Geospatial technology combines information technology with geography to help solve problems by harnessing the power of location. Urban planners might use this technology to find the best route for an expressway. Map layers needed for this project include land use, zoning, land ownership, population, topography, and utility infrastructure to determine potential conflicts and cost. Businesses like Starbucks use geographic information on street traffic, zoning, median income, and corner lots to determine a suitable location for a new store. Emergency management agencies use geographic information to identify houses susceptible to wildfires or find the fastest route to a hospital. Through courses in the minor, you’ll get hands-on experience using location-based technologies like geographic information systems (GIS), global positioning systems (GPS), and remote sensing (satellite/aerial imagery). A minor in geospatial technology can prepare you for a variety of careers, including GIS analyst, community planner, county assessor, water resource technician, crime analyst, GPS technician, or even an economic consultant.

**Required courses**

A minor must include a minimum of 12 hours unduplicated by your major(s) and minor(s). A minimum of 12 of the 21 hours must be upper level (300-400) courses.

- CSC 150 Programming Fundamentals I .................................................. 3
- GEO 120 World Regional Geography or GEO 130 Physical Geography ........... 3
- GEO 425 Urban Geographic Information Systems ............................................. 3
- GEO 430 Geographic Information Systems .................................................. 3
- GEO 435 Computer Mapping ........................................................................ 3
- GEO 440 Remote Sensing ............................................................................ 3
- Plus three hours from the following:
  - CIS 366 Introduction to Database ........................................................... 3
  - CSC 160 Programming Fundamentals II .................................................. 3
  - CSC 365 Scripting Languages .................................................................... 3
  - GEO 497 Geography Internship ............................................................... 3
  - SSC 319 Statistics for Social Sciences ....................................................... 3

**Skills Learned**

- Map reading
- Creating and modifying maps
- Analyzing the distribution of physical and cultural data
- Collecting and analyzing data from the census, government, and satellite and aerial imagery
- Linking data from economic, health, environment, population, or political sources to map graphics
- Relational database management and structured query language (SQL)
- GPS data collection
- Critical thinking and problem solving

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**FAST FACTS**

**Credit hours:** 21

**Department:** History, Politics, and Geography

**School:** Natural and Social Sciences


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**courses and skills**

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**geography faculty**

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