COMPUTER SCIENCE & GEOGRAPHY & GEOGRAPHIC INFORMATION SCIENCE, BSLAS

for the degree of Bachelor of Science in Liberal Arts & Sciences Major in Computer Science & Geography & Geographic Information Science

computer science degree information: CS + X Degrees (https://cs.illinois.edu/academics/undergraduate/degree-program-options/cs-x-degree-programs/#requirements)
geography & geographic information science information: CS + GGIS (https://cs.illinois.edu/academics/undergraduate/degree-program-options/cs-x-degree-programs/computer-science-geography)
department page: https://www.geog.illinois.edu/
overview of college admissions & requirements: Liberal Arts & Sciences (http://catalog.illinois.edu/schools/las/academic-units)
college websites: https://las.illinois.edu/ and https://engineering.illinois.edu
geography & geographic information email: ggis-advisor@illinois.edu
computer science email: undergrad@cs.illinois.edu (academic@cs.illinois.edu)
Please see the computer science advisor as well as the geography advisor.

Undergraduate Degree Programs in Geography & Geographic Information Science

For the Degree of Bachelor of Science in Liberal Arts and Sciences
- Major in Computer Science & Geography & GIS, BSLAS (p. 1)
- Major in Geography & Geographic Information Science, Geographic Information Science Concentration, BSLAS (http://catalog.illinois.edu/undergraduate/las/geography-geographic-information-science-bslas/geographic-information-science)
- Major in Geography & Geographic Information Science, Physical Geography Concentration, BSLAS (http://catalog.illinois.edu/undergraduate/las/geography-geographic-information-science-bslas/physical-geography)

For the Degree of Bachelor of Arts in Liberal Arts and Sciences
- Major in Geography & Geographic Information Science, General Geography Concentration, BALAS (http://catalog.illinois.edu/undergraduate/las/geography-geographic-information-science-balas/general-geography)
- Major in Geography & Geographic Information Science, Human Geography Concentration, BALAS (http://catalog.illinois.edu/undergraduate/las/geography-geographic-information-science-balas/human-geography)

Please see the computer science advisor as well as the geography advisor.

A Major Plan of Study Form must be completed and submitted to the LAS Student Academic Affairs Office by the beginning of the fifth semester (60-75 hours).

General education: Students must complete the Campus General Education (https://courses.illinois.edu) requirements including the campus general education language requirement. Minimum required major and supporting course work: Normally equates to 66 hours. Twelve hours of 300- and 400-level in the major must be taken on this campus.

Minimum hours required for graduation: 120 hours.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CS 100</td>
<td>Freshman Orientation (recommended) ¹</td>
<td>1</td>
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<tr>
<td>CS 125</td>
<td>Intro to Computer Science</td>
<td>4</td>
</tr>
<tr>
<td>CS 126</td>
<td>Software Design Studio</td>
<td>3</td>
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<tr>
<td>CS 173</td>
<td>Discrete Structures</td>
<td>3</td>
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<tr>
<td>CS 225</td>
<td>Data Structures</td>
<td>4</td>
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<tr>
<td>CS 233</td>
<td>Computer Architecture</td>
<td>4</td>
</tr>
<tr>
<td>CS 241</td>
<td>System Programming</td>
<td>4</td>
</tr>
<tr>
<td>STAT 200</td>
<td>Statistical Analysis</td>
<td>3</td>
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<tr>
<td>STAT 212</td>
<td>Biostatistics</td>
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<tr>
<td>CS 361</td>
<td>Probability &amp; Statistics for Computer Science (recommended)</td>
<td>4</td>
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<tr>
<td>CS 374</td>
<td>Introduction to Algorithms &amp; Models of Computation</td>
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<tr>
<td>CS 421</td>
<td>Programming Languages &amp; Compilers</td>
<td>3 or 4</td>
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</table>

Mathematics (may also fulfill the General Education QR I and II requirements)
- MATH 220 Calculus 5
- MATH 221 Calculus II 2
- MATH 231 Calculus II 3

Required Geographic Information Science Coursework - Minimum of 24 hours
- GEOG 371 Spatial Analysis 4
- GEOG 379 Intro to GIS Systems 4
- GEOG 380 GIS II: Spatial Prob Solving 4
- Two (2) additional GIS courses from the following list: 6
  - GEOG 205 Business Location Decisions
  - GEOG 280 Intro to Social Statistics
  - GEOG 412 Geospatial Tech & Society
  - GEOG 421 Earth Systems Modeling
  - GEOG 439 Health Applications of GIS
  - GEOG 440 Business Applications of GIS
  - GEOG 460 Aerial Photo Analysis
  - GEOG 468 Biological Modeling
  - GEOG 473 Digital Cartography & Map Design
  - GEOG 476 Applied GIS to Environ Studies
  - GEOG 477 Introduction to Remote Sensing
  - GEOG 478 Techniques of Remote Sensing

Information listed in this catalog is current as of 03/2020
<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>GEOG 479</td>
<td>Advanced Topics in GIS</td>
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<tr>
<td>GEOG 480</td>
<td>Principles of GIS</td>
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<tr>
<td>GEOG 489</td>
<td>Programming for GIS</td>
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<tr>
<td>GEOG 204</td>
<td>Cities of the World</td>
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<td>GEOG 210</td>
<td>Social &amp; Environmental Issues</td>
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<tr>
<td>GEOG 221</td>
<td>Geographies of Global Conflict</td>
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<td>GEOG 222</td>
<td>Big Rivers of the World</td>
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<tr>
<td>GEOG 224</td>
<td>Geog Patterns of Illinois</td>
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<tr>
<td>GEOG 287</td>
<td>Environment and Society</td>
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<tr>
<td>GEOG 350</td>
<td>Sustainability and the City</td>
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<td>GEOG 356</td>
<td>Sustainable Development in South Asia</td>
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<tr>
<td>GEOG 370</td>
<td>Water Planet, Water Crisis</td>
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<tr>
<td>GEOG 384</td>
<td>Population Geography</td>
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<td>GEOG 401</td>
<td>Watershed Hydrology</td>
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<td>GEOG 405</td>
<td>Geography Field Course</td>
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<td>GEOG 406</td>
<td>Fluvial Geomorphology</td>
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<td>GEOG 408</td>
<td>Humans and River Systems</td>
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<td>GEOG 410</td>
<td>Green Development</td>
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<td>GEOG 436</td>
<td>Biogeography</td>
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<tr>
<td>GEOG 438</td>
<td>Geography of Health Care</td>
</tr>
<tr>
<td>GEOG 446</td>
<td>Sustainable Planning Seminar</td>
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<tr>
<td>GEOG 455</td>
<td>Geog of Sub-Saharan Africa</td>
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<tr>
<td>GEOG 465</td>
<td>Transportation &amp; Sustainability</td>
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<tr>
<td>GEOG 466</td>
<td>Environmental Policy</td>
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<tr>
<td>GEOG 471</td>
<td>Recent Trends in Geog Thought</td>
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<tr>
<td>GEOG 482</td>
<td>Challenges of Sustainability</td>
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<tr>
<td>GEOG 483</td>
<td>Urban Geography</td>
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<tr>
<td>GEOG 484</td>
<td>Cities, Crime, and Space</td>
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<tr>
<td>GEOG 496</td>
<td>Climate &amp; Social Vulnerability</td>
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</tbody>
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**Total hours** 120

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1 CS 100 (http://catalog.illinois.edu/search/?P=CS%20100) is an orientation course aimed at first-year students, so students who declare the major after the freshman year are not required to complete it.