessing environmental impacts, and forecasting the populations of small areas. They use the department’s Geographical Information Systems Instructional Lab (GISIL) extensively to develop expertise in using GIS software.

Coursework in the track covers methods of spatial analysis and geographical modeling and involves database management and computer programming.

In addition to the common requirements, students in the geographic information science track complete a common track course (3-4 s.h.) and at least 15 s.h. of upper-level geographical and sustainability sciences courses.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>GEOG:3310</td>
<td>Landscape Ecology</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:3315</td>
<td>Ecosystem Ecology</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:3320/</td>
<td>Wetlands: Function, Geography, and Management</td>
<td>3</td>
</tr>
<tr>
<td>EES:3260</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GEOG:3340</td>
<td>Ecosystem Services</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:3350</td>
<td>Urban Ecology</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:3400</td>
<td>Iowa Environmental Policy in Practice</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:3760/</td>
<td>Hazards and Society</td>
<td>3</td>
</tr>
<tr>
<td>GHS:3760</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GEOG:3920/</td>
<td>Planning Livable Cities</td>
<td>3</td>
</tr>
<tr>
<td>URP:3001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GEOG:4010</td>
<td>Field Methods in Physical Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:4200/</td>
<td>Sustainability as a System Science</td>
<td>3</td>
</tr>
<tr>
<td>SUST:4200</td>
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<td></td>
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<tr>
<td>GEOG:4470</td>
<td>Ecological Climatology</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:4500/</td>
<td>Applications in Environmental Remote Sensing</td>
<td>4</td>
</tr>
<tr>
<td>IGPI:4500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GEOG:4520/</td>
<td>GIS for Environmental Studies: Applications</td>
<td>3</td>
</tr>
<tr>
<td>IGPI:4520</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GEOG:4650</td>
<td>Simulation in Environmental Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:4750/</td>
<td>Environmental Impact Analysis</td>
<td>3</td>
</tr>
<tr>
<td>URP:4750</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GEOG:4770/</td>
<td>Environmental Justice</td>
<td>3</td>
</tr>
<tr>
<td>AFAM:4770</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GHS:4770</td>
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</tbody>
</table>

Health and Society Track

The health and society track requires a minimum of 15 s.h. It is designed for students interested in understanding the causes and consequences of social inequalities, the long-term effects that changing human/environmental interactions have on human health, and emerging transnational challenges to the sustainability of livelihoods. The track provides students with foundational knowledge and skills to support postgraduate employment in governmental or nongovernmental positions, graduate study in public health or
in health-related fields, and service experiences such as the Peace Corps and AmeriCorps.

Students gain understanding of the factors and processes that determine geographic patterns of health. They explore the effects of the social, built, and natural environments on the physical, social, and mental health of populations. Coursework in the track examines patterns and causes of infectious and chronic diseases; hazards, vulnerability, and environmental justice; and the spatial methods used to understand such issues.

Thematic content from courses is complemented by quantitative, spatial, and statistical analysis coursework, enabling students to analyze and understand geographic patterns of health. Students have opportunities to work on applied problems, such as assessing patterns of disease, identifying the underlying population and environmental drivers of good or poor health, and evaluating the social dimensions of environmental impacts.

In addition to satisfying the common requirements, students in the health and society track complete three common track courses (9 s.h.) and at least two upper-level geographical and sustainability sciences courses (6 s.h.).

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG:2110/ GHS:2110</td>
<td>Seven Billion and Counting: Introduction to Population Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:3110/ GHS:3111</td>
<td>Geography of Health</td>
<td>3</td>
</tr>
</tbody>
</table>

Students choose two upper-level courses (at least 6 s.h.) from the following, in consultation with their advisor. Those who wish to gain additional experience in theory and application of GIS systems should also take an additional 6 s.h. in GIS-based geographical and sustainability sciences courses.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG:3070/ GHS:3070</td>
<td>Hungry Planet: Global Geographies of Food</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:3300/ GHS:3300</td>
<td>Envisioning Future Worlds: Sustainable Development and Its Alternatives</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:3760/ GHS:3760</td>
<td>Hazards and Society</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:3920/ URP:3001</td>
<td>Planning Livable Cities</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:4770/ AFAM:4770/ GHS:4770</td>
<td>Environmental Justice</td>
<td>3</td>
</tr>
</tbody>
</table>

**Teacher Licensure**

Students interested in teaching in elementary and/or secondary schools should seek admission to the Teacher Education Program (TEP) in the College of Education.

