

# Minor in Geographic Information Science

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## Minor in Geographic Information Science (GIS)

Through a series of courses, students will learn how to create, collect, assemble, manage, manipulate, analyze, and display raster images, such as those from aerial photography and remote sensing, and vector spatial data, along with their associated attributes. They will apply the skills gained through lectures, readings, and assignments to analyze data at all scales and produce maps and reports. These skills complement many majors.

## University Core Curriculum Requirements

General Education Distribution Area	Cr. Hrs.
<b>Fine Arts (FA)*</b> 2 courses, from at least two of the following areas of study: Art, CMT (Mass Media or Theatre), Music (includes Dance).	6
<b>Humanities (HU)*</b> 3 courses, from at least two of the following areas of study: CMT (Communication), English, Linguistics, Philosophy, Women's and Gender Studies, World Languages and Cultures, (Note: No more than two foreign language courses may be used to fulfill this requirement.)	9
<b>Behavioral/Social Sciences (SB)*</b> 3 courses, from at least two of the following areas of study: African & African American Studies, Anthropology, Computer Science, Economics, Geography & Environmental Studies, History, Justice Studies, Latino & Latin American Studies, Political Science, Psychology, Sociology, Social Work	9
<b>Natural Sciences (NS and NSL)**</b> 3 courses, from at least two of the following areas of study; one course must have a laboratory component (NSL): Biology, Chemistry, Earth Science, Environmental Science, Physics (Note: If an FYE ANTH that counts as Natural Science is taken, only one Biology course may be used for Natural Science).	9

### Engaged Learning Experiences

Students must complete, at Northeastern, three courses designated as Engaged Learning Experiences courses. One of the Engaged Learning Experiences courses must be at the 300-level, and one Engaged Learning Experiences course must be designated as "Boundary Crossing".

### Discipline Specific (ELE-DS)

These courses have pre-requisites that are specific courses within a program of study. Discipline Specific courses give students a deeper understanding of how knowledge is created and applied in their field.

### Boundary Crossing (ELE-X)

These are courses that cross disciplinary boundaries and/or cross boundaries through engagements outside the classroom or University allowing students to see how knowledge gained in one field might inform other fields or other aspects of society.

### Math/Quantitative Reasoning (MA)

1 Math course, that has intermediate Algebra as prerequisite OR is a course listed on the General Education Distributive Learning List of Approved Courses. Any 3 hour college level math course, beyond Intermediate Algebra, meets this requirement.

\* Majors in Fine Arts, Humanities or Social/Behavioral Sciences, may waive up to 6 credit hours of General Education requirements in the corresponding distribution area.

\*\* Majors in Natural Sciences may waive up to 9 credit hours of General Education requirements in the Natural Sciences distribution area.

Students should also be aware of all other university requirements to obtain a degree - NEIU requirements (<http://catalog.neiu.edu/graduation-requirements/bachelors-degree/>)

## Minor in Geographic Information Science requirements

Code	Title	Hours
<b>Required courses:</b>		
GES-391	Introduction To GIS	3
GES-392	Geospatial Analysis	3
GES-393	GIS Modeling And Programming	3
GES-351	Spatial Statistics (or other approved statistics course)	3
<b>Two of the following:</b>		<b>6</b>
GES-377	Computer Cartography	
GES-387	Interactive Cartography	
GES-390	Remote Sensing And Digital Image Processing	
GES-395	GIS Internship	
<b>Total Hours</b>		<b>18</b>

Please see program coordinator for further information.