

**EC4070**  
**INDUSTRIAL ORGANIZATION THEORY**  
(AS OF OCTOBER 19<sup>TH</sup>, 2005)

**COURSE DESCRIPTION:**

In economics, the field of Industrial Organization (IO) studies imperfect competitive markets, i.e., markets where a firm is able to exercise market power and set a price above marginal cost. By applying microeconomics and game theory, IO examines the strategic interaction and behavior of firms to acquire and maintain market power, and use these theoretical tools to explain observed features in particular markets and industries, such as the determination of prices, product positioning, research and development, advertising, and so forth. The objective of the course is to help you understand:

- a. How markets work (e.g. How does an incumbent firm discourage others to enter its market? Why collusion is possible in some markets and not in others?)
- b. How the firms' actions affect consumer welfare (e.g. Does price discrimination hurt consumers? Are vertical contracts between a manufacturer and a retailer good or bad for consumers?)
- c. Why government intervenes in markets (e.g. Why does the government regulate natural monopolies? What are the effects of patents on investment in R&D?)

**TEXTBOOKS:**

My lectures are drawn mostly from a combination of the following two textbooks:

- Luis M.B. Cabral, *Introduction to Industrial Organization*, MIT Press, 2000.
- Lynne Pepall, Daniel Richards & George Norman, *Industrial Organization: Contemporary Theory and Practice*, Thomson Learning, 3<sup>rd</sup> Edition, 2005.
- W. Kip Viscusi, Joseph E. Harrington and John M. Vernon, *Economics of Regulation and Antitrust*, MIT Press, 4<sup>th</sup> Edition, 2005

Cabral's book is very easy to read and gives you a concise presentation of most of the topics I will cover in lecture. Pepall et al. is a more advanced, more technical textbook than Cabral. Viscusi et al. is a textbook that focuses on the active role of the government.

There are several texts I intend to use in order to supplement my lectures. In fact, students who would like to extend their knowledge may find them useful. In increasing order of difficulty, they are:

- John E. Kwoka & Lawrence J. White, *The Antitrust Revolution: Economics, Competition, and Policy*, Oxford University Press, 4<sup>th</sup> Edition, 2003.
- Massimo Motta, *Competition Policy: Theory & Policy*, Cambridge University Press, 1<sup>st</sup> Edition, 2004.
- Jeffrey Church & Roger Ware, *Industrial Organization: a Strategic Approach*, McGraw-Hill, 2<sup>nd</sup> Edition, 2000.
- Oz Shy, *Industrial Organization: Theory and Applications*, MIT Press, 1995.
- Stephen Martin, *Advanced Industrial Economics*, Blackwell Publishers, 2<sup>nd</sup> Edition, 2002.
- Jean Tirole, *Theory of Industrial Organization*, MIT Press, 1988.

### **LECTURE MEETINGS:**

Lectures are held Thursdays from 9:00 AM to 11:00 AM in Aras an Pharsaigh, room 4.03. The course starts October 12<sup>th</sup> and ends May 13<sup>th</sup>. As such, I will be in charge of the year-long course.

### **TUTORIAL MEETINGS:**

The course has been assigned a one-hour slot for tutorials on Mondays from 1:00 PM to 2:00 PM, in the Arts Building, room 3019. During tutorials, my focus is on presenting exercises that apply lecture material in a practical way. Meetings will occur every other week. I will post on the website a schedule of meetings.

### **COURSE WEBSITE**

All documents (syllabus, lecture notes, assignments) will be posted at the course website. You will be sent an e-mail with the link to that webpage. Notice that there will be NO link through my homepage at the Department of Economics.

### **OFFICE HOURS:**

I hold office hours Mondays from 3:00 PM to 4:00 PM and Thursdays from 11:30 AM to 12:30 PM, in the Arts Building, room 3012. No appointment is necessary. Please feel free to drop by my office to ask questions, to make suggestions, or even just to introduce yourself. You can also contact me by e-mail at [Martin.Paredes@tcd.ie](mailto:Martin.Paredes@tcd.ie) to set up an appointment at another time.

### **COURSE ASSESSMENT:**

There will be a Final Examination at the end of the year that will count for 70% of the overall grade. The examination is comprehensive. If you miss the examination because of illness, the usual rules regarding a medical certificate apply if you wish to be excused. A medical certificate must be supplied to the Department of Economics office within three days of the missed test or examination.

