Summary. An advanced introduction to the use of game theory in the study of politics. Applications include: strategic voting, bargaining, lobbying, strategic information transmission, and political agency. Familiarity with mathematical reasoning is helpful. Prerequisites: MAT 103.

Contact Information & Logistics. Instructor: Matias Iaryczower, 040 Corwin Hall, email: miaryc@princeton.edu. Lectures: M-W 11:00 am - 11:50 am, Aaron Burr Hall 209. Precepts: (1) Mon. 9:00 am - 9:50 am and (2) Mon. 3:30 pm - 4:20 pm, Corwin Hall 23. Office Hours: M. 1:30 pm - 2:30 pm, Corwin 040. The textbook for the course is “An Introduction to Game Theory”, by Martin Osborne, 2004, Oxford University Press [OSB].

Course Requirements & Grades. Grades are based on the following weighting scheme: Assignments (30%), Quizzes (10%), Midterm (20%), Final (30%) and Oral Presentation(s) (10%). Attendance is required, and participation encouraged. Midterm and final examinations are in class, and closed-book. Collaboration on the examinations is prohibited. Students are encouraged to work together on assignments, but the final answers must be written independently. Late assignments will not be accepted, unless for a valid (documented) medical reason. The date that an assignment is due will be announced in lecture when the assignment is distributed. Assignments will be due in class at the start of the lecture on the day they are due. If there is any ambiguity in these policies, it is your responsibility to get clarification from me.
1 Tentative Schedule

I. Static Games of Complete Information.

- Week 1: September 16. Static Games of Complete Information: Main Ideas I.
  - Lectures: Rational Choice, Strategic Games, Dominance, Nash Equilibrium.
  - Readings: OSB C2

- Week 2: September 21-23. Static Games of Complete Information: Main Ideas II.
  - Readings: C4 (up to and including 4.9) + Lecture Notes.

II. Dynamic Games of Complete Information.

- Week 3: September 28-30. Dynamic Games of Complete Information.
  - Lectures: Extensive Games, Subgame Perfect N.E., Applications.
  - Readings: OSB C5 + C 7.1.
  - Precept: Review + Exercises.

- Week 4: October 5-7. Dynamic Games of Complete Information.
  - Lectures: Extensive Games, Subgame Perfect N.E., Applications.
  - Readings: OSB C5 + C 7.1.
  - Precept: Reading 1 + Presentations.

  - Lectures: Applications: Bargaining, Sequential Vote Buying, Binary Agendas.
  - Readings: OSB 16.1 + OSB C7.4 + Lecture Notes.
  - Precept: Review + Exercises.

  - Lectures: Applications: Bargaining, Sequential Vote Buying, Binary Agendas.
  - Readings: OSB 16.1 + OSB C7.4 + Lecture Notes.
  - Precept: Reading 2 + Presentations.

- Midterm Examination (October 26)
• Week 7: October 28. Repeated Games.
  – Lectures: Cooperation in Infinitely Repeated Games.
  – Precept: Review.

• Week 8: November 9-15. Repeated Games.
  – Lectures: Cooperation in Infinitely Repeated Games.
  – Precept: Reading 3 + Presentations.

III. Games of Incomplete Information.

• Week 9: November 16-18. Static Games of Incomplete Information: Main Ideas.
  – Lectures: Bayesian Nash Equilibrium, Application: Juries.
  – Precept: Review + Bayesian Updating.

• Week 10: November 23. Dynamic Games of Incomplete Information: Main Ideas.
  – Readings: OSB C10
  – Precept: Review + Exercises.

• Week 11: Nov. 30 - Dec. 2. Dynamic Games of Incomplete Information: Main Ideas.
  – Readings: OSB C10
  – Precept: Reading 4 + Presentations.

• Week 12: Dec. 7-9. Applications: Political Agency and Accountability.
  – Lectures: Simple Models of Political Agency.
  – Readings: C3 of Timothy Besley’s “Principled Agents? The Political Economy of Good Governance”.
  – Precept: Reading 5 and Presentation.

• Week 13: December 14-16. Applications: “Cheap Talk”.
  – Lectures: Strategic Information Transmission.
  – Readings: OSB 10.8, 10.9
  – Precept: Review + Exercises.

• Final Examination.