General Description

Most political processes consist of parties (voters, politicians, … you name them) making decisions that affect various aspects of peoples and societies lives. Thus, the outcomes (and their respective utilities) for every participant depend upon everyone’s actions. It is, therefore, becomes important for each political player to affect other players’ actions in a way that the best possible outcome is attained for that player. In other words we can view “politics” as the processes by which we all try to influence each other’s behavior. In the process of influencing each other decisions we often play “games” with other people. This course focuses on the foundations of “Game Theory” as modeling tool to study these particular political situations. Some of the materials in this course are analytical – that is, they provide "tools" by which one can address a wide range of specific instances. Other materials are psychological or cognitive – that is, they address attributes of humans as they engage in politics. Finally, a part of this class will be devoted to learning about laboratory experiments design. Students will have an opportunity to participate in a laboratory experiments that would illustrate how methods and models of game theory can test political processes in a controlled laboratory environment.

Requirements and Grading

Class attendance, in-class quizzes, and participation in laboratory experiments (25%), two midterm exams (25% each) and a 7-9 pages final essay writing is required (25%). The quizzes will be in the form of multiple choice type questions covering basics of in-class lectures and discussions. It will be administered four times during the class. All quizzes will be open books/notes. Essays can be in the form of articles/book review from reading materials posted on class web site or (preferably) a student can pick his/her own topic of interest related to the main subject of the class. It can be a political/economic or other similar situation that can be analyzed from game theoretic point of view. During the course of the class I will provide you with multiple examples of such topics, and will provide you with a template of how to tackle them.
Students are also expected to spend at least three hours a week to search online (or elsewhere) for political examples that fit the theories and models considered in class. A list of such examples, and relative references should be submitted with the final essay.

Incompletes: All the work (essays) should be complete by the due date. An incomplete grade may be given in some cases if there is evidence of some kind of emergency (medical/family) that prevented the student from completing the work on time. It is instructor’s discretion whether or not to grant such a request. If the request is granted then the student has to sign an agreement regarding the date of work completion or a failing grade can be given.

**Practical Topics (tools):**

Theory of Games; Experimental Design

**Required Book:**

“Analyzing Politics” by Mark Bonchek and Kenneth Shepsle

Additional Articles to Read (required) will be posted on class web site.

**Daily Schedule and Readings:**

**Week 1.** The concepts of Modeling an Rationality. Representation of Political Processes, Components of a Game. Prisoner’s Dilemma. Cooperation.

**Readings: Shepsle 1-41.**

[Split or Steal Game](#) (Prisoners Dilemma)

**Week 2.** Representation of Political Processes (continued), Preferences and Utilities, Group Choice Analysis, Majority Rule. Spatial Models of Majority Rule, Analysis of Extensive Form Games, Solutions for Extensive Forms, Agendas, Condorcet Winners

**Readings: Shepsle 42-150.**

[Excellent Article on “Math. Of Elections”](#)

[Article on Median Voter Theory](#)
**Week 3.** Analysis of Strategic Form Games, Nash Equilibria, Strategic Behavior: Sophistication, Misrepresentation, and Manipulation. Voting Methods and Electoral Systems. Representation versus Governance

Redings Shepsle 156-191.

*The paper on “Mindreading and Manipulation” is here*

*The “Flying Club” article*

**Week 5.** Cooperation, Two-Person Cooperation, Pork-Barreling, Cooperation under repeated play, Inducing Cooperation. Prisoner’s Dilemma vs. Stag Hunt model.


*Prisoners Dilemma in Sports and Drugs*


*Voting and Coalitions*

**Week 7.** Bureaucracy and Intergovernmental Relations, Niskanen’s Model, Bargaining, Agenda Setting Power, Principals and Agents, Leadership. Institutions and Legislatures.

Readings: Shepsle: 356-473

*“Election Selections” Article*

*Principal Agent Model and Financial Crisis*

The paper on “PD Games and Prospect Theory” is here

Why do we take risks?

More TBA

News Reports Discussed in Class:

To be Added Daily.

**Week 9.** Experimental Design in Political Science. Methods and Models of experimental research. Examples: Prospect Theory; PD Games; Ultimatum Games etc.

**More Relevant Online Information**

- Prisoner’s Dilemma Tournament
- Dating and Prisoner’s Dilemma
- Prisoner’s Dilemma and “Games of Trust”
- “Partisan” Game of Chicken
- “Elections and Game Theory article
- “Football Strategy and Game Theory”
- Monkeys and Fairness
- Game Theory of Swing States