To qualify for licensure in secondary teaching, students in the TEP complete a degree in education as well as a related College of Liberal Arts and Sciences degree. See Teacher Education Program Application and Admission on the College of Education website for details on requirements and deadlines for applying to the College of Education and about TEP choices of majors leading to licensure.

**Combined Programs**

### B.S./M.S. in Informatics (Geoinformatics Subprogram)

Students majoring in geography who are interested in earning a master's degree in informatics with a geoinformatics subprogram may apply to the combined B.S./M.S. program offered by the College of Liberal Arts and Sciences and the Graduate College. The program enables students to begin the study of informatics before they complete their bachelor’s degree. Students are able to complete both degrees in five years rather than six.

Separate application to each degree program is required. Applicants must be admitted to both programs before they may be admitted to the combined degree program. For information about the informatics program, see the M.S. in informatics (Graduate College) in the Catalog.

**Honors**

### Honors in the Major

Students have the opportunity to graduate with honors in the major. Departmental honors students must maintain a cumulative University of Iowa g.p.a. of at least 3.33 and a g.p.a. of at least 3.33 in all work for the major. They must be admitted to the department's honors program by the first semester of their senior year or earlier.

Honors students in geography pursue study beyond the typical undergraduate level. In order to graduate with honors in the major, they work under the direction of a faculty member to conduct original research and then prepare and present an honors thesis based on their research. The thesis is reviewed by a committee of at least three faculty members. Departmental honors students earn credit for their thesis by registering for GEOG:4995 Honors Thesis. They may substitute GEOG:4030 Senior Project Seminar for GEOG:4995, as long as they continue to work on the thesis under the direction of a faculty member.

### University of Iowa Honors Program

In addition to honors in the major, students have opportunities for honors study and activities through membership in the University of Iowa Honors Program. Visit Honors at Iowa to learn about the University's honors program.

Membership in the UI Honors Program is not required to earn honors in the geography major.

### Career Advancement

Courses in geography are commonly required of students preparing to teach at the elementary and secondary school levels or to work in planning and public affairs. The degree also provides a solid background for many related professions, including law, health care, environmental engineering, and business.
The application of geographic information systems (GIS) to social, economic, and environmental problems has increased considerably during the past decade. This trend is likely to continue into the future; in fact, the U.S. Department of Labor has identified the area as one of its 14 high-growth industries. GIS presents an abundance of career opportunities for geography graduates in local, state, and federal government agencies, as well as in the private sector.

Geography majors are encouraged to participate in an internship. The department maintains close ties with the Iowa Department of Natural Resources and other local agencies that offer internships.

The department's faculty members help students apply for postgraduate programs and contact potential employers. The Pomerantz Career Center offers multiple resources to help students find internships and jobs.

### Academic Plans

#### Four-Year Graduation Plan

The following checkpoints list the minimum requirements students must complete by certain semesters in order to stay on the University's Four-Year Graduation Plan. Courses in the major are those required to complete the major; they may be offered by departments other than the major department.

- **Before the third semester begins**: two introductory courses in the major.
- **Before the fifth semester begins**: six courses in the major.
- **Before the seventh semester begins**: 12 courses in the major and at least 90 s.h. earned toward the degree.
- **Before the eighth semester begins**: 15 courses in the major.
- **During the eighth semester**: enrollment in all remaining coursework in the major, all remaining GE CLAS Core courses, and a sufficient number of semester hours to graduate.

#### Sample Plans of Study

Sample plans represent one way to complete a program of study. Actual course selection and sequence will vary and should be discussed with an academic advisor. For additional sample plans, see MyUI.

