Economics 703: Microeconomic Theory II
Fall 2018

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Class Time and Place: Tuesdays and Thursdays, 10:30-12:00, 100 Perelman Center

Review Sessions: Fridays, 11:00-12:00, 100 Perelman Center

This is a graduate level introduction to game theory, information economics, and mechanism design. It is designed for first year Economics Ph.D. students, to be taken in conjunction with Economics 701.

Problem sets will be assigned every week. They are an important part of the course; you should spend a great deal of time and effort on them. You are encouraged to work in groups on the problem sets. However, before meeting in the group, you should attempt each question by yourself. Groups work well when they allow you to learn from each other.

Main Texts:
Mailath, G., *Modeling Strategic Behavior: A Graduate Introduction to Game Theory and Mechanism Design*, to be published.

Draft is available at http://web.sas.upenn.edu/gmailath/books/modeling-strategic-behavior/

Supplementary Readings:
Mas-Colell, A., M. Whinston, and J. Green, *Microeconomic Theory*

Grading:
There will be one in-class midterm exam on Oct 18, and one cumulative final exam on Dec 17 from 9-11am. Your grade will be based one third on the midterm and two thirds on the final.

Note: We do not meet on Dec 6.

Course Outline:

Lecture 1 (Aug 28):
Strategic Interaction, Normal-Form Games. (Chapters 1.1, 1.2)

Lecture 2 (Aug 30):
Extensive-Form Games, Reduced Normal Form. (Chapter 1.3)

Lecture 3 (Sep 4):
Nash Equilibrium. (Chapter 2.1)

Lecture 4 (Sep 6):
Backward Induction, Credible Threats, Subgame Perfection. (Chapters 2.2, 2.3)

Lecture 5 (Sep 11):
Mixed-Strategies. (Chapter 2.4)

Lecture 6 (Sep 13):
Empirical Work, Multiplicity. (Chapter 2.5)

Lecture 7 (Sep 18):
Games with Nature. (Chapter 3)

Lecture 8 (Sep 20):
Games with Nature. (Chapter 3)

Lecture 9 (Sep 25):
Existence of Nash Equilibrium. (Chapter 4.1)

Lecture 10 (Sep 27):
Dynamic Games, Sequential Rationality. (Chapter 5.1)

Lecture 11 (Oct 2):
Perfect Bayesian and Sequential Equilibria. (Chapters 5.2, 5.3)

Lecture 12 (Oct 9, no class on Oct 4 for the fall break):
Signaling. (Chapter 6.1)

Lecture 13 (Oct 11):
Signaling. (Chapter 6.2)

Lecture 14 (Oct 16):
Repeated Games. (Chapters 7.1-7.4)

Lecture 15 (Oct 18):
Midterm.

Lecture 16 (Oct 23):
Repeated Games. (Chapters 7.1-7.4)

Lecture 17 (Oct 25):
Markov Perfect Equilibrium. (Chapter 8.1)

Lecture 18 (Oct 30):

Coarse Conejcture. (Chapter 8.2)

Lecture 19 (Nov 1):
Axiomatic Bargaining, Non-Cooperative Bargaining. (Chapter 9)

Lecture 20 (Nov 6):
Non-Cooperative Bargaining. (Chapter 9)

Lecture 21 (Nov 8):
Mechanism Design. (Chapters 10 and 11)

Lecture 22 (Nov 13):
Mechanism Design. (Chapters 10 and 11)

Lecture 23 (Nov 15):
Myerson-Satterthwaite. (Chapter 12.3)

Lecture 24 (Nov 20):
Optimal Mechanism Design and Auctions. (Chapter 12.4)

Lecture 25 (Nov 27, no class on Nov 22 for the Thanksgiving):
Mechanism Design and Contracting.

Lecture 26 (Nov 29):
Contracting.

Lecture 27 (Dec 4):
Contracting. (Chapter 13)