This course surveys applications of natural science methods in the analysis of normatively significant political problems. Its unifying themes are the EITM (Empirical Implications of Theoretical Models) project of the National Science Foundation and the promise of policy relevant research on important topics like electoral law enforcement and conflict early warning. We begin with a study of mathematical reasoning in political science. We review models of unitary, political decision making, strategic choice in two person and n-person settings. Agent-based, computational modeling also is reviewed. We then turn to empirics. Research design, measurement, human experimentation, modeling of micro and macro political processes, and cross-level inference are studied in this third part. In the conclusion, efforts to join mathematical, statistical, and computational approaches are studied. These efforts come from the fields of American, Comparative, and International Politics.

Students are required to complete all the required reading for the course and to write two papers. The first is a critical review of a selection of readings for one of the weeks in Parts Two (weeks III-VI) or Three (weeks VII-XII). The second paper is a research design for the application of a method studied in the course. If this method comes from Part Two, students are urged to write their first paper on readings from Part Three. If the second paper is a design for an application of a method from Part Three, ideally, the first paper should be a critical evaluation of work in a week in Part Two.

In addition, all students also are required to present one reading in class and to write a final examination that covers the reading for the entire course.

The final grade for the seminar will be weighted roughly as follows: class participation—15%, paper one--25%, paper two—25%, and final examination—35%.

NB. Many of the readings are available directly through JSTOR (www.jstor.org)
Part One: Motivation

I. Introduction and organization.
[Jan. 20]

II. Puzzles, problems, debates and agendas
[Jan. 27]

Required-Thematic


Required-Praxis; Applications in law and international relations)


Recommended


Symposium: Two Paths to a Science of Politics (2004), Perspectives on Politics 2(2): 295-324:
Brady, Henry E. “Introduction”

III. Political decision making (rational choice and decision theory)
[Feb. 3]

Required:


Recommended


IV. Strategic decision making in “two person” settings
[Feb. 10]

Required

Osborne, Martin J. (2004) An Introduction to Game Theory NY Oxford University
Press: Chapters 1, 2, 4 (pps. 11-54, 99-152)

Chapter 2 in Contested Economic Institutions NY: Cambridge University Press.
[Including Iversen’s Appendix]

Recommended

McCarty, Nolan and Adam Meirowitz (2007) Political Game Theory
New York: Cambridge University Press.

Farrell, Joseph (1987) “Cheap Talk, Coordination, and Entry.” Rand Journal of
Economics 18: 34-39

Richards, Diana (2001) “Coordination in Shared Mental Models” American Journal
Of Political Science 45: 259-276.

Play in Repeated Coordination Games” Econometrica 58: 571-595.

Cooperation, Coordination and Communication.” In Modern Political Economy:
Old Topics, New Directions J.S. Banks and E. Hanushek (eds) NY: Cambridge
University Press.

In Democratic Capitalist Societies” American Political Science Review 76: 215-238.
V. Collective decision making, part one
[Feb. 17]

Required

Chapters 1 and 2

University Press, Chapters 2, 3, 5 (pps. 21-72; 90-114)

Riker, William (1980) “Implications from Disequilibrium of Majority Rule for
The Study of Institutions” American Political Science Review 74: 432-446.

Shipan, Charles and Ferejohn, John and (1990) “Congressional Influence on

Recommended

New Haven, CT Yale University Press.


And Some Implications for Agenda Control” Journal of Economic Theory 2:472-482.

Post Transition Chile.” Chapter 4 in Presidents, Parliaments, and Policy Stephan
Haggard and Matthew McCubbins editors. NY: Cambridge University Press.

Laver, Michael and Kenneth Shepsle (1997) Making and Breaking Governments:
Cabinets and Legislatures in Parliamentary Democracies NY: Cambridge
University Press.

Schwartz, Thomas (1987) “Votes, Strategies, and Institutions: An Introduction to the
Theory of Collective Choice.” In Congress: Structure and Policy M. McCubbins
and T. Sullivan editors.

Romer, Thomas and Howard Rosenthal (1978) “Political Resource Allocation,


VI. Collective decision making, part two [computational approaches methods] [Feb. 24]

Required


Two of the following three articles:


Recommended


Part Three: Testing political theories and uncovering (political) stylized facts

VII. Research design and Causality
[March 3]

Required


At the 23rd Annual Summer Meeting of the Political Methodology Society
University of California, Davis.


Recommended


Daniel Ho et al. (2007 “Matching As Nonparametric Preprocessing for Reducing Model Dependence in Parametric Causal Inference” Political Analysis 15(1)


VIII. Measurement and identification
[March 10]

Required


Recommended


*****Spring Break*****

IX Experimental methods
[March 24]

Required


Recommended


X. Analyzing micropolitical processes

[March 31]

Required


Recommended


**XI. Analyzing macropolitical processes**

[April 7]

**Required**


**Recommended**


Campaign Spending


XII. Cross-level and multi-level inference
[April 14]

Required


**Recommended**


M. Herron and K. Schotts “Using Ecological Inference Point Estimates as Dependent Variables in Second Stage Regressions”

C. Adolph and G. King, “Comment on Herron and Schotts”

M.Herron and K. Schotts “Cross-contamination in EI-R: A Reply”

C.Adolph and G. King with M.Herron and K.Schotts, “A Consensus Second Stage Analyses in Ecological Inference Models”


A Symposium on Multilevel Modeling for Large Clusters. Special Issue of *Political Analysis* 13(4). Articles by Kedar and Shively, Bowers and Drake, Jusko and Shively, Lewis and Linzer, Huber et al, Duch and Siverson, Kedar, Franzese, and Achen with Comments by Beck and Gelman.
XIII. Political economy

[April 21]

**Required**

Duch, Raymond M. and Randolph A. Stevenson (2008) “Competency Signals and Rational Retrospective Economic Voting” and “Political Control of the Economy” Chapters 5 and 7, respectively in The Economic Vote: How Political and Economic Institutions Condition Electoral Results NY: Cambridge University Press.


Sattler, Thomas, Patrick Brandt and John R. Freeman “Democratic Accountability in Open Economies.” Unpublished manuscript.

**Recommended**


XIV. Bayesian approaches to political analysis
[April 28]

Required


Recommended


Required

Reread EITM, Empirical Implications of Theoretical Models (2002) [from Week I]

Recommended

An exchange in the Autumn 2007 issue of Political Analysis