### Geography, B.S.

- Environmental Studies Track [p. 5]
- Geographic Information Science Track [p. 6]
- Health and Society Track [p. 7]

#### Environmental Studies Track

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL:1200</td>
<td>The Interpretation of Literature</td>
<td>3 - 4</td>
</tr>
<tr>
<td>or RHET:1030</td>
<td>or Rhetoric</td>
<td></td>
</tr>
<tr>
<td>GEOG:1090</td>
<td>Globalization and Geographic Diversity</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:1020</td>
<td>The Global Environment</td>
<td>3</td>
</tr>
<tr>
<td>GEOG:1021</td>
<td>The Global Environment Lab</td>
<td>1</td>
</tr>
<tr>
<td>GE CLAS Core: Historical Perspectives</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

#### Spring

- RHET:1030 or ENGL:1200: Rhetoric or The Interpretation of Literature
- GEOG:1070: Contemporary Environmental Issues
- Major: geography "select one" course
- GE CLAS Core: Values and Culture
- Elective course

**Hours**: 15-16

#### Second Year Fall

- GE CLAS Core: World Languages First Level Proficiency or elective course
- STAT:2010: Statistical Methods and Computing
- GEOG:1050: Foundations of GIS
- Elective course
- Elective course

**Hours**: 15-16

#### Third Year Fall

- GE CLAS Core: World Languages Second Level Proficiency or elective course
- Major: GIS "select one" course
- Major: computer science/math course
- Major: environmental studies track course

**Hours**: 13-15

#### Fourth Year Fall

- Major: environmental studies track course
- GE CLAS Core: Literary, Visual, and Performing Arts
- Elective course

**Hours**: 15
### Geographic Information Science Track

**Course** | **Title** | **Hours**
---|---|---
**First Year**
**Fall**
ENGL:1200 or RHET:1030 | The Interpretation of Literature or Rhetoric | 3 - 4
GEOG:1090 | Globalization and Geographic Diversity | 3
GEOG:1020 | The Global Environment | 3
GEOG:1021 | The Global Environment Lab | 3
GE CLAS Core: Historical Perspectives | 3
CSI:1600 | Success at Iowa | 2

| **Spring**
ENGL:1200 or RHET:1030 | The Interpretation of Literature or Rhetoric | 3 - 4
GEOG:1050 | Foundations of GIS | 4
Major: geography "select one" course | 3 - 4
GE CLAS Core: Values and Culture | 3
Elective course | 3

| **Second Year**
**Fall**
GE CLAS Core: World Languages First Level Proficiency or elective course | 4 - 5

| **Spring**
GE CLAS Core: World Languages Second Level Proficiency or elective course | 4 - 5
Major: GIS track course | 3
GE CLAS Core: International and Global Issues or Social Sciences | 3
Elective course | 1

| **Third Year**
**Fall**
GE CLAS Core: World Languages Second Level Proficiency or elective course | 4 - 5
Major: GIS track course | 3
CS:1110 or CS:1210 | Introduction to Computer Science or Computer Science I: Fundamentals or Programming for Informatics | 3 - 4
GE CLAS Core: Literary, Visual, and Performing Arts | 3

| **Fourth Year**
**Fall**
Major: GIS track course | 3
GE CLAS Core: Natural Sciences without Lab | 3
Elective course | 3
Elective course | 3
Elective course | 3

| **Spring**
GEOG:4030 or GECLAS Core: World Languages Fourth Level Proficiency or elective course | 4 - 5
Major: GIS track course | 3
GEOG:3992 or CCP:1201 or GEOG:3400 | Undergraduate Research or Academic Internship or Iowa Environmental Policy in Practice | 1 - 3

- Major: computer science/math course
- Elective course

| **Spring**
GEOG:4030 or GECLAS Core: World Languages Fourth Level Proficiency or elective course | 4 - 5
Major: GIS track course | 3
GEOG:3992 or CCP:1201 or GEOG:3400 | Undergraduate Research or Academic Internship or Iowa Environmental Policy in Practice | 1 - 3

- Major: computer science/math course
- Elective course

- Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall)

