

Spring 2010

Geographic Information Systems

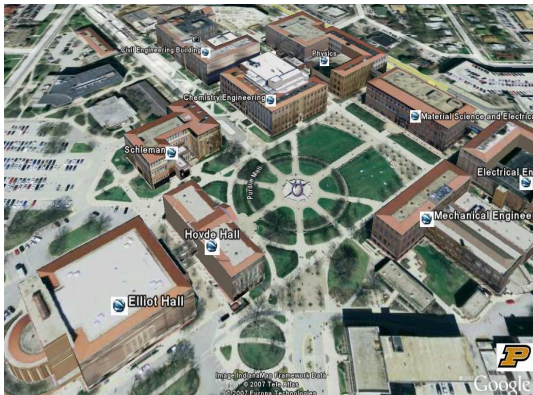
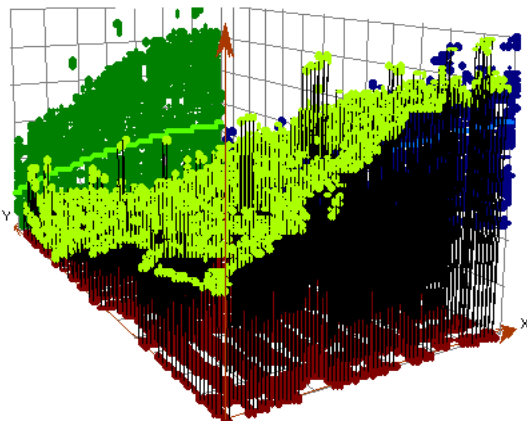
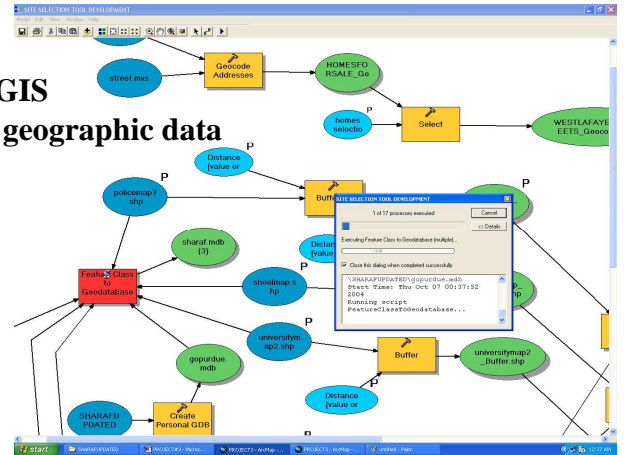
On campus: 41465 CE 59700; off-campus: 45104 - CE 59700

Course objectives:

- introduce the principles, methods and skills in GIS
- enhance capabilities in handling and analyzing geographic data
- conduct GIS spatial analysis tasks
- design and create a geographic database
- perform Internet mapping
- enhance skills with ArcGIS & extensions

Course organization:

- Two 75-min lectures per week
- ~6 assigned projects
- 1 self-selected term project
- Team work

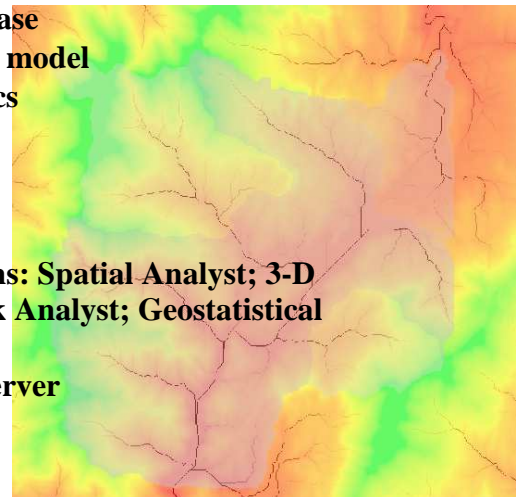


Topics:

- Raster data model
- Terrain characteristics
- Watershed and viewshed analyses
- 3-D visualization
- Vector data model and topology
- Multi layer spatial analysis and site selection
- Network modeling and analysis
- Web GIS and Internet mapping
- Geospatial database
- Object-relational model
- Prime geostatistics

Tools to use:

- ArcGIS
- ArcGIS extensions: Spatial Analyst; 3-D Analyst; Network Analyst; Geostatistical Analyst, etc
- ArcIMS & ArcServer
- Model Builder



Instructor: Prof. Shan ; Contact : 765-494-2168; CIVL 4110; jshan@ecn.purdue.edu;
Lecture: TTh 12:00-1:15pm; Classroom: POTR 268