The remaining 30% will be assessed as follows:

- Two papers, which will be worth a combined 15%. At each point of time I will announce a list of possible topics for you to choose. Tentatively, one of them should be submitted at the end of the Michaelmas term, and the other at the end of the Hilary term.
- A presentation of an antitrust case, including submission of a document about it. This is worth another 15%. I may allow students to form groups, depending on the size of the class. Presentations would occur at the end of the Trinity term

### **ATTENDANCE TO LECTURES**

You are responsible for everything covered in lectures. If, for any reason, you have to miss a lecture, I encourage you to make prior arrangements with another student to take careful notes for you and to sit with you and explain their notes afterward. Please do not ask me to “fill you in” on what you missed.

Please arrive on time. There is absolutely NO chatting during lecture. Also, please turn off your cell phones.

## COURSE OUTLINE

The course outline covers the material I intend to cover during the year (both modules). For Sections I and II, my lectures are based on both Cabral and Pepall. The references for the other books are complementary, although sometimes I will make use of some of them (in that case, I will make the respective announcement). The outline and references for Section III are preliminary.

### I. Industry Structures

1. Introduction.  
[ Cabral, ch. 1 & 2 | Pepall, ch. 1 & 4 ]  
[ Church, ch. 1, 2.1 & 2.3 | Shy, ch. 1 & 3 | Tirole, Introduction (pp. 1-4) ]
2. Monopoly & Perfect Competition.  
[ Cabral, ch. 5.1 (pp.69-70) & 6.1 | Pepall, ch. 2 ]  
[ Church, ch. 2.2, 4.1 & 4.4 | Shy, ch. 4, 5.1 & 5.2 | Tirole, Introduction (pp. 6-12), ch. 1 ]
3. Other models with no Strategic Behavior: Dominant Firm, Monopolistic Competition.  
[ Cabral, ch. 5.1 (pp. 70-75) & 6.2 to 6.4 ]  
[ Church, ch. 4.2 & 11.2 | Shy, ch. 7.2 | Tirole, ch. 7.2 ]
4. Review of Game Theory.  
[ Cabral, ch. 4 | Pepall, ch. 9.1, 9.2, 9.3, 11.3, 14.2 & 14.3 ]  
[ Church, ch. 7 & 9 | Shy, ch. 2 | Tirole, ch. 11 ]
5. Single-Period Oligopoly Models: Cournot, Bertrand and Stackelberg Duopoly Models.  
[ Cabral, ch. 7 | Pepall, ch. 9.4, 9.5, 11.1, 10.1 & 10.2 ]  
[ Church, ch. 8 & 13.2 | Shy, ch. 6.1 to 6.4 & 6.7 | Tirole, ch. 5.1 to 5.4 ]
6. Measures of Market Structure and Market Power.  
[ Cabral, ch. 9 | Pepall, ch. 3 ]  
[ Church, ch. 2.4 & 12 | Shy, ch. 8.1 | Tirole, ch. 5.5 ]

### II. Business Strategies

7. Collusion and Cartels.  
[ Cabral, ch. 8 | Pepall, ch. 14.1 & all 15 ]  
[ Church, ch. 10 | Shy, ch. 5.4 (pp. 78-79) & 6.5 | Tirole, ch. 6 ]
8. Product Differentiation.  
[ Cabral, ch. 12.1 to 12.3 | Pepall, ch. 10.3 & 11.2 ]  
[ Church, ch. 11.1 & 11.4 | Shy, ch. 7.1 & 7.3 to 7.5 | Tirole, ch. 7.1 & 7.3 ]
9. Price Discrimination & Other Pricing Strategies.  
[ Cabral, ch. 10 | Pepall, ch. 5, 6 & 8 ]  
[ Church, ch. 5 & 16.4 | Shy, ch. 5.3, 13, 14.1 & 14.4 | Tirole, ch. 3 ]
10. Horizontal Strategies: Entry deterrence, Predation, Mergers.  
[ Cabral, ch. 15 | Pepall, ch. 16, 12 & 13 ]  
[ Church, ch. 13.3, 13.4, 14.1, 14.3, and all 20, 21 & 23 | Shy, ch. 8.2.1, 8.3 & 8.4 | Tirole, ch. 8 & 9 ]

