

POLS 513: Introduction to Game Theory

Emory University
Spring 2014

Meeting room: Tarbutton 120
Meeting time: Monday, 1:00pm–4:00pm

Instructor: Jeffrey K. Staton
Email: jeffrey.staton@emory.edu
Phone: 404-727-6559
Office: Tarbutton 321B
Office hours: Tuesday, 10:00am–11:00am or by appointment

Course Description

This course is an introduction to the theory of games with applications to political science. You will learn the building blocks of non-cooperative game theory.

Reading Material

We will primarily read out of Martin Osborne's introductory game theory text.

Osborne, Martin J. 2004. *An Introduction to Game Theory* New York: Oxford University Press

In addition to the text, we will read a series of articles, all of which are available on JSTOR or the electronic course reserve. I will suggest a series of alternative textbooks on the first day of class. I encourage you to consult a few texts if you find the Osborne treatment unhelpful.

Grading

Your final grade is a weighted average of the following components:

Two Examinations (Each worth 30% of your grade). The exams will include both problems of the sort in the text and general questions concerning the applied readings. The exams will be timed and closed book; however, you make take them at home.

Problem Sets (30% of your grade). You will receive weekly problem sets that give you the chance to reinforce lessons from each lecture. You may study the problems together if you desire; however, you should write up the solutions on your own. I will distribute the problems to you no later than Tuesday by noon. They are due Friday at 5 pm. It is important that you turn in whatever you have accomplished, even if you have not gotten very far. Nancy and I review the problems Monday morning to learn about whether there are topics I need to cover again.

Participation (10% of your grade) I expect you to be in class and participate as best you can in our discussions.

Incomplete Grades

No incomplete grades will be given unless there is an agreement between the instructor and the student **prior** to the end of the course. The instructor retains the right to determine legitimate reasons for an incomplete grade.

Integrity of Scholarship

I will follow the guidelines established by Emory College, which can be found at http://www.college.emory.edu/current/standards/honor_code.html. In short, don't cheat. The benefits are small. Even if the probability of getting caught is tiny, the costs of getting caught are huge.

Students with Disabilities

Students requiring any type of academic accommodation should consult with the Office of Disability Services (<http://www.ods.emory.edu/> or 404-727-6016) and discuss the issue with the instructor within the first week of class.

Class schedule

January 13: Making Rational Choices 1

Osborne, Chapter 1

Green, Donald P. and Ian Shapiro. 1994. Pathologies of Rational Choice Theory: A Critique of Applications in Political Science New Haven, Conn: Yale University Press. Chapters 2 & 3.

Cox, Gary W. 1999. "The Empirical Content of Rational Choice Theory." Journal of Theoretical Politics. 11(2): 147-167.

Clarke, Kevin A. and David M. Primo. 2007. "Modernizing Political Science: A Model-Based Approach." Perspectives on Politics. 5 (4): 741-751.

January 20: No class - MLK Day

January 27: Nash Equilibrium 1

Hindricks (2006)

Baron and Ferejohn (1989), definitely read through page 1186.

Osborne, Chapter 2

February 3: Nash Equilibrium 2

Osborne, Chapter 3

February 10: vNM Preferences

Osborne, Chapter 3

February 17: Mixed Strategy Nash Equilibrium
Osborne, Chapter 4

February 24: Maxminimization
Osborne, Chapter 11

March 3: Rationalizability
Osborne, Chapters 12

March 7: Exam 1 distributed

March 10: No class - Spring Break

March 17: Extensive Games with Perfect Information 1
Osborne, Chapter 5-6

Exam 1 due

March 24: Extensive Games with Perfect Information 1
Osborne, Chapter 6-7

March 31: Bayesian Games
Osborne, Chapter 9

April 7: Extensive Games with Incomplete Information 1
Osborne, Chapter 10

April 14: Extensive Games with Incomplete Information 2
Osborne, Chapter 10

April 21: Repeated Games 1
Osborne, Chapter 14

Tournament

April 28: Repeated Games 2
Osborne, Chapter 14 and Chapter 16 (16.1-16.2)

Milgrom, Paul, Douglass North, and Barry Weingast. 1990. "The Role of Institutions in the Revival of Trade: The Law Merchant, Private Judges, and the Champagne Fairs." *Economics and Politics* 2.

May 2: Exam 2 distributed

May 6: Exam 2 due