GEOGRAPHIC INFORMATION SCIENCE MINOR

2181M LeFrak Hall
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Program Director: Amanda Hoffman-Hall, Ph.D.

The minor program in Geographic Information Sciences is designed to give students the technical skills needed to acquire, manage and analyze geospatial data. Almost everything we do involves geospatial information such as deciding where to live and travel. Influenced by computer technology, the academic disciplines of geographic information science includes such areas as geospatial visualization, remote sensing, big geospatial data handling, mobile GIS, and web mapping among others, and has evolved dramatically in the past few decades. The fields of GIS-computer systems that manage and analyze different forms of digital geospatial data, and remote sensing-the science of obtaining geographic information from aircraft and satellites, have been growing at an extraordinary rate. Digital cartography has revolutionized traditional cartography to vastly improve map making and visualization of geographic information in a multimedia environment. Students in the minor program will receive extensive training in all of these exciting areas and join the next generation of geospatial scientists. These skills are in great demand in fields such as environmental, sustainable development, urban planning, governmental sectors, military intelligence, engineering, modeling, and computer science related fields.

Requirements

- All credits for the minor must be taken in the Department of Geographical Sciences at the University of Maryland, College Park.
- All courses must be completed with a grade of “C” or better.
- No more than six credits are to be included in the minor and student’s major, supporting courses, and college requirements.
- At least nine credits must be at the 300 or 400 level.
- Must complete 15 credits in geography

See the undergraduate advising office for more information: LeFrak Hall 2108, 301-405-4073.

Course | Title | Credits
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**Required Courses**
GEOG272 | Introduction to Earth Observation Science | 3
GEOG373 | Geographic Information Systems | 3
Two courses from the following: | 6
GEOG416 | Conceptualizing and Modeling Human-Environmental Interactions | 
GEOG473 | Geographic Information Systems and Spatial Analysis | 
GEOG475 | Computer Cartography | 
GEOG476 | Object-Oriented Computer Programming for GIS | 
GEOG498 | Topical Investigations (GEOG498I Algorithms for Geospatial Computing) | 
Other similar course | | 

GEOG306 | Introduction to Quantitative Methods for the Geographical Environmental Sciences | 3
or BIOM301 | Introduction to Biometrics | 
or BMGT230 | Business Statistics | 
or CCJS200 | Statistics for Criminology and Criminal Justice | 
or ECON321 | Economic Statistics | 
or EDMS451 | Introduction to Educational Statistics | 
or GVPT422 | Quantitative Political Analysis | 
or INST314 | Statistics for Information Science | 
or JOUR405 | Breaking News With Numbers: Statistics for Journalists | 
or PSYC200 | Statistical Methods in Psychology | 
or SOCY201 | Introductory Statistics for Sociology | 

**Total Credits**: 15