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 geographic database
- Experience Internet mapping
- Advanced skills with ArcGIS & extensions

Course workload:
- ~6 assigned projects
- 1 self-selected term project
- Team work

Topics:
- Terrain characteristics
- Point clouds handling and analysis
- Watershed and viewshed analyses
- Vector data model and topology
- Social media data analysis
- Network modeling and analysis
- Web GIS and Internet mapping
- Geospatial database
- Primer geostatistics and spatial statistics

Tools to use:
- ArcGIS and ArcGIS Online
- ArcGIS extensions: Spatial Analyst; 3-D Analyst; Network Analyst; Geostatistical Analyst; Spatial Statistics; etc
- Model Builder and scripting
- Other open source GIS tools

Instructor: Prof. Shan; Contact: 765-494-2168; CIVL 4110; jshan@purdue.edu; Lecture: MWF:2:30-3:20pm; Classroom: 2555 Seng-Liang Wang Hall