Raines, G.L., 2001, revised 2006, Resource materials for a GIS spatial analysis course: U.S. Geological Survey Open-File Report 01-221, v. 1.1, 122 p., 2 zip files of Arcview Avenue scripts and data.

This report consists of materials prepared for a GIS spatial analysis course offered as part of the Geography curriculum at the University of Nevada, Reno and the University of California at Santa Barbara in the spring of 2000. The report is intended to share information with instructors preparing spatial-modeling training and scientists with advanced GIS expertise. The students taking this class have completed each universities GIS curriculum and have a foundation in statistics as part of a science major. The course utilized the Arcview GIS. This report is organized into chapters that contain the following:

- Slides used during lectures,
- Guidance on the use of Arcview,
- Introduction to filtering in Arcview,
- Conventional and spatial correlation in Arcview,
- Tools for fuzzification in Arcview,
- Data and instructions for creating using ArcSDM for simple weights-of-evidence, fuzzy logic, and neural network models for Carlin-type gold deposits in central Nevada,
- Reading list on spatial modeling, and
- Selected student spatial-modeling posters from the laboratory exercises.

Avenue scripts and data useful for the exercises are included in zip files for each chapter. The textbook used for this class is "Geographic Information Systems for Geoscientists –Modeling". The lecture slides were designed to enhance the information in the textbooks; so, the slides are not for self-guided education. The remaining chapters were prepared to assist in the self-guided laboratory exercises. Because the students were expected to be GIS experts, the laboratory problems were designed to state a problem for which the students were expected to find and implement a solution. Thus, chapters following the lecture slides give specific guidance and Arcview scripts or extensions for spatial-modeling tasks of filtering, correlation, fuzzification, and spatial modeling using ArcSDM.

The report consists of two zip files. The first contains the report in PDF format, and four zip files of Arcview Avenue scripts or extensions and Arcview data associated with the filtering, correlation, fuzzification, and Carlin modeling. The second zip file contains the student posters in the RTL format for the HP large format plotters.

Requirements: Experienced GIS user with Arcview 3 and Spatial Analyst extension. Adobe Acrobat Reader is needed to read the report. To plot the student posters, a plotter accepting the HP plotter RTL format is needed.