GIS for Public Policy – proposed schedule

One and one-half hour sessions will meet twice a week. Readings, data collection and/or exercises will be assigned for each week. Each session may include a discussion of the reading, a presentation, and a short lab exercise using ESRI's ArcGIS software.

Four weekly assignments will each count for 10 percent of the grade. A final project, including maps and GIS datasets, will count for 60 percent of the grade. The final project includes a written report (not more than 10 pages), a 44x36 inches size map, and GIS datasets with metadata records on a CD. The project will count for 60 percent of the grade.

The class may run as follows:

February 3: **Introduction to GIS, strengths and limitations of the technology, social and ethical issues**, lab exercise 2 (Chapters 1, 2, and 11 in GIS for the Urban Environment)

Reading: pp. 16-24 in *Geographical Information Systems and Science*, 2nd edition, by Longley, Goodchild, Maguire and Rhind, (2005), John Wiley & Sons, Ltd.

February 5: **Vector and Raster data structures and basics of projections**, exercise on projections

Reading: pp. 71-80, "Spatial representation: the social scientist's perspective," by D.J. Martin, in *Geographical Information Systems*, 2nd edition, abridged, by Longley, Goodchild, Maguire and Rhind, (2005), John Wiley & Sons, Ltd.

February 10: **Sources for GIS data**, presentation (Chapters 4 and 6, case study selected by student)

February 12: **Data Classification, Methods and Exploration**, lab exercises 3 and 4 (Chapter 3); assignment to propose research goal and study area for final project

Reading: pp. 26-50, Chapter two in *Geographic Information Analysis*, by O'Sullivan and Unwin (2003), John Wiley & Sons, Ltd.

February 17: **Methods of Spatial Data Analysis**, lab exercises 9 and 10 (Chapter 9)

February 19: **Methods of Spatial Data Analysis**, exercise on data analysis tools; assignment to search for GIS data sets for project's area of interest, hand in a summary of results

Reading: pp. 69-99, Chapter 3 in *ArcGIS 9: Geoprocessing in ArcGIS*, by Jill McCoy (2004), ESRI Press.

February 24: **Map Design and Layout**, presentation (Chapter 5)

February 26: **Map Design and Layout**, lab exercise 5 and other exercises; assignment to identify the tools to be used for the project

March 3: **Generating data through Geocoding, and Editing GIS data**, lab exercise 7

March 5: **Progress report on projects**, students share lessons learned to date in gathering, analyzing and visualizing GIS data (Chapter 12); assignment to produce sample maps of project area and selected data sets

March 10: **Student Presentations**

March 12: **Student Presentations**