



Econ 2107, 2057, 8038: Industrial Organisation **Semester II 2009**

Course objective and description

Industrial Organisation studies the interdependence of market structure, firm's conducts, and market outcomes. In this course, students will be introduced to the theory of the firms, imperfect competition, oligopoly theory, and other strategic behaviours. Specific topics covered include product differentiation, entry deterrence, and vertical relationship.

The analysis in this course is essential for understanding competition policy and regulation. As the first IO course, materials on anti-trust economics may be used as motivating examples, but will not be the main focus of the course.

Course Information

Industrial Organisation is an undergraduate unit (2107) that can also be taken at Honours (2057) and Graduate (8038) levels. There are two hours of lectures each week for all students. One hour of tutorial starts from week two for all students. Students taking the course at Honours (2057) and Graduate (8038) level have one additional hour per week starting from week 3. Two of this additional hour will be required for all other students (week 9 and 10). A detailed schedule will be available in the beginning of the semester. Students are strongly advised to attend all the lectures and tutorials. Students are responsible for any materials and announcements missed due to their absence.

Learning Outcomes

On satisfying the requirements for this course, students will have the knowledge and skills to:

- Understand firms and market structure and the consequence of various conducts of the firms

- Have a solid understanding of various IO models and be ready to continue to courses on competition policy and regulation

Own Study

University study requires at least as much time and effort as a full-time job. You should expect to put in at least 6 hours per week of your own study time for this course in addition to the lectures and tutorials. Discussion with fellow students can also be valuable.

Lecture times and locations

There would be four hours per week. The time and location is TBA.

The exact schedule detailing the allocation of these hours among lectures, tutorial, and the postgraduate and honours hour will be made available on WebCT soon.

Lecturer

Dr. Tina Kao

Room 2015, H. W. Arndt Building 25a

Email: tina.kao@anu.edu.au

Office hour: Wednesdays 11 to 12 noon or by appointment.

- Please note that your lecturer will not answer consultation type of questions via email. Please come to see her during the office hour.
- Please read this outline carefully. Email questions enquiring about information covered in this outline will not be answered.

Assessment

Pass students (2107):

- Two assignments, each worth 5%.
- Tutorial assessment and participation: 5% of your course grade
- A midterm exam which will count for 35% of your course grade. The mid term exam will be held in week 7. The date is TBA.
- A final exam which will count for 50% of your course grade

Honours and graduate students (2057, 8038):

- Two assignments, each worth 5%.
- Tutorial assessment and participation: 5% of your total grade
- Presentation and discussion during the postgraduate and honours hour worth 5% of your course grade
- A midterm exam which will count for 30% of your course grade. The mid term exam will be held in week 7. The date is TBA.
- A final exam which will count for 50% of your course grade
- Honours and graduate students may be subject to more materials in assessments covering the additional materials.

A few words about the assessments:

- ❖ Assignments: No extension will be granted. Any late assignment will get zero. You may discuss with your classmates about the problem sets. But each student must submit their own problem sets. Typed answers are encouraged.

Special Exams, Special Consideration, Supplementary Exams, Academic Honesty, etc.

The university has rules dealing with situations where you are unable to attend or complete assessments to the best of your abilities due to accident, illness etc. It is your responsibility to familiarise yourself with the rules with regard to special examinations, special consideration and supplementary exams - see http://cbe.anu.edu.au/Current_Students/general_info/ under General Policies. Clarification can be obtained from the College Student Administration Office on the first floor of the Copland Building

Requests for Special Exams must be made to the College Student Administration Office. Requests for Special Consideration should be made to the School of Economics. In attention to School of Economics administrator, Ms. Maria Tatarow.

The university has strict rules in relation to academic honesty. You should consult the site <http://academichonesty.anu.edu.au/> for ANU's policies.

Textbook

The materials in this course will be drawn from several textbooks. The main textbook to be used:

Church, Jeffrey and Roger Ware (2000) *Industrial Organization. A strategic approach*. Irwin McGraw-Hill.

