

INDUSTRIAL ORGANIZATION 2013-20852
UPF

Language: Spanish

Date and place: Mondays and Tuesdays, 13.00-14.30, Ciutadella Campus, Room 40.S02.

Instructor: Dragan Filipovich

E-mail: dbfilipovich@yahoo.com

Office hours: by appointment

Course Description

Although the name 'Industrial Organization' is apparently self-explanatory, it is nevertheless somewhat misleading. In fact, the course studies how competition operates in markets that are not perfectly competitive. It is therefore not surprising that game theory (which studies strategic behaviour) is an important tool in this field of study. It is also a field that is characterized, ironically, by some degree of 'disorganization', i.e. it has no clear logical drive, being instead an amalgam of theories, which are sometimes quite dissimilar. The specialization was originally very empirical (the Harvard School: 'conduct, structure, performance' which was what really defined the agenda), but there is a lot of theory present; this course will focus on that theory (or rather, theories). As usual, we will begin by studying the theory of monopoly, then move on to various static theories of imperfect competition, and we will conclude by studying dynamic imperfect competition issues (tacit collusion, entry, reputation, technology adoption).

This course will closely follow:

Tirole J., *The Theory of Industrial Organization*, MIT Press, 2003.

Specific chapters are listed below in the schedule of classes. Although most of the course will be based on this text, we will not cover all the material included in the chapters listed below, but only certain parts. A few issues (which I believe are interesting but which are not covered in the text) will be based on specialized articles referenced in the schedule.

Prerequisites: This course has important prerequisites, although I will try to make it as self-contained as I can. At least two courses on microeconomics (i.e. exclusively concerning micro), one introductory and one intermediate (at the level of Varian's *Intermediate Microeconomics*). It would be desirable to have basic (but operational) concepts of game theory (Nash equilibrium and subgame perfect equilibrium), but I'll perform a (quick) review of these concepts. Students who do not meet these prerequisites will have to be prepared to make an extra effort independently.

SCHEDULE:

I) MONOPOLY AND PRICE DISCRIMINATION

1.Week

Review of Pareto Optimality and Surplus; Basic Monopoly Theory.

Varian, Intermediate Microeconomics. Chapter 4. Chapter 1. Tirole.

Week 2

Coase Conjecture. Price Discrimination.

Vertical Control.

Chapter 1, Tirole. Chapter 2, Tirole

MacAfee, 2008; MacAfee, 2005.

II) STATIC OLIGOPOLISTIC COMPETITION

Week 3

Review of Game Theory: Nash and Subgame Perfection.

Chapter 11, Tirole. Osborne, Chapters 3 and 5.

Cournot and Bertrand competition. Substitutes. Complements.

Chapter 5, Tirole.

Nalebuff et al., Competing Complements.

Week 4

Models of Imperfect Competition. Models of spatial competition (line and circle). Monopolistic Competition. The Dixit-Stiglitz model.

Chapter 7, Tirole.

Week 5

First mid-term exam (Tuesday, February 5).

Networks and 'Switching Costs'

Farell and Klemperer, 2007.

Shy, 2010.

Week 6

Two Sided Markets. Copying and Copyright
Rysman, 2009. Varian, 2005.

III) DYNAMIC OLIGOPOLISTIC COMPETITION

Week 7

Dynamic Competition in Pricing and Tacit Collusion.

Chapter 6, Tirole. Osborne, Chapters 14 and 15.

Week 8

Input models. Cournot with entry. Stackelberg. Contestability.

Chapter 8, Tirole.

Martin, 2000.

Week 9

Reputation and Price Limits.

Chapter 9, Tirole.

Week 10

Patent Races.

Chapter 11, Tirole.

Second Mid-term exam (Tuesday March 12th)

I doubt that we will have time to cover all the material. This schedule should be seen as an ultimate goal. I estimate that it will be unlikely that we will have time to cover the last two chapters, even dealing with all issues in a fairly telegraphic manner. I recommend reading the relevant chapters in advance if possible.

Course Assessment

Students will be assessed as follows:

- 1) 5 Assignments (20% overall) (assigned each week, from the third week.)
- 2) Two mid-term exams (15 % each) (February 5th and March 12th)
- 3) Final exam (50 %) (scheduled by the University). The resit examination will count for the same as the final exam: 50%. To be precise, the resit examination grade will replace the final grade, and will count for 50% of the final grade, regardless of whether it is higher or lower than the grade in the final exam).

All grades (mid-term exams, final exam or re-examination) will be averaged. No minimum grade is needed to pass an exam. The student will only pass the course if the average of all the grades is 50% or higher.

Finally, as you may know, many students have enrolled for this course. This leaves me no room for flexibility in procedures and deadlines. The tasks must be submitted (on paper, not by email or in electronic format) on schedule to the person responsible for the seminar to which the student is officially assigned, and only to him or her, without exception. I will not schedule individual examinations, except in cases where is a specific request by the university.

