

Course Outline

'Industrial Economics' (EC3313) – 2006/07 Autumn & Spring

Course Code and Title

Industrial Economics (EC3313)

Lecturer

Johan Lagerlof

Aims

EC3313 is a full-year third year undergraduate course in industrial economics. Its aim is to familiarize students with a broad range of the methods and models applied by economists in the analysis of firms and industries. A broader goal is that students who take the course will, by working extensively with theoretical models, acquire analytical skills that are transferable to other kinds of intellectual problems.

Prerequisites

Students should have a grounding in microeconomics and mathematics, including calculus. A large part of the course will consist of analyses of formal economic models. Therefore, it is important that students who intend to take this course, and who feel that they might have forgotten things from their previous mathematics studies, rehearse the material from Quantitative Methods I and II.

Learning Outcomes

Upon completion of the course students should:

- Understand basic models of the behavior of firms and industrial organization 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.
- Be familiar with the history of competition policy and some important American and European competition law.

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.

There is a course website at <http://www.johanlagerlof.org/page15>.

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; and your ability to critically appraise models and their application.
- Formative assessment will consist of two take-home essays and two in-class tests taken during the year. The dates for these are laid out in the current Student Handbook. You will be provided with standardized feedback on these pieces of work.

Reading

The main course text is:

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

A pdf file version of this book is available free of charge on the Internet at the following address (a link is also provided on the course home page):

<http://homepages.ucalgary.ca/~jrchurch/page4/page5/page5.html>

You must respect the “Terms and Conditions of Use” that can be found on the first page of the downloadable document. Among other things, these say that “[The pdf file version of the book] is available for personal and noncommercial use. You are permitted by these Terms and Conditions of Use to make one stored electronic copy and one paper copy for your personal, noncommercial use.”

The book is currently out of print, but those of you who prefer a printed “real” book may be able to find a second hand copy to buy (for example, at amazon.co.uk). A

second edition of the book is supposed to be published in the autumn of 2006 at Cambridge University Press. However, in the course we will use the first edition, as the new edition is not likely to be available in time (if it at all comes out).

The other texts we will use are:

M. Motta, *Competition Policy: Theory and Practice*, Cambridge University Press, 2004.

Pepall, L., D.J. Richards and G. Norman, *Industrial Organization: Contemporary Theory & Practice*, third edition, Thomson, 2005.

We will read one chapter from each of these books. A copy of the chapters will be provided by the lecturer; hence, there is no need to purchase these books.

Weekly Timetable

If any date for a midterm in this timetable differs from the date in the Student Handbook, the date in the Handbook is the correct one.

Lectures 1-2: Overview of course; competition policy: history, welfare measures, competition law (Motta, Ch. 1; Church and Ware: Chapter 2).

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

1. Have an overview of the structure and content of the course.
2. Be familiar with the history of competition policy, with possible objectives of competition policy, and with some central US and European competition law.

Lecture 3: Monopoly (Church and Ware: Chapters 2 and 4.4-4.5).

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

1. Be able to characterize a monopolist's optimal price.
2. Understand why and how a monopoly gives rise to a "dead-weight loss".
3. Know about "rent-seeking behavior" and "X-inefficiency".

Lectures 4-5: Static games and Cournot competition (Church and Ware: Chapter 7 (Sections 7.1, 7.2, 7.3.1, 7.3.4 and 7.6) and Chapter 8 (Sections 8.1, 8.2.1 and 8.2.2)).

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

1. Know what economists mean by “Cournot competition”.
2. Be able to characterize Cournot equilibrium.
3. Understand the welfare implications of Cournot competition.

Lecture 6: Midterm test.

Lecture 7: Bertrand competition (Church and Ware: Chapter 8 (Sections 8.3.1 and 8.3.2) and Chapter 15 (Section 15.1 – the explanations of “strategic complements and “strategic substitutes”).

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 “Bertrand competition”.
2. Be able to characterize Bertrand equilibrium.
3. Understand the welfare implications of Bertrand competition.
4. Understand the concepts of *strategic complements* and *strategic substitutes* and their importance for game-theoretic analysis.

Lecture 8: Dynamic games and first and second movers (Church and Ware: Chapter 9 (Sections 9.1-9.4 and Chapter 13 (Section 13.2)).

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 the Stackelberg model.
2. Understand and be able to solve the Stackelberg model.
3. Understand the concepts of *backward induction* and *subgame perfect equilibrium*.

Lecture 9: Limit pricing and entry deterrence (Church and Ware: Chapter 13 (Sections 13.3-13.4).

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 10: Review.

Lectures 11-12: Collusion (Church and Ware: Chapter 10 (Sections 10.3-10.7)

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

1. Be familiar with the concept of a “super game” or a “repeated game” and be able to solve for an equilibrium of such a game.
2. Understand the requirements for self-enforcing collusion in repeated games.

Lecture 13-14: Empirical tests of oligopoly (Church and Ware: Chapter 8 (Section 8.5) and Chapter 12).

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

1. Know what the oligopoly model of conjectural variations is.
2. Be familiar with the Bresnahan-Lau approach of identifying and measuring market power (i.e., the approach explained in Section 12.2.1).

Lectures 15-16: Product differentiation (address approaches) (Church and Ware: Chapter 11 (Sections 11.1 and 11.4)).

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

1. Be familiar with and able to solve (different versions of) Hotelling’s model of a “linear city”.

Lecture 17: Midterm test.

Lecture 18-19: Mergers (Church and Ware: Chapters 22-23; Pepall et al.: Chapter 16)

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

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

Lecture 20: Review.