

**BUS350 Introduction to Operations Management/Industrial Organization  
(ECN321 Industrial Organization) (3 credit hours)\***

Spring and Fall semesters

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Office hours: XXX and by appointment

Meeting times: XXX

\*Japanese students who matriculated prior to April 2008 will do an additional one-credit project to earn 4 credits for this course.

**Description:** Industrial organization (IO) is the field of economics focused on the strategic behavior of firms, the structure of market, and their interactions. It is sometimes referred to as the economics of imperfect competition. Industrial organization has moved from being primarily empirically oriented to relying more extensively on sophisticated theoretical models. Historically, there have been two major approaches to IO; the structure-conduct-performance approach (SCP) and the Chicago School approach. Over the past 25 years, a good deal of consensus has developed among IO economists. The set of ideas embodied in this consensus is often called new industrial organization. A key part of new industrial organization is the use of game theory to model the behavior of firms within an oligopoly. This course attempts to use to some extent game theory as a unifying method of analysis of firms and industry conduct. Students will gain knowledge about the modern theory of industrial organization and an array of examples of industrial behavior and performance. During the course, there will be some discussion on the concept of the government-business relationship in Japan (Japan Inc), industrial policy, and “keiretsu.” This course investigates the outcome of these market structures in environments with price discrimination, product differentiation, durable goods, experience goods, collusion, signaling such as warranties and advertising, M&A, entry and exit. Students will gain understanding beyond the introductory treatment they received in principles of economics the complex nature of market mechanism.

**Objectives:** Courses in microeconomic theory usually emphasize theoretical rigor at the expense of real-world accuracy. This industrial organization course attempts to balance the two opposite directions, emphasizing a relatively more accurate depiction of the real world. This course is aimed at students who have completed at least a one-semester micro economic course. The level of technical mathematics necessary to understand all of materials is equivalent to the mathematics necessary to understand a standard intermediate microeconomics text.

**Study Materials:**

**<Textbook>**

Waldman, Don E. and Elizabeth J. Jensen. Industrial Organization: Theory and Practice, 3e. Pearson Addison Wesley, 2007.

**<Reference books, sources of readings and other information>**

- Ichikawa, Hiroya. “A Competition among rules: A Survey of Japan’s Competition Policy and Related Problems.” Paper presented at the Symposium on Europe and Japan: Partnership in a Changing World, Session VII, Competition among Rules, Organized by Japanese-German Center Berlin, Royal Institute of International Affairs RIIA in London, England, and Japan Institute for International Affairs(JIIA), held in Berlin, Germany, 1991.

- US Department of Commerce. "Japan. The Government-Business Relationship: A guide for the American Businessman." Bureau of International Commerce, 1972.
- Miyashita, Kenichi and David Russell. Keiretsu: Inside the Hidden Japanese Conglomerates. McGraw-Hill, 1994.
- Porter, Michael E., Hirotaka Takeuchi and Mariko Sakakibara. Can Japan Compete? Macmillan Press, 2000.
- Scherer, Frederic M. and David Ross. Industrial Market Structure and Economic Performance, Houghton-Mifflin, 3e, 1990.
- Shepherd, William. The Economics of Industrial Organization. Prentice-Hall, 1985.
- Schmalensee, Richard. "Industrial Organization," in The New Palgrave Dictionary of Economics, v. 2, pp. 803-08, 1987.

#### <More advanced readings>

- Shy, Oz. Industrial Organization: Theory and Applications. MIT Press, 1995. Graduate textbook.
- Tirole, Jean. Theory of Industrial Organization. MIT Press, 1988. Graduate textbook requiring extensive knowledge of calculus and game theory.
- Vives, Xavier. Oligopoly Pricing: Old Ideas and New Tools. MIT Press, 2001. Graduate textbook that follows a game-theoretic approach.

#### <Website Readings>

Students are required to follow news related to industrial organization.

**Assessment:** Students achievement of this course's objectives will be measured in the following five areas: (1) Class participation and presentation (20%) (2) News Brief Analysis (10 %) (3) Midterm exam (30%) (4) Final exam (30 %) (5) other factors (10 %)

**Academic Preparation:** Principles of Economics (or equivalent course). Fundamental understanding of the Japanese economy is recommended.

**Policies:** All assignments and exams must be completed to receive a passing grade for this course. Students are reminded not to engage in acts of plagiarism or other forms academic dishonesty.

