Advanced Geospatial Methods

URPL 6260, Spring 2016
Instructor: Austin Troy, PhD (Austin.troy@ucdenver.edu)
Meets: Tues 2-4:45 in North 5033
Prerequisite: At least one 3-credit introductory GIS class, taken within the last four years

Topics covered:
- Advanced vector and raster geoprocessing tools
- Automation with Model Builder and basic Python scripting
- Basic GIS hydrology analysis
- Network analysis, including service areas, shortest routes and facility siting
- 3D terrain analysis and visualization in Arc Scene
- LiDAR processing and analysis, including building and vegetation feature extraction in ArcGIS and Quick Terrain Modeler
- Introduction to spatial statistics, including autocorrelation and basic kriging
- Spatial reference: projections, coordinate systems, datums, spheroids

This is designed to be an advanced GIS techniques course for students who already have a solid grounding in ArcGIS. It consists of both lectures on theoretical topics in Geographic Information Science as well as a weekly computer lab which will cover advanced techniques. Course requirements include a weekly lab assignment, an exam and a final project. Contact Austin.troy@ucdenver.edu with any questions.