

Vehicle Assembly Plants in Alabama and Mississippi  
with a 50 Mile Buffer



## Admission

To pursue the graduate-level GIS certificate, students must have a bachelor's degree in a field that deals with geographic information, such as geography, natural resources and land-use management, environmental analysis, regional and environmental planning, civil engineering, or business applications.

Professionals that want to earn the GIS Certificate who are not enrolled in a graduate program are asked to enroll as non-degree seeking graduate students. This application does not require GRE scores, statement of purpose, or recommendation letters. Non-degree students cannot take classes outside of the GIS Certificate Program.

## Faculty



Sagy Cohen, Ph.D.

Associate Professor: GIS, remote sensing, environmental modeling.

Kevin Curtin, Ph.D.

Professor, GIS, data modeling and database design, location science, networks.

Matthew LaFevor, Ph.D.

Assistant Professor: GIS, water management, field techniques, agro-ecology.

Hongxing Liu, Ph.D.

Professor: remote sensing, GIS sensor networks, environmental modeling.

W. Craig Remington, M.S.

Adjunct Professor and Director of Cartographic Research Lab: GIS, cartography.

Joe Weber, Ph.D., GISP

Professor: GIS, transportation, national parks.

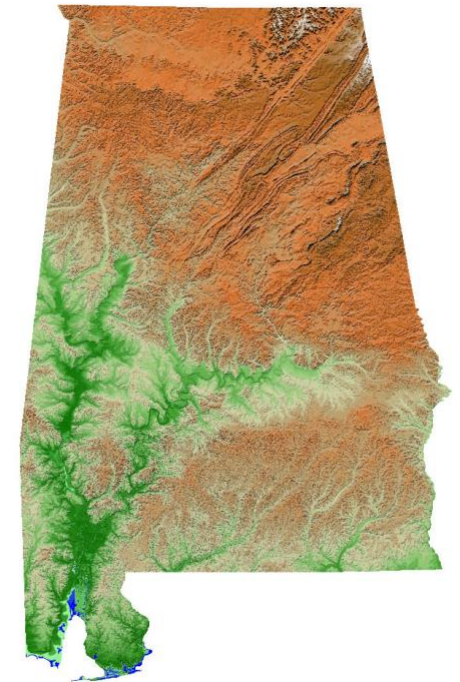
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**GIS Certificate Manager**  
**Department of Geography**  
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GIS  
Certificate  
Program

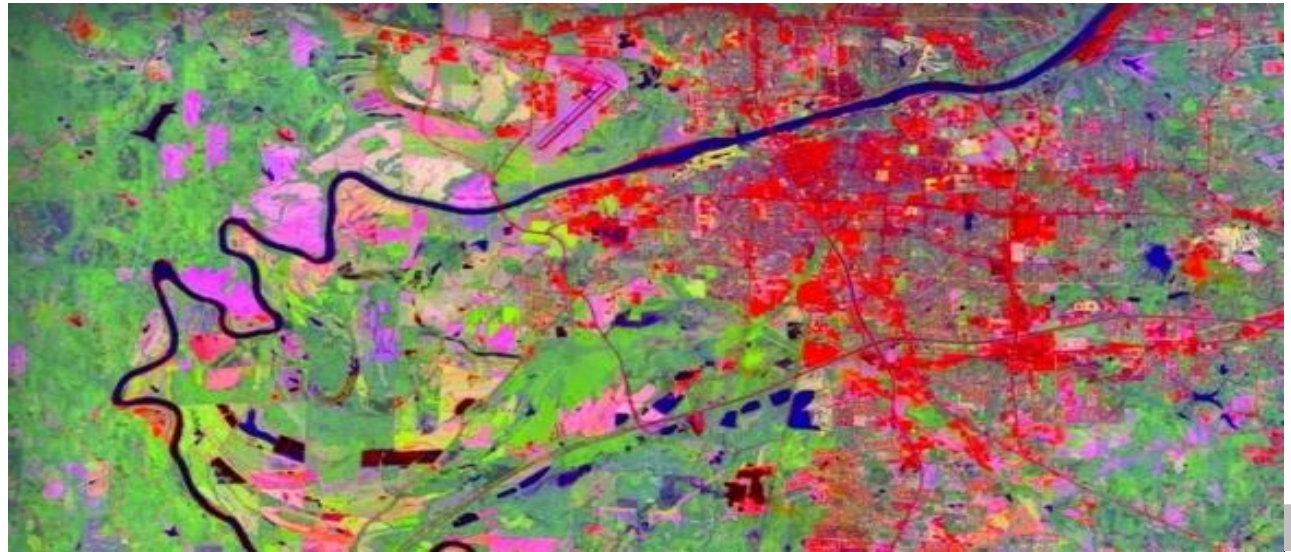
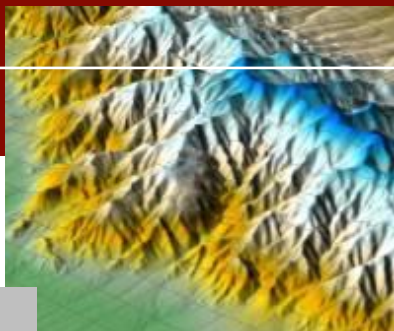


