GIS & Social Research
Spring 2005
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What it’s about

This course focuses on applications of GIS in social research. It begins by presenting critical perspectives on space, place, cartography, and GIS, and then tries to incorporate these perspectives in applying GIS to social-research projects. Class sessions will combine discussion of assigned readings with lab exercises that are geared to building GIS skills in general and GIS social-research skills in particular (including introductory spatial statistics and applications).

Each student will complete three GIS projects during the semester, two of which (housing, disaster vulnerability) will be based on lab assignments and one of which will be an independent project chosen in consultation with the instructors. Each project will include graphic presentation and web display. In addition, a segment of the course will consist of data downloading and manipulation and map alignment problem-solving.

Prerequisite: An introductory GIS course and an introductory statistics course, or instructors’ permission.

GIS software: The course software will be ArcGIS 9.0, which is loaded on the lab computers and is otherwise obtainable as a 6-month CD-rom in Ormsby et al., Getting to Know ArcGIS (2nd ed.; ESRI Press). Students must have access to ArcGIS 9.0 for work outside the lab and are responsible for keeping backups of their course work.

Required readings: The course readings are available via the internet, instructor-loaned books and articles, and the FIU library. The course web site contains various GIS instructional materials. Highly recommended books are Peters and MacDonald, Unlocking the census with ArcGIS; Mitchell, The ESRI guide to GIS analysis vol. I:

**Expectations, assignments & grades**

- Students are responsible for attending the entirety of each class session; for the thoughtful completion of all assigned tasks as scheduled; for thoughtful and active participation in class discussions and other tasks; for having access to ArcGIS outside the lab; and for keeping backups of all assigned work.

- Graded assignments:
  - *Three lab-based GIS assignments* (including GIS skill-building exercises and introductory spatial statistics): housing & socioeconomic inequality in Miami-Dade County; working with U.S. & Mexican data & maps; and disaster vulnerability & socioeconomic inequality in Miami-Dade County. Each of these assignments will be worth 15% (i.e. a total of 45%) of the final grade.
  - *An independent research project*, from data downloading and manipulation to graphic presentation and web display. This assignment must be conceptualized (in the form of a 1-2 page double-spaced proposal) that is due in class on February 16. The project will be worth 40% of the final grade, and is due on the date of the scheduled final exam.
  - *Homework assignments* (worth 15% of the final grade).

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**I. Introduction: Mapping the 2004 U.S. Presidential Election**

Ritholtz, *The big picture: Macro perspectives on capital markets, economy, geopolitics (with a dash of film & music)*


**II. Space, Place & Identity**

*Note: We will focus on relatively short excerpts from the most theoretically germane parts of these readings. The objective is to inform a critical perspective on the uses of GIS.*

**Cultural Perspectives**

Tuan, *Space, place, and identity.*


Feld, "Waterfalls of song." In *Senses of place*, editors Feld & Basso.


Low, "The edge and the center: Gated communities and the discourse of urban fear." In *The anthropology of space and place: Locating culture*, editors Low & Lawrence-Zuniga.

Zukin, “Cultural strategies of economic development and the hegemony of vision.” In *The urbanization of justice*, editors Merrifield and Swyngedouw.

Price, *Dry place: Landscapes of belonging and exclusion*, chapters 1 & 4.

**Politico-Economic Perspectives**


Sassen, *Cities in a world economy*, chapters 1-4, 6.

Fischer, Jaeger, & Parnreiter, “Política, economía y desarrollo socio-espacial” (Institute for Urban and Regional Studies, Austrian Academy of Sciences).

Massey, *Space, place, and gender*.

Tardanico and Rosenberg, “Two Souths in the New Global Order” (pages 8-10). In *Poverty or development: Global restructuring and regional transformations in the U.S. South and the Mexican South*.

Harvey, *Spaces of capital: Towards a critical geography*, chapters 1, 2, 4, 7 & 11.

Smith, *Transnational urbanism: Locating globalization*.

Graham & Marvin, *Splintering urbanization: Networked infrastructures, technological mobilities and the urban condition*.

**III. GIS, Power & Empowerment**

As with the space, place, & identity readings, we will survey the following readings with the purpose of informing a critical perspective on GIS.

**Perspectives**

Chrisman, “Full circle: More than just social implications of GIS”
[www.geog.umn.edu/gisoc99/chrisman.htm](http://www.geog.umn.edu/gisoc99/chrisman.htm)

Graham, “Surveillant simulation and the city”
[http://www.ncgia.ucsb.edu/conf/BALTIMORE/authors/graham/paper.html](http://www.ncgia.ucsb.edu/conf/BALTIMORE/authors/graham/paper.html)
Crampton, “GIS needs to be part of the solution”

Longley et al., Geographic information systems and science, 89-95, chapters 10 and 15.


Harris et al., “Social implications of how people, space, and environment are represented in GIS” http://www.iapad.org/publications/ppgis/96-7.pdf

Kwan, “Feminist visualization: Re-envisioning GIS as a method in feminist geographic research”
http://www.blackwellpublishing.com/content/BPL_Images/Journal_Samples/ANNA0004-5608~92~4~309%5C309.pdf

Harnsworth, “Indigenous values and GIS: A method and a framework”
http://www.landcareresearch.co.nz/research/social/ikdmpap.asp


Froehling, “GIS and social struggles in southern Mexico”
www.geo.wvu.edu/i19/papers/froehling.html


Some Case Studies

Akaba, “West Oakland EJ diesel emissions reduction campaign”

Weiner & Harris, “Community-integrated GIS for land reform in South Africa”


IV. GIS Analysis & Spatial Statistics

Overviews

Longley et al., Geographic information systems and science, 89-95, chapters 10 and 15.

Bailey & Gatrell, Interactive spatial data analysis.
Fotheringham et al., *Geographically weighted regression*.

*Review the readings on critical perspectives in Section III.*

**How To Do It**

ArcGIS instructions

GeoDa instructions

CrimeStat 2.0 instructions

Fotheringham et al., *Geographically weighted regression*, chapter 9.

**V. GIS & Social Research: Class Projects**

1. *Housing & socioeconomic inequality in Miami-Dade County*

2. *Working with data & maps: U.S. & Mexican social-research datasets*

3. *Disaster vulnerability & socioeconomic inequality in Miami-Dade County*