

McGill University
Department of Economics
Class Time: Mon/Wed 16.05-17.25
Class Room: BURN 1B39

Instructor: Dhanoos (Dee) Sutthiphisal
Office: 3610 McTavish, Room 11-3
Office Hours: Mon/Wed 15.00-16.00 & After class
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ECON 305: INDUSTRIAL ORGANIZATION
UNDERGRADUATE

FALL 2010

Course Objectives

This course extends the basic but rather abstract microeconomic concepts you have learned to a more realistic world. The central issues concern firms' choice of price, quantity, and quality in markets where the assumptions behind perfect competition do not hold. These questions apply to a wide range of disciplines such as industrial economics, business strategy and corporate law. Using both theoretical models and empirical evidence, we will examine:

- Various types of market structures (e.g. monopoly and perfect competition).
- The (strategic) interaction among firms within and across industries (AKA game theory).
- Various business practices (e.g. product differentiation, price discrimination, price wars and mergers).
- Government laws and policies (e.g. antitrust laws and intellectual property rights system).

Note that because of limited class time, the discussion on theory of the firm will be kept at minimal for the course even though it is one of important areas in industrial organization.

Course Prerequisites

Students are expected to have knowledge of introductory economic theory (Econ 208 and 209) as well as basic algebra.

Textbook

The recommended textbook for this course is Dennis W. Carlton and Jeffrey M. Perloff, *Modern Industrial Organization*, Fourth Edition (Pearson, 2005).

- I will provide detailed class notes. So, the textbook is not really necessary.
- The Canadian supplement is not necessary but it is informative if you are interested in Canadian examples and studies.
- Older, but not too long ago, editions of this textbook are fine and may be less expensive.

Course Requirements

There are 3 exams in this course: 2 midterms and a final. The first midterm is on Wednesday October 13. The second midterm is on Monday November 15. The final is cumulative and is on the date given by the university. These exams will consist of true-false, definition/short-answer, problem-solving and essay questions. In addition to the three exams, you are required to complete a term project. Deadline for the term project and how to submit it are discussed on the following page. Instructions for the term project will be posted on the Class Web by September 30. I will be happy to provide some assistance for the project during my office hours. Also, if you hand in your project draft at least 2 weeks before the deadline, I will give you suggestions that may help increase your grade for the project.

Class Notes, Readings and Problem Sets

Class notes, readings and problem sets (with solutions) will be posted on the Class Web. Use them at your own risk. I have tried to eliminate typing errors when preparing these materials. However, it is very likely that there are still (a few) errors in the notes and the solutions. You must use your own judgment when utilizing these materials. (I would appreciate it if you could let me know where the errors are so that the future generation of students can benefit from better class materials.)

Although the problem sets will not be counted towards your grade, it is in your best interest to familiarize yourself with the concepts given in class by solving the problems. Also, an understanding of the required readings will be helpful in answering questions in the exams.

Office Hours and Review

Regular office hours are listed on the first page. For each exam, I will schedule extra office hours which will be announced in class a week before the exam. However, you should not let questions accumulate until the week before an exam. It is not healthy to panic at the last minute and it is difficult to work things out under pressure.

For students with a legitimate time conflict with the office hours, you can make an appointment with me by e-mail when you need help. In addition, I will give a review session for each midterm and the final on: Monday October 4, Wednesday November 10 and Friday December 3.

Communication Policies

In addition to office hours, please feel free to ask me questions via the Internet. I encourage you to use the Class Discussion function in WebCT to ask me questions since they may also benefit your classmates. Should you need to contact me via email, please use the WebCT email system. Please do not contact me via my usual McGill email. For the night before each exam, I will answer your e-mails if and only if I receive them BEFORE 10 PM.

If there is an important announcement such as extra office hours and review, I will also e-mail you. To be able to receive my announcements, you need to update your email address in Minerva.

Exam Policies

The midterm scores and grades will be posted on the Class Web. You are not allowed to keep your exams. If you would like to review your exams, please see me during my office hours or make an appointment.

Grade Appeals

If you are not satisfied with how your exam/term project (or any part of it) is graded, you may submit a grade appeal in WRITING. If you choose to do so, your entire exam/term project will be reviewed. There will not be a partial re-grading, and you may receive a lower grade after the appeal.

Grade Assignment

There are 4 possible grading schemes for the course. For Schemes 1-3, you will receive a letter grade for each exam and the term project. Your grade for each exam is based on a class distribution, whereas your grade for the term project is based on your own performance.