Compiled by the Cartographic Research Lab  
University of Alabama

# What is GIS?

Geographic Information System (GIS) is a computer-based information system that is capable of storing and analyzing spatial data. GIS integrates various map layers and non-spatial data and produces new spatial information for the decision-making process. GIS includes common database operations, spatial statistical analysis, computer graphics and visualization, and geographic analysis. Current satellite remote sensors provide GIS with the latest information about the earth environment. Today, GIS is not only taught and studied in colleges and universities, but applied in many areas ranging from emergency planning to landfill site selection, and from mapping wildlife habitat to land use / land cover change detection.

Graduates of the GIS Certificate Program have found employment with state agencies, such as the Alabama Emergency Management Agency, Alabama Department of Environmental Management, city, county, and metropolitan planning organizations, and private engineering companies and environmental consulting firms.



*“Knowing where things are, and why, is essential to rational decision making.”*

- Jack Dangermond, Environmental Systems Research Institute (ESRI)

The objectives of the certificate in GIS are to provide participants with a concentrated geography background focusing on geographic information techniques, to prepare participants with technical skills in using GIS, and to qualify participants for applications of GIS in various areas.

### Required courses (12 hours):

GY 330/570 Computer Mapping and Graphics ....	4 hours
GY 520 Remote Sensing I .....	4 hours
GY 530 Introduction to GIS.....	4 hours

### Electives (8 hours):

GY 532 GIS Programming .....	4 hours
GY 576 GIS Practicum .....	up to 4 hours
GY 535 Remote Sensing II.....	4 hours
GY 536 Advanced GIS .....	4 hours
GY 537 GIS for Transportation .....	4 hours
GY 538 Applications of GIS.....	4 hours
GY 543 Location Science.....	3 hours

Prerequisites or permission to register may apply.

### Facilities and Resources:

The Geography Department houses:

- The GIS and Remote Sensing Laboratory, a state-of-the-art computing facility serving students.
- The Cartographic Research Laboratory, a self-supporting, non-profit facility, receiving funding through the sale of publications and through the completion of cartographic and GIS projects.
- The Map Library, a regional depository for the U.S. Federal Government and one of the largest map collections in the country.
- The Surface Dynamics Modeling Lab (SDML), which studies planetary surface processes and dynamics.
- The Laboratory for Location Science, which brings GIS and Operations Research together to solve optimal facility location problems

The Geography Department is a member of the University Consortium for GIS (UCGIS), USGS/NGA Center of Excellence in Geospatial Sciences and the UN Global Geospatial Information Management Academic Network of Americas.

