

**GEOGRAPHY**

**DEPARTMENT OF**

**Geographic Information Sciences (Bachelor of Science)**

Requires 121 Total Credit Hours; 33-35 Major Credit Hours; **Declared major SU22 and before.**General education requirements for degree completion can be found at <https://artsandsciences.osu.edu/advising/general-education-requirements>

**Major Requirements**

Several major courses are offered only one term per year. Careful schedule planning is required to complete course   
sequences in a timely manner.

**Required Prerequisite/Corequisite to the Major**

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| --- | --- | --- | --- |
| **Course** | **Title** | **Hours** |  |
| STAT 1450  **OR** STAT 2450 | Intro to the Practice of Statistics  **OR** Introduction to Statistical Analysis I | 3 |  |

**Required Courses** (8 courses/24 hours)

|  |  |  |  |
| --- | --- | --- | --- |
| **Course** | **Title** | **Hours** | **Required Prerequisite** |
| GEOG 4103 | Introductory Spatial Data Analysis *(previously GEOG 5100)* | 3 | Math 1116 or above |
| GEOG 5200 | Cartography and Map Design | 3 | None |
| GEOG 5201 | GeoVisualization | 3 | GEOG 5200 |
| GEOG 5210 | Fundamentals of Geographic Information Systems | 3 | None |
| GEOG 5212 | Geospatial Databases for GIS | 3 | GEOG 5210 |
| GEOG 5222 | GIS Algorithms and Programming – **Autumn Only** | 3 | GEOG 5210 |
| GEOG 5223 | Design and Implementation of GIS – **Spring Only** | 3 | GEOG 5222 |
| GEOG 5225 | Geographic Applications of Remote Sensing | 3 | None |

**Elective Courses**

Choose three of the following courses (9 hours).

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| **Course** | **Title** | **Hours** | **Required Prerequisite** |
| GEOG 4191 | Internship in Geography (permission required) | 1-5 | None |
| GEOG 5103 | Intermediate Spatial Data Analysis – **Spring Only** | 3 | GEOG 4103 *(previously GEOG 5100)* |
| GEOG 5101 | GIST Professionalism and Ethics – **Spring Only** | 3 | None |
| GEOG 5229 | Emerging Topics in GIS – **Autumn Only** | 3 | GEOG 5210 |
| GEOG 5XXX | One 5000-level topical course in Geography in addition to the courses above | 3 | Varies |
| CSE 2122 or CSE 2123 | Data Structures Using C++ or  Data structures using Java | 3 | CSE 1222 |
| CSE 1223 |
| CSE 2221 | Software I: Software Components | 3 | CSE 1223 |
| CSE 2231 | Software II: Software Development and Design | 3 | Prereq: 2221. Concur: 2321 |
| CSE 3241 | Introduction to Database Systems | 3 | CSE 2133 or 2231 & 2321 or Math 2366 |
| CSE 5242 | Advanced Database Management Systems | 3 | CSE 3241 or 5241 & 2421 or 5042 |

**\*** Check CSE and GEOG course listings to confirm when courses are offered.

**Major Requirement Notations**

The following requirements for the major apply to all Arts and Sciences degrees.

**Major requirements comprise at least 30 semester hours and can be substantially higher**. Major courses must be at the 2000 level or above. At least 20 hours of the major must be in courses offered by the department of the major. Note: Some interdisciplinary majors are excluded from the 20-hour rule.

**Students must earn at least a C- in a course for the course to apply to the major**. However, students must receive a 2.0 cumulative grade point average (GPA) for all major course work. If a D+, D, or an E is earned in a course needed for the major, the course cannot be counted on the major. The major advisor will decide if the course should be repeated or if another course should be substituted. Courses taken on a pass/non-pass basis cannot be used on the major.

**The department must approve all courses in the major**. Some departments require a “major program form,” a document that must be signed by the academic advisor and submitted with the graduation application. Some departments do not require such a form because the academic advisors use an automated version on the degree audit report. Some departments require both. In any case, students should meet with the academic advisor early to plan the major; during your meeting, it can be determined whether the department requires a paper major program form. Any changes or adjustments to the major should be made in consultation with the academic advisor.

**If a student transferred from another institution, no more than half of the credit hours on the major program may consist of transfer credit.** The academic advisor, the chairperson of the department, and the appropriate assistant dean must approve any request for a variation in this policy.

**For Honors students, the GE curriculum and major must be approved by the assigned Honors advisor.** Information about the honors curriculum and requirements and how to schedule an appointment with an honors advisor is available on the College of Arts and Sciences Honors Program website: http://aschonors.osu.edu/advising. Students will also be assigned a faculty advisor in the department of study to help the student choose courses and co-curricular opportunities that align with academic and professional goals.

**For more information about internship and career opportunities, visit the College of Arts and Sciences Career Services Office.** Their website is <http://asccareerservices.osu.edu/> .