Scheme 1

		<u>Letter Grade</u>	<u>Numeric Grade</u>	<u>Course Grade Lower Bound</u>
Term Project	15%			
First Midterm	35%	A	4.0	3.85
Second Midterm	0%	A-	3.7	3.50
Final	50%	B+	3.3	3.15
		B	3.0	2.85
		B-	2.7	2.50
		C+	2.3	2.15
Term Project	15%	C	2.0	1.85
First Midterm	0%	D	1.0	0.85
Second Midterm	35%	F	0.0	0.00
Final	50%			

Scheme 3

Term Project	15%
First Midterm	25%
Second Midterm	25%
Final	35%

For Scheme 4, you will receive the grade for the course based on the McGill percentage scale.

<u>Scheme 4</u>		<u>Total Score</u>	
		<u>Letter Grade</u>	<u>Lower Bound</u>
Term Project	15%		
First Midterm	25%	A	85%
Second Midterm	25%	A-	80%
Final	35%	B+	75%
		B	70%
		B-	65%
		C+	60%
		C	55%
		D	50%
		F	0%

The grade you receive will be from the scheme that yields the highest grade. For example, suppose you receive 50 out of 100 for the term project, 100 out of 200 for the first midterm, 120 out of 200 for the second midterm and 80 out of 100 for the final; and the curves give you a B- from the term project, a B for the first midterm, a B+ for the second midterm and an A for the final. Scheme 2 is obviously better than Schemes 1 and 3. It will give you: $2.7 \times 0.15 + 3.3 \times 0.35 + 4.0 \times 0.5 = 3.56 < 3.85 \rightarrow$ an A-. Scheme 4 gives you $(50/100) \times 0.15 + (80/200) \times 0.25 + (100/200) \times 0.25 + (80/100) \times 0.35 = 50.5\% \rightarrow$ a D. Hence, your course grade would be an A-.

Supplemental Exam Policy

The supplemental exam will account for 85% of your grade and the term project will be 15%. The supplemental exam cannot makeup for the term project. Because I will not be able to curve your score, your grade for the course will be based on the McGill percentage scale as in Scheme 4 if you take the supplemental exam.

Academic Integrity Statement (It is mandatory that I put this in the syllabus.)

McGill University values academic integrity. Therefore all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see <http://www.mcgill.ca/integrity> for more information).

Right to Submit in English or French Written Work that is to be Graded

In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in English or in French any written work that is to be graded.

Term Project Deadline and Late Penalties

Extensions for submission of the term project will only be given in cases of illness, where a medical certificate is provided. You need to submit a hard copy of the term project to me (for grading purpose) as well as an electronic version to TurnItIn.com (to verify authenticity). (Using TurnItIn.com will help me focus my grading on your ideas rather than putting an effort to check the authenticity of your work. Hence, I can give you the mark fairly and promptly.) By 10am of Friday December 3, you must submit an electronic version to TurnItIn.com. The hard copy can be submitted after 10am but must be before 5.30pm of the due date (December 3). A project submitted late (electronically) will lose 20% of the points a day (each 24-hour period from the deadline) including during the weekend. For example, suppose you earn 60 points out of 80 for the project that was 1 day late. You will lose 12 points for the project. (First, your project will be assigned points without being considered whether or not it is turned in on time. Then, the mark down will sequentially be applied.) No project will be accepted after 10am of the 5th day after the due date, except the case that a medical note has been supplied AND you have made arrangements with me in advance.

Alternatives to Use of TurnItIn.com

Requests for exemption from the Turnitin.com requirement will NOT be considered after Friday October 1, 2010. If you do not wish to use Turnitin.com, you must do the following. Submit to me, by October 1 at 5pm, a letter of intent stating that you do not wish to use TurnItIn.com. In the letter, you must also specify which of the three following alternatives you would like to use instead of submitting the term project to TurnItIn.com:

(1) Instead of using the antitrust case I will be asking you to analyze (for those who use TurnItIn.com), choose your own antitrust case from not a too distant past (less than 10 years ago). You need to gather relevant information yourself and perform your analysis from the information you collect based on what we have learned in class. I will be available during office hours for consultation. In addition, your choice of antitrust case must be approved by me before October 17. (To get approval, you must set up an appointment to discuss your plan. The approval will be based on the likelihood that you can collect sufficient information for your analysis as well as whether there have been other students who have done the same project in the past or will be doing it this semester. If the plan is approved, I will send an email confirmation that you can keep for your records.) Your grade for the project will not be curved. Your grade will be based both on how well the information you collect helps in your analysis and on how you apply concepts we learn in class to the project.

The term project must be double-spaced in 12pt Garamond font with justified 1.25-inch side margins. Excluding tables, figures and reference, the project should be no longer than 10 pages. All submissions must be in 2 hard copies. I will keep one copy for my file and return the other to you after it is graded. The deadline and late penalties for turning in the term project still apply.

