This course introduces students to basic techniques for the exploration of political and economic geography while covering a range of substantive themes. Students will learn to produce and analyze maps and learn the basics of spatial data analysis, and apply these skills to a range of questions at the intersection of political and economic geography.

This course begins with a brisk overview of attempts to answer some of the basic questions of economic geography and urban economics. What explains the spatial location of workers, firms, and economic activity? What explains the rise (and fall) of cities, suburbs, and residential segregation around the world? Can we draw any general conclusions about the spatial location of income groups?

We start with these questions in part because they have a variety of potential political consequences that have largely been ignored by political scientists, and the goal of the course is to explore them. We explore geographic underpinnings of sectionalism, regionalism, and political polarization, revisiting and hopefully moving beyond debates about “red states and blue states.” We examine the geography of political preferences and voting behavior, and explore the ways in which the geographic distribution of preferences interacts with electoral institutions, focusing in particular on implications for redistribution and the welfare state.

This is a specialized course for graduate students whose research interests touch upon political geography. Familiarity with basic tools of quantitative analysis, especially regression analysis, is assumed. Students will become familiar with ArcGIS, R, and/or GeoDa software and learn the basics of creating maps, importing data, and analyzing spatial data. Classroom time will be split between discussions of the substantive readings and building tools of spatial analysis, and students will work individually and in groups with the software and tutorials. While we cover most of the basics that will be useful to political scientists, students interested in a full-fledged spatial statistics course will want to consider Statistics 253 and 352.

Evaluation

Students will work on labs (either individually or in groups) each week and participate in class discussions. Students will complete a mid-term analytical assignment and write a short final paper (15-20 pp.). Progress reports on the final paper will be given throughout the second half of the quarter. The final grade will be calculated as follows:

- Participation (class discussion and lab assignments) 35%
- Mid-Term Project 15%
Final Presentation 10%
Final Paper 40%

Students with documented disabilities

Students who may need an academic accommodation based on the impact of a disability must initiate the request with the Student Disability Resource Center (SDRC) located within the Office of Accessible Education (OAE). SDRC staff will evaluate the request with required documentation, recommend reasonable accommodations, and prepare an Accommodation Letter for faculty dated in the current quarter in which the request is being made. Students should contact the SDRC as soon as possible since timely notice is needed to coordinate accommodations. The OAE is located at 563 Salvatierra Walk (phone: 723-1066, 723-1067 TTY).

Books and Software

Unless they are in the assigned books, readings will be available on the Coursework website. The following books are available for purchase at the Campus Book Store or online:

Required:


Recommended:


Copies of ArcGIS and Extensions (Student Edition) will be distributed in class. ArcGIS can also be downloaded on to Stanford-owned machines (http://library.stanford.edu/depts/gis/download.html).

GeoDa and documentation, including tutorials, can be downloaded here: http://geodacenter.asu.edu/

While not essential, existing knowledge of the R programming language will be valuable for several labs that will focus on R’s spatial functions. Students who are not already using R will want to download the latest version here and may want to take a brief tutorial: http://www.r-project.org/

January 6 Course Introduction
Introduction to ArcGIS and other GIS resources at Stanford


NB. Julie Sweetkind-Singer and Patricia Carbajales will visit our class to lead a discussion of GIS and other data resources at Stanford. Be prepared to outline a research question or topic and identify the type of data you would need to pursue this topic.

Assignment: Download ArcGIS and complete Lab 1 (Startup)

January 13  *Geography, Trade, and Agglomeration Economies*  
*Representing the Earth’s Surface*


Assignment: Complete Lab 2 (Projections)

January 20  *Cities and Urban Form*  
Class to be rescheduled after MLK, Jr. Day


**Assignment:** Complete Lab 3 (Visualizing urban form)

**January 27 Segregation and Sorting**


[4 PM: In-class workshop on address geo-coding]

**February 3  Income, preferences, and polarization**


[4 PM: In-class workshop on spatial analysis in R]

**February 10  Conceptualizing and measuring patterns of spatial dependence**

*Spatial Regression*


- Reread Reardon 2004, Massey and Denton 1988, and Cutler, Glaeser, and Vigdor 2004. Recommended:
  - Noel A. Cressie, Statistics for Spatial Data, pp. 13-25. [Coursework]

[4 PM: In-class workshop on python]

MID-TERM PROJECT DUE ON FEBRUARY 17, 8 AM.

Project TBA

February 17  Diffusion


- Engel, Chapter 9

Recommended:


Assignment: Complete Lab 4 (Historical GIS).

Optional extra assignment: Using the ArcScan tutorial, work together in groups to digitize an historical map.
February 24  Neighbors, Networks, and Contextual Effects

Remote Sensing, Raster Analysis, Landcover


- Engel, Chapter 11

Recommended:


Assignment: Complete Lab 5 (remote sensing, raster analysis, landcover).

March 3  Causal Inference in a Historical and Geographic Context


- 2-3 student-selected papers from IR and comparative politics

- Engel, Chapter 10

**Assignment:** Complete Lab 6: Map algebra, DEMs, Terrain analysis

**March 10**  
*Student presentations of final projects*

**March 17**  
*Final paper due*