

# 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:** <https://cs.illinois.edu/academics/undergraduate/degree-program-options/cs-x-degree-programs#requirements>  
**geography & geographic information science department website:** [department page](#)  
**overview of college admissions & requirements: Liberal Arts & Sciences** (<http://catalog.illinois.edu/las>)  
**college websites:** <https://las.illinois.edu/> and <https://engineering.illinois.edu>  
**astronomy email:** [ggis-advisor@illinois.edu](mailto:ggis-advisor@illinois.edu)  
**computer science email:** [undergrad@cs.illinois.edu](mailto:undergrad@cs.illinois.edu) ([academic@cs.illinois.edu](mailto:academic@cs.illinois.edu))

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

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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.**

Code	Title	Hours
<b>Required Computer Science Courses:</b>		
CS 100	Freshman Orientation (recommended) <sup>1</sup>	1
CS 125	Intro to Computer Science	4
CS 126	Software Design Studio	3
CS 173	Discrete Structures	3
CS 225	Data Structures	4
CS 233	Computer Architecture	4
CS 241	System Programming	4
Choose one of the following:		3
STAT 200	Statistical Analysis	
STAT 212	Biostatistics	
CS 361	Probability & Statistics for Computer Science (recommended)	

CS 374	Introduction to Algorithms & Models of Computation	4
CS 421	Programming Languages & Compilers	3 or 4
<b>Mathematics (may also fulfill the General Education QR I and II requirements)</b>		
MATH 220	Calculus or MATH 22Calculus I	5
MATH 225	Introductory Matrix Theory	2
MATH 231	Calculus II	3
<b>Required Geographic Information Science Coursework - Minimum of 24 hours</b>		
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	
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 215		
GEOG 221	Geographies of Global Conflict	
GEOG 222	Big Rivers of the World	
GEOG 224	Geog Patterns of Illinois	
GEOG 287	Environment and Society	
GEOG 310		
GEOG 350	Sustainability and the City	
GEOG 356	Sustainable Development in South Asia	
GEOG 370	Water Planet, Water Crisis	
GEOG 381		
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-Saharn Africa	

GEOG 465	Transportation & Sustainability	
GEOG 466	Environmental Policy	
GEOG 471	Recent Trends in Geog Thought	
GEOG 481		
GEOG 482	Challenges of Sustainability	
GEOG 483	Urban Geography	
GEOG 484	Cities, Crime, and Space	
GEOG 493	Democracy and Environment	
GEOG 496	Climate & Social Vulnerability	
<b>Total hours</b>		120

<sup>1</sup> 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.