Description

This course is a fast paced overview of Theoretical IO. It is intended for graduate students with foundations in Microeconomics and Game Theory. The focus of the course is to cover the most important topics in IO, understanding the intuition behind most theoretical results and understanding how to apply them in other contexts. It does not cover in detail all of IO, but focuses more on the intuition of the main results and the key assumptions required for such results. It does not provide a full characterization of the results, which is left to the students to learn from the original literature or to learn from a more focused IO course. It also does not cover all topics in IO, among which are Regulation, Platforms, and Networks.

This course is very useful for students who have not yet decided what subfield to specialize and are looking to get an understanding of IO. It is useful to students who have decided on a subfield, whos subfield is not IO, and are looking to broaden their economics background with an introductory course in IO. Finally, it is also very useful for students who will continue on into industry, as it provides strong foundations for developing sound strategies in a business environment. For students who want to specialize in the field of IO, this is an introductory course and does not cover topics in sufficient depth so as to provide the student with a strong understanding of IO. It does, however, point out the references where the student could obtain such depth of knowledge.

Schedule

This course goes Monday through Friday. The daily schedule is as follows:

- 9:00 - 10:20 Lecture I
- 10:20 - 10:40 Coffee Break
- 10:40 - 12:00 Lecture II
- 12:00 - 13:00 Lunch
- 13:00 - 14:15 Problem Sets (Individual work)
- 14:15 - 14:20 Break
- 14:20 - 15:20 Review of Problem Sets
- 15:20 - 15:40 Coffee Break
- 15:30 - 17:00 Lecture III

Course Outline

Monopoly Theory

Lecture 1: Introduction to Monopolies

Demand curves derived from consumer utility
Consumer Surplus
Marginal Revenue curves
Price/Quality tradeoffs

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Lecture 2: Comparative Statics
The Implicit Function Theorem
Introduction to Supermodularity

Lecture 3: Price Discrimination
1st and 3rd degree.
2nd Degree: Quantity Discrimination: Continuum of Types: Bundling
2nd Degree: Quality Discrimination

Lecture 4: Durable and Experience Goods
Durable Goods: Pricing, Incentives to affect durability
Experience Goods: Both sides have asymmetric information
Experience Goods: Only consumers have asymmetric information

Oligopoly - Short Run Analysis

Lecture 5: Bertrand vs Cournot
Reaction Curves and Equilibrium
Bertrand Pricing - equilibrium
Cournot Output setting - equilibrium

Lecture 6: Bertrand vs Cournot II
Welfare
Horizontal Mergers

Lecture 7: Capacity Constraints and Bertrand Pricing
Capacity game followed by Pricing Games
Rationing Rules

Lecture 8: Strategic Complements vs Strategic Substitutes
Strategic interaction with joint economies and joint diseconomies
Multi Market Contact

Spatial Competition

Lecture 9: Horizontal Differentiation
The Linear City Model - Pricing and Location Choice
The Circular City Model
Spatial Preemption

Lecture 10: Vertical Differentiation
Pricing
Location Choice

Oligopoly - Long Run Analysis

Lecture 11: Exogenous and Endogenous Entry
Exogenous Entry Costs
Investments in Quality and Endogenous Entry Costs

Lecture 12: Entry Deterrence
The Stackelberg Game
Spence-Dixit Model
Bundling for Entry Deterrence
Vertical Relationships

Lecture 13: Double Marginalization

Ustream/Downstream
Price Controls and Two-Part Tariffs
Complementary Goods

Lecture 14: Foreclosure (Vertical Restraints)

Foreclose Downstream
Foreclose Upstream

Cartel Theory

Lecture 15: Cartel Formation

Pro-cyclical prices: Green-Porter trigger strategies
Counter-cyclical prices: Rotemberg & Saloner
Multimarket Contact and Collusion

References / Readings

Main Reference:

Additional Book References:

Lecture 1: Introduction to Monopolies

F. Ramsey 1927. A Contribution to the Theory fo Taxation. EJ

Lecture 2: Comparative Statics


Lecture 3: Price Discrimination

K. Corts, 1998. Third Degree Price Discrimination in Oligopoly: All-Out Competition and Strategic Commitment. RJE
D. Spulber, 1989. Product Variety and Competitive Discounts. JET

Lecture 4: Durable and Experience Goods

J. Bulow, 1986. Durable Goods Monopolists. JPE

Lecture 5: Bertrand vs Cournot


Lecture 6: Bertrand vs Cournot II


**Lecture 7:** Capacity Constraints and Bertrand Pricing

D. Kreps & J. Scheinkman, 1983. *Quantity Precommitment and Bertrand Competition Yield Cournot Outcomes*. BJE


**Lecture 8:** Strategic Complements vs Strategic Substitutes


**Lecture 9:** Horizontal Differentiation


**Lecture 10:** Vertical Differentiation


**Lecture 11:** Exogenous and Endogenous Entry


**Lecture 12:** Entry Deterrence


D. Fudenberg & J. Tirole, 1983. *Capital as Commitment: Strategic Investments to Deter Mobility*, JET


**Lecture 13:** Double Marginalization


**Lecture 14:** Foreclosure (Vertical Restraints)


**Lecture 15:** Cartel Formation


**Excercise / Homeworks**

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