Geographic Information Systems Minor

A minor in geographic information systems (GIS) is designed to give students a broad understanding of the geographic concepts that underpin GIS and related geospatial technologies, as well as develop practical skills in utilizing these technologies to address applications in a wide range of disciplines and domain areas. The structure of this minor goes beyond 'software knowledge' and introduces students to fundamental theories related to spatial thinking and geographic information, and provides training in the tools and techniques required to utilize GIS and geospatial technologies in professional settings. In addition, students will explore the social and cultural impacts of the increasing use of these technologies in both the public and private sectors. Students must earn a grade of 'C' or better in all 18 21 credit hours required by the GIS minor.

Program Requirements (18-21 Credits)

Foundation Requirements (6-7 Credits)

Complete the following course:

- GEOG 200 Digital Earth - 3 credits

Choose ONE from the following:

- GEOG 204 Introduction to Geographic Information Systems GIS - 3 credits
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- MSCI 331 Introduction to Geographic Information Systems (GIS) and Remote Sensing - 3 credits AND
- MSCI 331L Introduction to Geographic Information Systems Laboratory - 1 credit

Methods (3 4 Credits)

Choose ONE from the following:

- GEOG 310 Digital Cartography - 3 credits

- GEOG 311 Q Earth Observation - 3 credits
- GEOG 312 Spatial Analysis Using GIS - 3 credits
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- PHYS 432 Remote Sensing of the Environment - 3 credits ~~AND~~
- ~~PHYS 432L Remote Sensing of the Environment Laboratory - 1 credit~~

Electives (9-12 Credits)

Choose three from the following:

- ARTD 201 Graphic Design I - 3 credits
- CSCI 225 Introduction to Relational Database and SQL - 3 credits
- CSCI 303 Introduction to Server-side Web Application Development - 3 credits
- GEOG 310 Digital Cartography - 3 credits
- GEOG 311 Q Earth Observation - 3 credits
- GEOG 312 Spatial Analysis Using GIS - 3 credits
- GEOG 316 GIS for Government - 3 credits
- GEOG 399 Independent Study - 1 to 6 credits
- GEOG 400 Geospatial Intelligence - 3 credits
- GEOG 450 Digital Heritage: Historical Digital Reconstruction - 3 credits
- GEOG 452 Q Digital Heritage: Virtual Landscapes - 3 credits
- GEOG 456 Q Video Game Worlds - 3 credits
- GEOG 491 Special Topics in Geography/GIS - 3 credits
- PHIL 315 Technology and Human Values - 3 credits
- ~~POLI 495 Internship in Political Science - 3 credits~~
- GEOG 495 Q Internship in Geography/GIS – 1-12 credits*
- PHYS 432 Remote Sensing of the Environment - 3 credits ~~AND~~
- ~~PHYS 432L Remote Sensing of the Environment Laboratory - 1 credit~~

Total Credits Required: 18 ~~21~~ Credits

*Maximum of six (6) credits may be counted toward the minor