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)

**Geographic Information Science:** CS +
GIS (https://cs.illinois.edu/academics/undergraduate/degree-
program-options/cs-x-degree-programs/computer-science-
geography/)

department page: https://www.ggis.illinois.edu/ (https://
ggis.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://
ingeering.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/)

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**Table of Required Coursework:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 100</td>
<td>Freshman Orientation (recommended)</td>
<td>1</td>
</tr>
<tr>
<td>CS 124</td>
<td>Introduction to Computer Science I</td>
<td>3</td>
</tr>
<tr>
<td>CS 128</td>
<td>Introduction to Computer Science II</td>
<td>3</td>
</tr>
<tr>
<td>CS 173</td>
<td>Discrete Structures</td>
<td>3</td>
</tr>
<tr>
<td>CS 225</td>
<td>Data Structures</td>
<td>4</td>
</tr>
<tr>
<td>CS 222</td>
<td>Software Design Lab</td>
<td>1</td>
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<tr>
<td></td>
<td>Choose one of the following combinations</td>
<td>8-11</td>
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<tr>
<td>CS 233</td>
<td>Computer Architecture</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&amp; CS 241 and System Programming</td>
<td></td>
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<tr>
<td>CS 240</td>
<td>Introduction to Computer Systems</td>
<td></td>
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<tr>
<td></td>
<td>&amp; two CS courses at the 400 level above CS 403, excluding CS 421 and CS 491</td>
<td>3 or 4</td>
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<tr>
<td></td>
<td>Choose one of the following:</td>
<td>3</td>
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<tr>
<td>STAT 200</td>
<td>Statistical Analysis</td>
<td></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>
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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>
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<tr>
<td></td>
<td>Mathematics (may also fulfill the General Education QR I and II requirements)</td>
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<tr>
<td>MATH 220</td>
<td>Calculus</td>
<td>5</td>
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<tr>
<td>or MATH 221</td>
<td>Calculus I</td>
<td></td>
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<tr>
<td>MATH 225</td>
<td>Introductory Matrix Theory</td>
<td>2 or 3</td>
</tr>
<tr>
<td>or MATH 257</td>
<td>Linear Algebra with Computational Applications</td>
<td></td>
</tr>
<tr>
<td>MATH 231</td>
<td>Calculus II</td>
<td>3</td>
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<tr>
<td></td>
<td>Required Geographic Information Science Coursework - Minimum of 24 hours</td>
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<tr>
<td>GEOG 371</td>
<td>Spatial Analysis</td>
<td>4</td>
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<tr>
<td>GEOG 379</td>
<td>Intro to GIS Systems</td>
<td>4</td>
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<tr>
<td>GEOG 380</td>
<td>GIS II: Spatial Prob Solving</td>
<td>4</td>
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<tr>
<td>Two (2) additional GIS courses from the following list:</td>
<td>6</td>
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<tr>
<td>GEOG 205</td>
<td>Business Location Decisions</td>
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<tr>
<td>GEOG 224</td>
<td>Environmental Data Science</td>
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<tr>
<td>GEOG 280</td>
<td>Intro to Social Statistics</td>
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</tbody>
</table>

Information listed in this catalog is current as of 02/2022
GEOG 412  Geospatial Tech & Society
GEOG 407  Foundations of CyberGIS & Geospatial Data Science
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
GEOG 479  Advanced Topics in GIS
GEOG 480  Principles of GIS
GEOG 489  Programming for GIS

Two (2) human and/or physical geography courses: 6
GEOG 204  Cities of the World
GEOG 210  Social & Environmental Issues
GEOG 221  Geographies of Global Conflict
GEOG 222  Big Rivers of the World
GEOG 287  Environment and Society
GEOG 350  Sustainability and the City
GEOG 356  Sustainable Development in South Asia
GEOG 370  Water Planet, Water Crisis
GEOG 384  Population Geography
GEOG 401  Watershed Hydrology
GEOG 405  Geography Field Course
GEOG 406  Fluvial Geomorphology
GEOG 408  Humans and River Systems
GEOG 410  Green Development
GEOG 436  Biogeography
GEOG 438  Geography of Health Care
GEOG 446  Sustainable Planning Seminar
GEOG 455  Geog of Sub-Saharan Africa
GEOG 465  Transportation & Sustainability
GEOG 466  Environmental Policy
GEOG 471  Recent Trends in Geog Thought
GEOG 482  Challenges of Sustainability
GEOG 483  Urban Geography
GEOG 484  Cities, Crime, and Space
GEOG 496  Climate & Social Vulnerability

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.