

Course Outline for 'Industrial Economics' (EC3313) - 2004/05 Autumn & Spring

Course Code and Title

Industrial Economics (EC3313)

Lecturer

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Aims

EC3313 is a full-year third year undergraduate course in industrial economics. Its aim is to familiarise students with a broad range of the methods and models applied by economists in the analysis of firms and industries. Students should have a grounding in microeconomics and mathematics, including calculus.

Learning Outcomes

Upon completion of the course students should:

- Understand basic models of the behaviour of firms and industrial organisation and how they can be applied to policy issues.
- Be able to manipulate these models and be able to solve analytically problems relating to industrial economics.
- Be able to apply the models to important policy areas while being aware of the limitations of the theory.

Course Delivery

The course will be delivered through a one-hour lecture and a one-hour seminar each week. Specific learning outcomes and prescribed reading are provided for each week of the course. Seminars will provide an opportunity for further investigation and manipulation of models, and to solve assigned mathematical problems.

The instructor is available for consultation (either by you individually, or in small groups) during advertised office hours or by appointment.

Assessment

- 3-hour unseen examination, which contributes 100% of the final mark and is taken during the Exam Term (May/June). The exam will test your knowledge and understanding of the material covered in the course; your ability to manipulate diagrammatic and algebraic versions of the models you have learned; your ability to apply models to ‘real’ economic situations; your ability to critically appraise models and their application.
- Formative assessment will consist of two take-home essays and two in-class tests (comprising short answer questions) taken during the year. The dates for these are laid out in the current Student Handbook. You will be provided with standardised feedback on these pieces of work.

Reading

The main course text is:

J. Church and R. Ware, *Industrial Organization: A Strategic Approach*, McGraw-Hill, 2000.

You are strongly encouraged to buy your own copy of this book as you will be studying from it every week. You are expected to study all parts of the chapters assigned in the weekly readings, though advice will be given in lectures on the ‘key’ bits.

The other book that we will refer to a few times is:

J. E Kwoka, Jr. and L. J. White, *The Antitrust Revolution: Economics, Competition, and Policy*, 4th ed., Oxford University Press, 2004.

This book is recommended, but not required, reading.

Weekly Timetable

Lecture 1 Introduction; overview of course; welfare & market power
Church and Ware: Chapter 2

In addition to learning the material covered in the reading and lecture, by the end of this week you should:

- 1) Have an overview of the structure and content of the course.
- 2) Be familiar with the notion of perfect competition and the characterisation of a competitive equilibrium.
- 3) Understand the welfare significance of marginal cost pricing.

Lecture 2 Monopoly

Church and Ware: Chapter 4 (except 4.3.2, 4.3.3 and 4.3.4)

In addition to learning the material covered in the reading and lecture, by the end of this week you should:

- 1) Be able to characterise monopoly equilibrium with durable and non-durable goods.

Lecture 3 Game theory I: static games

Church and Ware: Chapter 7 (except 7.3.3)

In addition to learning the material covered in the reading and lecture, by the end of this week you should:

- 1) Understand what a game is and what a Nash equilibrium is.

Lecture 4 Classic models of Oligopoly I: Cournot competition

Church and Ware: Chapter 8 (except 8.2.3 and 8.2.4)

- 1) Be able to characterise Cournot equilibrium.
- 2) Understand the welfare implications of Cournot competition.

Lecture 5 Classic models of Oligopoly II: Bertrand competition

Church and Ware: Chapter 8

In addition to learning the material covered in the reading and lecture, by the end of this week you should:

- 1) Be able to characterise Bertrand equilibrium.
- 2) Understand the comparative welfare properties of Cournot and Bertrand outcomes.

Lecture 6 Game theory II: dynamic games and repeated games

Church and Ware: Chapter 9

In addition to learning the material covered in the reading and lecture, by the end of this week you should:

- 1) Understand the concepts of an *extensive form game*, *backward induction* and *subgame perfect equilibrium*.

Lecture 7 Collusion

Church and Ware: Chapter 10

In addition to learning the material covered in the reading and lecture, by the end of this week you should:

- 1) Understand the requirements for self-enforcing collusion in repeated games.

Lecture 8 Product differentiation I: monopolistic competition

Church and Ware: Chapter 11

In addition to learning the material covered in the reading and lecture, by the end of this week you should:

- 1) Be familiar with the different approaches to modelling competition when products are differentiated (address vs. non-address approaches).
- 2) Understand and be able to work with a model of monopolistic competition.

Lecture 9 Product differentiation II: address approaches

Church and Ware: Chapter 11

In addition to learning the material covered in the reading and lecture, by the end of this week you should:

- 1) Be familiar with Hotelling's model of a "linear city".

Lecture 10 Review (a look at the fall midterm test)

Lecture 11 Strategic behaviour I: entry deterrence

Church and Ware: Chapter 13

In addition to learning the material covered in the reading and lecture, by the end of this week you should:

- 1) Understand some mechanisms that may be used to create entry barriers strategically.

Lecture 12 Strategic behaviour II: principles

Church and Ware: Chapter 15

In addition to learning the material covered in the reading and lecture, by the end of this week you should:

- 1) Understand the concepts of *strategic complements* and *strategic substitutes* and their importance for game-theoretic analysis.

Lecture 13 Market power and product quality

Church and Ware: Chapter 6 (except 6.3)

In addition to learning the material covered in the reading and lecture, by the end of this week you should:

- 1) Understand the market for 'lemons' and its implications for provision of quality in goods markets.

Lecture 14 Advertising

Church and Ware: Chapter 17 (except 17.4)

In addition to learning the material covered in the reading and lecture, by the end of this week you should:

- 1) Be able to characterise levels of persuasive advertising and the welfare implications of that advertising.
- 2) Understand the role of advertising as a strategic instrument.

Lecture 15 Research and development

Church and Ware: Chapter 18 (except 18.3)

In addition to learning the material covered in the reading and lecture, by the end of this week you should:

- 1) Be familiar with the classification of process innovations (difference between drastic and non-drastring innovation).
- 2) Be familiar with the notion of a patent 'race', equilibrium in patent races, and social implications.

Lecture 16 Exclusionary strategies I: raising rivals' cost

Church and Ware: Chapter 20

In addition to learning the material covered in the reading and lecture, by the end of this week you should:

- 1) Understand the concept of *raising rivals' cost* and be familiar with some models that investigate this concept.

Lecture 17 Exclusionary strategies I: predatory pricing

Church and Ware: Chapter 21 (except 21.3 and any technical aspects of an incomplete information model)

In addition to learning the material covered in the reading and lecture, by the end of this week you should:

- 1) Know what economists mean by *predatory pricing* and be familiar with some theories that investigate this concept.

Lecture 18 Vertical integration and vertical restraints

Church and Ware: Chapter 22 (except 22.2 and 22.3)

In addition to learning the material covered in the reading and lecture, by the end of this week you should:

1) Be familiar with concept of *double marginalization*.

Lecture 19 Horizontal mergers

Church and Ware: Chapter 23 (except 23.4 and 23.5)

In addition to learning the material covered in the reading and lecture, by the end of this week you should:

1) Understand the meaning and implications of horizontal mergers in a variety of circumstances.

Lecture 20 Review