Introduction

This course is a comprehensive, high-level introduction to game theory. The focus of the course will be on basic concepts, but some time will be spent on applications as well. It is intended for doctoral students in political science, but it is also appropriate for other students with an interest in the formal study of political institutions and a background in microeconomics. I will assume that students are comfortable with mathematical techniques.

Requirements

You are of course required to attend lecture and follow the readings to the best of your ability. Class sessions will be conducted in lecture format. Weekly discussion sessions will be used for reviewing material and problem set solutions.

Lectures will take place on Monday and Wednesday from 9:10am to 10:25am in ...

Grades will depend on

1. Regular (approximately bi-weekly) problem sets. (40%);

2. In-class midterm on 3/7. (20%);

3. Comprehensive final exam on 5/7. (40%).

Reading Materials

Primary required text:

Suggested second text:

Copies of the required text have been ordered through Book Culture.

In addition, I recommend the following texts for reference and supplementary reading:


Contact information:

- Office: IAB 720
• Phone: 212 854 5941
• Office Hours: by appointment
• Email: mm3331@columbia.edu.

Teaching assistants:
1. Camille Strauss-Kahn – cs2899
2. Andrew Guess – amg2232

Schedule
• Jan 18, 23 Introduction, Rational Choice
  McCarty and Meirowitz, Ch. 2, 3 (skim)
  Osborne, Ch. 1

• Jan 25, 30 Social Choice
  McCarty and Meirowitz, Ch. 4.1-4.3

• Feb 1, 6 Normal Form Games: Introduction
  Osborne, Ch. 2
  McCarty and Meirowitz, Ch. 5.1-5.3

• Feb 8, 13, 15 Normal Form Games: Examples
  Osborne, Ch. 3.1, 3.3-3.5
  McCarty and Meirowitz, Ch. 5.6-5.7 (skim)

• Feb 20, 22 Normal Form Games: Mixed Strategies
  Osborne, Ch. 4.

• Feb 27, 29 Nash Theorem
  McCarty and Meirowitz, Ch. 5.9

• Mar 5 Nash Equilibrium Examples
• Mar 7 Midterm
• Mar 12, 14 Spring Break - No Class
• Mar 19, 21 Extensive Form Games: Introduction
  Osborne, Ch. 5
  McCarty and Meirowitz, Ch. 7.1-7.3

• Mar 26, 28, Apr 2 Extensive Form Games: Examples
  Osborne, Ch. 6, 7.3, 7.4
  McCarty and Meirowitz, Ch. 7.4

• Apr 4, 9, 11 Imperfect Information
  Osborne, Ch. 10
  McCarty and Meirowitz, Ch. 8 (skim)

• Apr 16, 18 Repeated Games
  Osborne, Ch. 14, 15
  McCarty and Meirowitz, Ch. 9 (skim)

• Apr 23, 25 Bargaining
  Osborne, Ch. 16.1-16.2

• May 7 Final Exam (9am - noon) (Provisional date and time - check registrar’s web page for updates.)