

California Institute of Technology
Ec 105. Industrial Organization. Winter Term 2005

Course Outline

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Class: Baxter 25 Mon. and Wed. 1.00 to 2.30.

Text Book: “Industrial Organization” by Oz Shy, MIT Press.

Recommended Reading. At times we will also refer to the following:

“Sunk Cost and Market Structure,” by J. Sutton, MIT Press.

“Industry Structure, Strategy and Public Policy,” by F. M. Scherer, Harper Collins.

“Information Rules” by C. Shapiro and H. Varian, HBS Press.

“The Innovator’s Dilemma” by C. Christensen, HBS Press.

Grades: Based on 5 homework sets, together worth half of the grade, and a final exam worth half. Collaboration is allowed on the homework, but not the final.

In this course we study the strategic decisions faced by firms in the marketplace. The basic framework of analysis is the “Structure-Conduct-Performance” paradigm. That is, we ask how does market structure, factors such as; the number of firms in the market, the relative size of firms, and the similarity of products, and the quality of information, affect strategy or conduct. Strategic decisions include; pricing practices, investment levels, advertising, and research expenditures. We then ask how strategic conduct affect the market’s “performance.” This includes questions such as: Is the market efficient? What are the firm’s profits? Are consumers hurt by certain practices? Is there too much or too little product diversity? We will also ask how performance may then have a feedback effect on structure. Examples include, innovation, exit and entry, and mergers.

In the first five to six weeks of the class we will present the analytical models used in Industrial Organization, and we will follow the text book closely. The last four weeks will involve “case studies” of particular industries to showcase how the models are used. This later part of the course will use additional readings that will be placed on reserve in the Millikan Library.

Syllabus

- 1 Introduction to Game Theory and Strategy.
- 2 The “Structure-Conduct-Performance,” paradigm.
- 3 Homogeneous Goods (commodities) and Models of Competition.
- 4 Exogenous Barriers to Entry: Technology and Sunk Costs.
- 5 Strategic Barriers to Entry 1. Advertising and Branding.
- 6 Strategic Barriers to Entry 2: Technology Choice and R&D.
- 7 Market Design 1: Vertical Relationships: Supply, Contracting, Integration.
- 8 Market Design 2: Horizontal Relationships: Mergers, Strategic Partnerships
- 9 Market Design 3: Network Externalities: Networks, Standardization.
- 10 The General Model: Empirical Implications and Tests of the Theory.
- 11 Case Study 1: The Beer Industry: Advertising and Contested Leadership.

13 Case Study 2: Intel: R&D and the Product Cycle.

14 Case Study 3: The Airline Industry: Endogenous Technology and Structure.

16 Case Study 4: A Primer on Media Markets: Sport as an "Essential Facility"