**Total Hours** | 116-127
Health and Society Track

Course | Title | Hours | Notes
--- | --- | --- | ---
First Year |  |  |  
Fall | RHET:1030 | Rhetoric | 3 - 4 
or ENGL:1200 | or The Interpretation of Literature
GEOG:1090 | Globalization and Geographic Diversity | 3 
GEOG:1020 | The Global Environment | 3 
GEOG:1021 | The Global Environment Lab | 1 
GE CLAS Core: Historical Perspectives | 3 
CS1:1600 | Success at Iowa | 2 
|  |  | 15-16 |  
Spring | ENGL:1200 | The Interpretation of Literature | 3 - 4 
or RHET:1030 | or Rhetoric
GEOG:2110 | Seven Billion and Counting: Introduction to Population Dynamics | 3 
|  | Major: geography "select one" course | 3 - 4 
GE CLAS Core: Values and Culture | 3 
Elective course | 3 
|  |  | 15-17 |  
Second Year |  |  |  
Fall | GE CLAS Core: World Languages First Level Proficiency or elective course | 4 - 5 
STAT:2010 | Statistical Methods and Computing | 3 
GE CLAS Core: Diversity and Inclusion | 3 
Elective course | 3 
Elective course | 1 
|  |  | 14-15 |  
Spring | GE CLAS Core: World Languages Second Level Proficiency or elective course | 4 - 5 
|  | Major: computer science/math course | 4 
GEOG:3110 | Geography of Health | 3 
GE CLAS Core: Literary, Visual, and Performing Arts | 3 
|  |  | 14-15 |  
Third Year |  |  |  
Fall | GE CLAS Core: World Languages Second Level Proficiency or elective course | 4 - 5 
|  | Major: computer science/math course | 4 
GEOG:3992 or CCP:1201 or GEOG:3400 | Undergraduate Research or Academic Internship or Iowa Environmental Policy in Practice | 1 - 3 
|  | Major: Health and Society "select two" course | 3 
Major: GIS "select one" course | 3 
Elective course | 3 
Elective course | 3 
|  |  | 15 |  
Spring | GEOG:4150 | Health and Environment: GIS Applications | 3 
|  | Major: Health and Society "select two" course | 3 
Elective course | 3 
Elective course | 3 
Elective course | 3 
|  |  | 14-17 |  
Fourth Year |  |  |  
Fall | GEOG:4030 or GEOG:4995 | Senior Project Seminar or Honors Thesis | 3 
|  | GE CLAS Core: Natural Sciences without Lab | 3 
Elective course | 3 
Elective course | 3 
Elective course | 3 
|  | Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) |  |  
|  |  | 15 |  
Spring | GEOG:4030 or GEOG:4995 | Senior Project Seminar or Honors Thesis | 3 
|  | GE CLAS Core: Natural Sciences without Lab | 3 
Elective course | 3 
Elective course | 3 
Elective course | 3 
|  |  | 15 |  
Total Hours | 117-126 |  |  

Notes:
- a Fulfills a major requirement and may fulfill a GE requirement.
- b GE CLAS Core courses may be completed in any order unless used as a prerequisite for another course. Students should consult with an advisor about the best sequencing of courses.
- c Students cannot choose a course that they have already used elsewhere in the major.
- d Students may use elective courses to earn credit towards the total s.h. required for graduation or to complete a double major, minors, or certificates.
- e Students who have completed four years of a single language in high school have satisfied the GE CLAS Core World Languages requirement. Enrollment in world languages courses requires a placement exam, unless enrolling in a first-semester-level course.
- f Students cannot choose a course that they have already used elsewhere in the major.
- g Proficiency or elective course
- h Elective course
- i Elective course
- j Elective course
- k Elective course
Choose from the following options: CS:1210, CS:2110, CS:2230, MATH:1380, MATH:1460. This course should be chosen based on math placement exam and/or prior coursework, and cannot count for more than one major requirement.

Enrollment in math courses requires completion of a placement exam.

Choose from the following: GEOG:3070, GEOG:3210, GEOG:3300, GEOG:3760, GEOG:3920, GEOG:4770.

Cannot use GEOG:4150, as it is required elsewhere in the track.

Please see Academic Calendar, Office of the Registrar website for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor or Graduation Services.