**Course Format and Activities:** Every class starts with a brief discussion on news articles related to industrial organization. Class sessions will alternate between lectures and students presentation. Students have to complete the reading assignment before class. Classes are interactive and seminar-type.

#### **Schedule:**

<Week1>

Introduction to the course :

Grouping – leaders, and group names

About news items to be discussed in class

Assignments for class presentation

Outline of the presentation to be mailed before class

To [hiroya@aol.com](mailto:hiroya@aol.com)

Warming up Group discussion

<Weeks 2>

The basic of Industrial Organization

Group 1: Introduction pp1/14. (chapter1)

Group 2: The firms and its costs pp17/31 (chapter 2)

The Neoclassical Firm

Group 3: The profit- maximizing output level pp31/44.(chapter2)

<Weeks 3>

Competition and Monopoly

Group 4: The economics of perfect competition pp 51/61(chapter 3).

Group 5: The economics of monopoly,pp63/71(chapter 3)

Group 6: Present value and discounting/Antitrust policy towards monopolization (pp71/80)  
( chapter 3)

Note:

Further detailed schedule for Week4-13 will be distributed later.

< Weeks 4>

Market structure

Group 8: Concentration/ Relevant market/ Entry/Exit:pp88 /100 (chapter 4)

Group 9: Economies of scale / capital cost / product differentiation. pp 100/113 (chapter4)

Group 10: Mergers pp113/123 (chapter 4)

Group 11: Empirical evidence pp123/134 (chapter 4)

< Weeks 5>

Monopoly Practices

Group 12: Dominant firm price leadership; pp143/150 (chapter 5)

Group 13: Contestable markets : pp150/156

< Weeks 6>

Market Power and Performance: The empirical evidence

Group 14: Structure-Conduct-Performance: pp161/175(chapter 6)

Group 15: Measures of market structure, pp176/ 187(chapter 6)

Group 16: Prices and concentration/ New empirical  
industrial organaization:pp187/200 (chapter 6)

<Weeks 7>

Game Theory: A framework for understanding oligopolistic behaviour

Group17: zero-sum /prisoner's dilemma:

pp207/214 (chapter 7)

Group18: games of mixed strategies: pp215/222(chapter 7)

Group19: Structure-Conduct-Performance:

pp161/175 (chapter 6)

<Weeks 8>

The development of oligopoly theory

Group20: Cournot model/ pp230/236(chapter 8)

Group21: Cournot-Nash Equilibrium: pp236/251(chapter 8)  
Group22: Stackelber model/ Bertrand model: pp251/262(chapter 8)

<Weeks 9>

Collusion: The great prisoner's dilemma  
Group20: Prisoner's dilemma revisited/pp266/274(chapter 9)  
Group21: Trigger price strategies: pp274/282(chapter 9)  
Group22: Efficient Collusion: pp282/289(chapter 9)  
Group 23: Antitrust policy toward collusion :pp289/299.

<Weeks 10>

Cartels in action  
Group23: Effective collusion/pp303/311(chapter 10)  
Group24: Most favoured Customer Clause/low price guarantees: pp311/317  
Group 25: Trade and professional associations/ Excess capacity problems:  
pp317/329(chapter 10)

<Weeks 11>

Oligopoly behaviour: Entry and pricing to deter entry  
Group26: Limit pricing: pp335/351(chapter 11)  
Group27: Predatory pricing: pp351/362 (chapter 11)

<Weeks 12> subject to changes

Product differentiation and advertising  
Group28: Forms of product differentiation: pp416/428 (chapter 13)  
Group29: product differentiation with asymmetric information: pp428/434 (chapter 13)  
Group30: Social benefits and cost of advertising: pp435/450(chapter 13)  
Group31: Product differentiation advantages of first movers: pp451/463(chapter 13)

<Weeks 13> subject to changes

Vertical Integration and Vertical Relationships  
Group32: Vertical relationship: pp563/574(chapter 16)  
Group33: Competitive effects: pp575/585(chapter 16)  
Group34: Public policy towards vertical restraints of trade and group Boycotts:  
pp585/596(chapter 16)

<Weeks 14> subject to changes

Regulation and deregulation  
Group35: Traditional public utility regulation: pp606/619(chapter 17)  
Group36: Movement from regulation to deregulation: pp619/633(chapter 16)

<Weeks 15>

Summing up  
Final exam/term paper