

Public Policy 411
Political Economy II: Intermediate Applied Theory
Winter 2014

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Course website The course has a website at chalk.uchicago.edu

Course Description This course follows up on Political Economy I: Introduction to Applied Game Theory (PPHA 41101). It will continue to introduce foundational concepts in noncooperative game theory and the key mathematical tools needed for to do applied theory. We will also look at a variety of applications from both political science and economics.

Prerequisites Students should have a working knowledge of some foundational mathematics including sets and relations, basic calculus, and basic probability theory. Students should also be familiar with game theory and decision theory at the level presented in Political Economy 1.

Course Requirements The course has two requirements:

- **Problem Sets** Problem sets will be distributed and due most Thursdays. Because working problems is critical to learning game theory, these problem sets will constitute 50% of your grade. You are encouraged to work on problem sets in groups, but you must write up your own answers. Late problem sets will not be accepted. All problem sets must be written clearly or typed. Moreover, the expectation is that the argument underlying your answers will be laid out in an easy to follow string of logic. That is, the TA and professor should not have to work hard to figure out what it is you are arguing. This will almost certainly mean that you will have to rewrite your solution (once you have arrived at it) before turning in the problem set.

- **Final** There will be a comprehensive in-class final at the end of the quarter that will make up the remaining 50% of your grade.

Course Materials The required textbooks for this course are

- Martin J. Osborne. 2004. *An Introduction to Game Theory*. Oxford University Press.
- Scott Gehlbach. 2013. *Formal Models of Domestic Politics*. Cambridge University Press.

Course Schedule

Below, I provide an outline of the course. I provide a list of topics and the relevant readings. We will see how long each section takes as we go.

Single Crossing Conditions

Comparative Statics

Ashworth, Scott and Ethan Bueno de Mesquita. 2006. “Monotone Comparative Statics for Models of Politics.” *American Journal of Political Science* 50(1):214–231.

The Median Voter Theorem

Gans, Joshua S. and Michael Smart. 1996. “Majority Voting with Single-Crossing Preferences.” *Journal of Public Economics* 59(2):219–37.

Dynamic Games

Infinitely Repeated Games, Folk Theorems, and the One-Shot Deviation Principle

Osborne, Chapters 14 and 15

Stationarity and Markov Perfection with applications to bargaining and democratization

Gehlbach, Chapter 6.1 and Chapter 8

Dynamic Games of Incomplete Information

Perfect Bayesian Equilibrium

Osborne, 10.1–10.4

Signaling

Osborne, 10.5–10.7

Cheap talk

Osborne, 10.8–10.9

Global Games and Information Manipulation

Gehlbach, Chapter 8.2

Agency Theory

Risk and Risk Aversion

MWG 6.C–6.D

Hidden Action

MWG, 14.A–14.B

Hidden Information

MWG, 14.C

Agency Models of Elections

Scott Ashworth. 2012. “Electoral Accountability: Recent Theoretical and Empirical Work.”
Annual Review of Political Science 15:183-201.