(2) Do the same project as those who will submit the project via TurnItin.com. Follow the same instructions as those who will submit the project via TurnItIn.com, except that all submissions must be in 2 hard copies. I will keep one copy for my file and return the other to you after it is graded. The deadline and late penalties for turning in the term project still

apply. In addition to the project submission, you must take an oral exam on the project. The oral exam date will be at time convenient to both of us between Monday November 29 and Friday December 3. You must let me know the preferred date and time in writing by November 1.

(3) Take an exam at time convenient to both of us between Monday November 29 and Friday December 3. You must let me know the preferred date and time in writing November 1. The exam will be on antitrust related issues (both theory and application) that I would expect students who have done the project to be able to answer. I will provide additional information about the exam by November 15. Your grade for this exam will be based on the McGill percentage scale (see Grade Scheme 4 in the syllabus).

Failure to follow the procedures set out above (and also do not use TurnItIn.com to submit the work) will result in a mark of zero for the term project.

Course Schedule (Dates for topics to be covered are tentative and subject to changes.)

1. Introduction

Topics: What industrial organization is about
Review on cost concepts

Dates: Wed Sep 1
(No class on Monday Sep 6 – Labor Day.)

Optional: Carlton and Perloff, pp. 29-49.

2. Market Structures: Extreme Cases

Topics: Perfect competition
Monopoly

Dates: Wed Sep 8 & Mon Sep 13

Optional: Carlton and Perloff, Chapter 3 and pp. 88-107.

3. Pricing Strategies (under “non-perfect” competition)

Topics: Price discrimination
Non-linear pricing (two-part tariff)
Tie-in sales
Auction

Dates: Wed Sep 15, Mon Sep 20 & Wed Sep 22

Required: Shepard, Andrea (1991). “Price Discrimination and Retail Configuration.” *The Journal of Political Economy*, Vol. 99, No. 1, pp. 30-53.

Optional: Carlton and Perloff, Chapters 9 and 10 and Appendix 11A.

4. Market Structures: Other Cases

Topics: Monopolistic competition
Homogeneous goods oligopoly

- Cartels
- Quasi-competition/contestable market
- Kink demand model
- Price leadership model (dominant firm with a competitive fringe)

Dates: Mon Sep 27, Wed Sep 29 & Mon Oct 4

Optional: Carlton and Perloff, pp. 110-119 and Chapter 5.
Rotemberg, Julio J. and Garth Saloner (1986). “A Supergame-Theoretic Model of Price Wars During Booms.” *American Economic Review* 76: 390-407.
Green, Edward J. and Robert H. Porter (1984). “Noncooperative Collusion Under Imperfect Price Information.” *Econometrica* 52: 87-100.

Review: MON OCT 4

Midterm 1: WED OCT 13

5. Competition and Game Theory

- Topics: Introduction to game theory (dominant strategy and Nash equilibrium)
Cournot competition
Dynamic (extensive form) game and Stackelberg competition
Bertrand competition with capacity constraint
- Dates: Wed Oct 6, Mon Oct 18, Wed Oct 20, Mon Oct 25 & Wed Oct 27
(No class on Monday Oct 11 – Thanksgiving.)
- Required: Rotemberg, Julio J. and Garth Saloner (1986). “A Supergame-Theoretic Model of Price Wars During Booms.” *American Economic Review* 76: 390-407.
Green, Edward J. and Robert H. Porter (1984). “Noncooperative Collusion Under Imperfect Price Information.” *Econometrica* 52: 87-100.
- Optional: Carlton and Perloff, Chapter 6.

6. Product Differentiation

- Topics: Location models (2 and 3 firms)
Cross price elasticity
Differentiated product and price determination
- Dates: Mon Nov 1, Wed Nov 3, Mon Nov 8 & Wed Nov 10
- Optional: Carlton and Perloff, Chapter 7.

Review: WED NOV 10

Midterm 2: MON NOV 15 (excluding price determination which will be in the final)

7. Antitrust and Related Issues

- Topics: Measuring firm’s market power
Vertical integration
Predatory pricing
Antitrust laws and policy
- Dates: Wed Nov 17, Mon Nov 22, Wed Nov 24 & Mon Nov 29
- Optional: Carlton and Perloff, Chapters 8, 11, 12 and 19.
Demsetz, Harold (1997). *The Economics of the Business Firm: Seven Critical Commentaries*. Cambridge University Press.

8. Intellectual Property Rights System

- Topics: Patents and trademarks
Various features to patent system
How IPRs may affect technological change
Prize as an alternative to patent systems
- Dates: Wed Dec 1 & Fri Dec 3
(Special makeup class on Fri Dec 3.)
- Optional: Carlton and Perloff, Chapter 16.

Review: Fri DEC 3
