Instructor: Milan Svolik  
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Office hours: Tuesday 9 – 12 p.m. and by appointment, Lincoln 370  
Course web page: http://netfiles.uiuc.edu/msvolik/www/teaching.html

Description: This course surveys several important topics in formal political theory and the application of key game-theoretic methods to the study of politics. This course is intended for graduate students in political science who have taken an introductory course in game theory.

Course Requirements: Students are required to attend lectures, read the assigned material, write up and present an assigned article, and submit a final paper. Each student will be responsible for presenting and critiquing a piece from the syllabus; we will decide the assignment of at our organizational meeting. The presentation should consist of

1. a summary of the paper’s central argument,
2. an exposition of the formal model,
3. a numerical example of a key result,
4. an evaluation and a critique.

The final paper should be a short (maximum 15 page double-spaced) paper that presents a formal political argument or surveys a body of formal literature.

Some useful articles on how to present mathematical arguments correctly and intelligibly are:


And here is a paper on how to build models:


**Grading:** The final grade will be composed as follows: presentation (40%), final paper (40%), and participation (20%).

**Readings:** There is no course textbook. I will use


for introductory exposition of some topics. Recommend for political Political Game Theory: An Introduction (Analytical Methods for Social Research) by Nolan McCarty and fudenberg as reference and myerson as unified exposition of fundamental results

**Course Outline:**

(*) denotes presentation papers.

**Introduction and Organization**

Some useful writings on the history, philosophy, and role of formal models in political science are:


**Collective Action**

*Topics: Public Goods, Voter Participation, Revolts, Global Games*


**Signaling Games**

*Topics: Perfect Bayesian Equilibrium, Entry Deterrence, Crisis Escalation, War of Attrition*

Sections 10.1-10.7 in Osborne (2004).


**Games with Communication**

*Topics: Perfect Bayesian Equilibrium, Cheap Talk, Legislative Organization*

Sections 10.8 and 10.9 in Osborne.


**Repeated Games**

*Topics: Cooperation in the Prisoner’s Dilemma, Folk Theorem, Non-Nash Reversion, Interethnic Cooperation, Trade Wars, Markov Perfect Equilibrium*

Chapters 14 and 15 in Osborne (2004).


**Agency Theory and Mechanism Design**

*Topics: Adverse Selection, Moral Hazard, Revelation Principle, Sequential Equilibrium*


Bargaining

Topics: Crisis Bargaining, Bargaining in Legislatures, Dynamic Bargaining

Chapter 16 in Osborne (2004).