This book covers a lot of material. We will focus on selected chapters from the first 16 chapters of the book. The material of the rest of the book is more relevant for other courses such as competition policy and regulation.

This book is currently out of print. The new edition is coming out with Cambridge University Press. You may still be able to order some copies from amazon.com. The authors have kindly made the first edition of the book available online at

<http://homepages.ucalgary.ca/~jrchurch/page4/page5/files/PostedIOSA.pdf>

Syllabus (Tentative only)

List of materials for the additional hour for honours and graduate students will be circulated in the beginning of the semester. Detailed schedule with topic to covered will be available on WebCT in the beginning of the semester.

1. The Welfare Economics of Market Power
 - Profit maximisation
 - Perfect competition
 - Efficiency
 - Market power
2. Theory of the Firm
 - Neoclassical Theory of the Firm
 - Why do firms exist
 - Limits to firm size
 - Do firms profit maximise

3. Monopoly
 - Sources of market power
 - A dominant firm with a competitive fringe
 - Durable goods monopoly
 - Market power: A second look
 - Benefits of monopoly
4. Non-Linear Pricing and Price Discrimination
 - Examples of price discrimination
 - Mechanisms for capturing surplus
 - Market power and arbitrage: Necessary conditions for price discrimination
 - Types of price discrimination
5. Market Power and Product Quality
 - Search goods
 - Experience goods and quality
 - Signalling high quality
6. Game Theory I
 - Foundations and principles
 - Static games of complete information
7. Classic Models of Oligopoly -- Cournot and Bertrand
 - Cournot
 - Market power and efficiency
 - N firm oligopoly
 - Collusion
 - Bertrand
8. Game theory II
 - Extensive forms
 - Strategies vs. actions and Nash equilibrium
 - Noncredible threats
 - Two-stage games
 - Games of almost perfect information

9. Dynamic Models of Oligopoly
 - Reaching an agreement
 - Dynamic games
 - Supergames
 - Factors that influence the sustainability of collusion
10. Product Differentiation
 - Monopolistic competition
 - Bias in product selection
 - Address models
11. Strategic Behaviour
 - The Stackelberg equilibrium
 - Entry deterrence
12. Entry Deterrence (if time permits)
 - Investment and entry deterrence
 - Contestable markets
13. Advertising and Oligopoly (if time permits)
 - The welfare economics of advertising
 - Theoretical analysis of advertising and oligopoly
 - Advertising and strategic entry deterrence
 - Advertising and oligopoly empirics

Additional reading

These papers are all classic IO papers. Additional materials for the additional hour of Honours and Graduate students will be given during the semester.

1. Green, Edward J, and Robert H. Porter (1984) Noncooperative Collusion under Imperfect Price Information. *Econometrica*, **52**, 87-100.
2. Rotemberg, Julio J. and Garth Saloner (1986) A Supergame-Theoretic Model of Price Wars during Booms. *American Economic Review*, **76**, 390 – 407.
3. Shaked, Avner and John Sutton (1982) Relaxing Price Competition through Product Differentiation. *Review of Economic Studies*, **49**, 3 – 13.

4. Dixit, Avinash and Joseph Stiglitz (1997) Monopolistic Competition and Optimum Product Diversity. *American Economic Review*, **67**, 297 – 308.
5. Mankiw, N. Gregory and Michael D. Whinston (1986) Free Entry and Social Inefficiency. *Rand Journal of Economics*, **17**, 48 – 58.
6. Jovanovic, Boyan (1982) Selection and Evolution of Industry. *Econometrica*, **50**, 649 – 70.
7. Gilbert, Richard and David Newbery (1982). Preemptive Patenting and the Persistence of Monopoly. *American Economic Review*, **72**, 514 – 26.
8. Fudenberg, Drew and Jean Tirole (1985) Preemption and Rent Equalisation in the Adoption of New Technology. *Review of Economic Studies*, **52**, 383 – 401.
9. Milgrom, Paul and John Roberts (1982) Limit Pricing and Entry under Incomplete Information. *Econometrica*, **50**, 443 – 60.