

PPHA 41101: Political Economy I: Introduction to Applied Theory

Autumn 2017

MW 10:30-11:50AM (Location: Harris 140B)

Instructor:

Konstantin Sonin (ksonin@uchicago.edu)

Office: Room 185

Office hours: Monday, Wednesday 1:30-2:30PM; at other time, by appointment through email.

If you send me an email, please have the prefix “PPHA 41101” in the Subject line.

Course Description:

This class is an introduction to game theory, the primary tool of strategic analysis in economics, politics, international relations, and elsewhere. The course introduces basic concepts of game theory, and discussed applications to political economy issues. Note that this class is a first part of the two-part sequence: the information-based models (“games with imperfect information”) are covered in PPHA41102.

Prerequisites:

Basic calculus and basic probability theory are important.

Textbooks:

I will follow Martin Osborne’s *An Introduction to Game Theory* (Oxford UP, any edition), though there is a number of excellent textbooks on the subject. I will rely on Scott Gehlbach’s *Formal Models of Domestic Politics* (Cambridge UP, 2013) and *Political Game Theory: An Introduction* (Cambridge UP, 2014) by Nolan McCarty and Adam Meirowitz for applications in political economy.

Although this is not a required read, you will greatly benefit from reading Thomas Schelling’s *The Strategy of Conflict* and Kenneth Shepsle’s *Analyzing Politics*.

TA Sessions and Office Hours:

TA(s) will hold fortnightly sessions, which will last for one hour. In sessions, TA will explain problem sets and demonstrate how to work with sample exercises. In addition, TA will hold office hours each week. Use this office hour to ask questions that were not discussed in class or TA sessions.

Attendance:

You are expected to attend and participate in every class.

Slides:

I will try to post preliminary slides for each lecture on Chalk. After the lecture, the actual slides will be posted.

Problem Sets:

There will be four problem sets. You may discuss problems with each other, but you must turn in your own work.



Home assignments will be due in class on Wednesdays

Please turn in a hard copy of your work and staple together multiple pages.

TAs will grade the problem sets on a scale of 1 to 100. Late home assignments will be heavily discounted.

Exams:

We will have a midterm exam in class on Wednesday, October 25, and a final exam on Tuesday, December 5, 1:30-3:30pm.

Grades:

Your course grade will be based on the following weights: problem sets 25%, midterm exam 25%, and final exam 50%.

Please direct any re-grade requests to me rather than the TA(s). In such case, submit your work and a brief written explanation of your argument. Following this re-evaluation, your grade may go up or down.

Additional readings:

Occasionally, I will post additional reading, both academic and policy-related, on Canvas. You might read (or not read) them to get a better understanding of how concepts we discuss in class apply in policy analysis and public discourse.

Course Plan:

Lecture 1 (M 09/25): Strategic Analysis in Politics and Elsewhere

Lecture 2 (W 09/27): Games in Normal and Extensive Forms

Lecture 3 (M 10/02): Looking for an Equilibrium Concept

Lecture 4 (W 10/04): Nash Equilibrium

Lecture 5 (M 10/09): Downs' Model of Political Competition

Lecture 6 (W 10/11): Existence of Nash Equilibrium

Lecture 7 (M 10/16): Solving for Nash Equilibrium in Normal-form Games



Lecture 8 (W 10/18): Models of Public Choice

Lecture 9 (M 10/23): Subgame Perfect Equilibrium

Mid-term (W 10/25)

Lecture 10 (M 10/30): Electoral Competition with Strategic Voters

Lecture 11 (W 11/01): Coalitional Games

Lecture 12 (M 11/06): Preferences and Arrow's Impossibility Theorem

Lecture 13 (W 11/08): Mechanism Design with Complete Information

Lecture 14 (M 11/13): Citizen Candidates

Lecture 15 (W 11/15): Repeated Games

Lecture 16 (M 11/20): Folk Theorem

Lecture 17 (W 11/22): Bargaining Games

Lecture 18 (M 11/27): Markov Games and MPE

Final Exam (M 12/05 – 1:30-3:30PM)