



NY State GIS Conference 2008

Pre-Conference Workshop:
Analysis with Raster Data
Sunday October 6, 2008

Instructor: Lee Herrington, Professor Emeritus of Resources Information Management
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Aim: To provide an introduction to the use of raster (grid) data in analysis in ArcGIS.

Learning objectives: By the end of the workshop, participants should be able to:

- Carry out basic processing of grid data using, as an example, elevation grids (Digital Elevation Models, DEMs). The Spatial Analyst Extension for ArcGIS will be used to carry out the following operations:
 - Symbolization
 - Classifying (in symbolization and in data)
 - Smoothing (low pass filtering)
 - Computing slope and aspect
 - Using basic arithmetic operations between layers
 - Converting grid data to feature data
- Apply acquired skills to solve two problems involving both raster and vector processing
 - Finding tax parcels that could be contributing sediment to town streams
 - Finding the best location for a TV relay tower (Viewshed)

Course outline:

The course uses both lecture and hands on exercises to cover the material. The course will cover: introduction to grid data models; display and analysis of DEMs; computation of slope and aspect, classification of the display of grid data and classification of the data itself; conversion of grid data to vector polygon data, and incorporation of grid data into vector analyses.

Who the course is intended for: This course is intended for individuals who have knowledge of and experience with ArcGIS and its operation. It is NOT an introduction to GIS.

Software: This course will be taught using ESRI's ArcGIS 9.2 and its Spatial Analyst Extension.

Teaching time: 4 hours consisting of a combination of presentations and computer based exercises.