ECON 6110: Microeconomic Theory III

Class: MW 13:25 - 14:40 in Rockefeller Hall 112
Instructor: Marco Battaglini, battaglini@gmail.com
Office hours: by appointment

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Sections: F 1:25-2:40
Office hours: Wed 5:45-6:45 and Friday 12:15-13:15 in Uris 429
Syllabus version: January 17, 2025

Description. The course is a graduate-level introduction to game theory and its economic applications. A "game" is any situation where individuals make choices whose consequences also depend on others' behavior. Game theory studies how people anticipate others' intentions and act accordingly. The course focuses on economic applications.

Prerequisite. The formal prerequisites for this course are ECON 6090 and ECON 6170.

Textbook. A Course in Game Theory, by Martin Osborne and Ariel Rubinstein, MIT Press.

Requirements. The course grade will be based on one prelim (30%), five problem sets (the best four count for 20%), and a cumulative final exam (50%). For the problem sets you are encouraged to work in groups, but every student has to write their own solution and submit it individually.

Outline. Lecture notes will be distributed. References to Osborne and Rubinstein's chapters in parentheses. Order of topics and dedicated time are estimates.

- Static games (2 weeks). (Lecture notes, Ch. 1-4)
- Extensive Games with Perfect Information. (1 week) (Lecture Notes, Ch. 6)
- Bargaining and other applications of extensive games. (1 week) (Lecture notes)
- Repeated games. (2 weeks) (Lecture Notes)
- Review and exam. (1 week)
- Bayesian Games with applications. (1 week) (Ch. 2. Lecture notes)
- Extensive Games with Imperfect Information. (1 1/2 weeks)
- Sequential Equilibrium and refinements. (1 1/2 weeks)
- Knowledge and Equilibrium. (1 week)
- Bayesian games and mechanism design. (2 week)
- Cooperative game theory (If there is time, 1 week)