Industrial Organization

Class location/time:

TSH B106    Thursday 7:00PM - 10:00PM

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Course Objectives

This course examines the organization of firms, industries and markets. Industrial Organization (IO) studies the strategic interactions of firms in markets, and their implications for firms’ profits and consumer welfare. Market power and market structure are key concepts in IO. Market power (or monopoly power) is the ability of a firm, or group of firms, to gain extraordinary profits above those needed to remunerate the inputs.

Market structure is a description of the number of firms in the market and of their respective market shares. A *monopoly* is an extreme case of market structure where a single firm controls the total output in the market. At the other extreme we have a *competitive* market structure where industry output is equally shared by a very large number of very small firms.

Firms’ decisions involve many different factors. As in Economics in general, Industrial organization deals with this complexity by constructing analytical models. A model is a deliberate simplification that captures the essential features of a problem and omits other less relevant features. The emphasis of this course is on analytical models. You will have to understand the structure of these models. However, we will also see case studies of some specific firms and industries.

Some examples of the type of questions that this course deals with are:

- *Which factors determine the number of firms in a market and the degree of market power of these firms?*
- *What are the consequences of market concentration for consumer welfare?*
- *We will also study the effects of alternative government interventions in markets: what practices should antitrust law prohibit?*

Two thirds of the course stress basic understanding of IO theory.

One third of the course examines selected empirical applications. It is often the case that in order to answer important questions related to competition between firms in an industry, we need to estimate demand functions or firms’ costs. *Empirical Industrial Organization* (EIO) provides the tools (i.e., the models and methods) to address these empirical questions. The tools of EIO are used in practice by firms, government agencies, consulting companies, and academic researchers.
**Required Material**

**Textbook**

**or**

**Econometric Software**
Different data management and/or statistical/econometric software packages are available. For the classroom demonstrations, I will use Stata ([www.stata.com](http://www.stata.com)), one of the packages commonly used by economists. Although purchasing Stata is not required for this course, student pricing can be found at: [http://www.stata.com/order/new/edu/gradplans/campus-gradplan/](http://www.stata.com/order/new/edu/gradplans/campus-gradplan/)

For the purposes of this course, a Small Stata 13 (or any older version) is more than satisfactory.

**Course Outline**

**Warning:** the course outline should be viewed as tentative and will be adjusted as the term progresses.

1. Theory of the firm: cost and ownership (Chapter 1; Chapter 2; Chapter 4 PRN or Chapter 1-2 CP + Slides)
2. Market structures: (Chapter 3; Chapter 5-6; Chapter 9; Chapter 10 PRN or Chapter 3-8 CP + Slides)
   a. Competition
   b. Monopoly:
      i. Price Discrimination: Linear and Nonlinear Pricing
   c. Static models of imperfect competition: oligopoly
      i. Single-period games: Cournot and Bertrand
      ii. Multi-period games: collusion
3. Product differentiation: (Chapter 7 PRN + Slides)
   a. Product variety and quality under Monopoly
b. Spatial model of Hotelling

4. Introduction to the New Empirical Industrial Organization (NEIO) approach: Slides
   a. Introduction to Empirical Industrial organization
   b. Stata tutorial

5. Anticompetitive Behaviour and Antitrust Policy (Chapter 12-14 PRN or Chapter 19-20 CP + Slides)

**Evaluation**

**Final grades** will be based on:

1. the mid-term exam **(30%)**
2. 2 problem sets **(10% each)**
3. the final exam **(50%).**

**Problem set**

*A late problem set will NOT be accepted under any circumstances.* The solution will be discussed in class. All the announcements and instructions on when/how the problem sets should be returned will be posted on the course website (Avenue to Learn). Remember that the problem sets carry a weight of 20%, so if you work sincerely on them, you will be able to secure that part of your grade.

**Exams**

The **mid-term** in-class exam is worth **30%** of your final grade and will be given on **February 23rd, 2017.** The **final exam** is worth **50%** of your final grade. The final exam is administered during the final exam week and will be **comprehensive.** The final exam is scheduled by the Registrar, and missed final exams will be dealt with under the Registrar's rules.

**Missed work**

If you have a valid and verified reason not to take the midterm exam or submit a problem set, the weight of the missed work will be applied to your final exam. In this case, you must notify the instructor within the time frame specified by the university policies. Because the weight of the mid-term exam is **30%,** in the case of missing the mid-term you must come to the Faculty Office and submit supporting documentation. **Filing the MSAF form only is NOT sufficient for missing the mid-term exam.**
Calculators
Only university approved calculators will be permitted in the test and the exam.

Photo ID
You will be required to show your university photo ID at the test and the exam.

Course modification warning
The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check his/her McMaster email and course websites weekly during the term and to note any changes.

Academic dishonesty
Academic dishonesty consists of misrepresentation by deception or by other fraudulent means and can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university. It is your responsibility to understand what constitutes academic dishonesty. For information on the various kinds of academic dishonesty please refer to the Academic Integrity Policy, specifically Appendix 3, located at http://www.mcmaster.ca/academicintegrity/

FACULTY OF SOCIAL SCIENCES E-MAIL COMMUNICATION POLICY
Effective September 1, 2010, it is the policy of the Faculty of Social Sciences that all e-mail communication sent from students to instructors (including TAs), and from students to staff, must originate from the student’s own McMaster University e-mail account. This policy protects confidentiality and confirms the identity of the student. It is the student’s responsibility to ensure that communication is sent to the university from a McMaster account. If an instructor becomes aware that a communication has come from an alternate address, the instructor may not reply at his or her discretion.
Email Forwarding in MUGSI:
http://www.mcmaster.ca/uts/support/email/emailforward.html

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