About tasks: The tasks consist of two types of questions: 1) 'knowledge' questions aimed at reviewing basic definitions, and 2) more elaborate questions, designed to train students in the

use of the tools and concepts presented in class. The 'problem' questions may be on additional reading. Each task will consist of 4-5 'knowledge' questions, and 2-3 'problem' questions.

The tasks must be submitted (on paper, not by email or in electronic format) on schedule to the person responsible for the seminar to which the student is officially assigned, and only to him or her, without exception (in particular, I will not accept assignments in class).

About the exams: the first mid-term exam will cover the material we have discussed in class, assigned reading and tasks material. The second mid-term exam will only cover the contents studied after the first mid-term exam. The final exam will include all the material covered on the course, in class, homework and reading assignments. The exams will be multiple choice. Each mid-term exam will only include 5 questions, and will last 45 minutes. Both mid-term exams take place during theory classes. Unless extraordinary circumstances apply, they will be graded and returned one week after they have been taken.

Grades

As usual, the pass grade is 5 (out of 10).

Bibliography

McAfee, Preston R.(2008) , Price Discrimination, in 1 ISSUES IN COMPETITION LAW AND POLICY 465 (ABA Section of Antitrust Law 2008).

McAfee, Preston R. (2005), The Price is Right Mysterious, *Engineering & Science*, No.3.

Martin, S. (2000), The Theory of Contestable Markets, Manuscript, Dept. of Economics, Purdue University.

Casadesus-Masanell R., B.Nalebuff, and D. Yoffie.(2008), Competing Complements, Working Paper 09-009, Harvard Business School.

Osborne, M. (2003), *An Introduction to Game Theory*, Oxford University Press.

Rysman M. (2009), The Economics of Two-Sided Markets, *Journal of Economic Perspectives*, Vol. 23, No. 3, pp.125-143.

Shy, O. (2010), A Short Survey of Network Economics, Working Paper, Federal Reserve Bank of Boston.

Varian H. (2005), Copying and Copyright, *Journal of Economic Perspectives*, 19, Number 2, pp. 121-138.

Varian H., *Intermediate Microeconomics*, 7th. edition

Even though the emphasis in this course is definitely not on empirics, here is a recent reference for whomever might be interested,

Einav L. and J. Levin (2010), Empirical Industrial Organization: A Progress Report, *The Journal of Economic Perspectives*, Vol. 24, No.2, pp. 145-162.

Operating Rules:

On the use of email:

I will often use email to send materials (assignments, announcements). Email announcements will in most cases repeat announcements made in class. If something is announced in class but not by email, the class announcement takes precedence, and not being in class to hear it will not constitute grounds for an excuse for anyone. Please limit your use of my personal email to situations of absolute necessity. All requests must in principle be made in person during class time. I will only accept requests by email in very rare cases (when I do not consider them to be so, I simply ignore the emails). In particular, I will not give academic explanations by email.

If you urgently need to contact me by email, please use my personal address,
dbfilipovich@yahoo.com

Attendance

Students arriving more than 15 minutes late will not be admitted. Announcements made in class are binding. In other words, what was said in class is official, and will not necessarily be announced through other channels (e.g. email). It is the student's responsibility to stay informed about the lecturer says in class. For logistical reasons, no attendance check will be made, but that does not exempt students from the obligation to attend classes (and be prepared to answer questions, participate and not talk continually during class).

Exam review

The exam review is to correct errors when grading. There will be no discussion of the teacher's criteria, or attempts to explain things that have not been understood (for that, please use my office hours). Any review of a task grade or a mid-term exam must be requested within one week of the return date of the assignment concerned. Complaints subsequent to this deadline will not be considered.

Behaviour in the classroom

Unfortunately, there are always people who insist on spending class time talking practically without stopping. I have zero tolerance for this. It interferes with my concentration, and, I am sure, that of many students. I consider it disrespectful to me and the class - whether the subject of the conversation is related to the class or not. If you have something to say about the class topic, or have any questions, I will be happy to hear them. I will issue a couple of warnings to people who insist on talking non-stop during class. On the third occasion, I will ask you to please leave the classroom. A request does not have consequences beyond achieving a better Pareto outcome, with these people chatting comfortably in the cafeteria, and I and the other students continuing the class without any distractions.

One more thing: although with large and not so large groups, I prefer not to ask students direct questions, I sometimes have no alternative in order to find out to what extent I am conveying the message to the class. Whether the answer is correct or otherwise is not important, but I do ask you to answer me with the minimum courtesy you would extend to anyone who asks you a question, even if you do not know the answer (a shrug of the shoulders or a monosyllabic answer is not polite).

Competences: G1, G4, G7, G9, G20, G11 G13, G14, G18, G19 ,E1

G1 . Understand and correctly interpret academic texts in a reasoned and pertinent manner.

G4. G4. Be able to use the English language in all areas of work (reading, writing and speaking in a high register)

G7. Develop independent reasoning ability with critical distance on controversial topics or issues.

G9. Possess consolidated habits of self-discipline, discipline and thoroughness when completing academic work and in organization and its correct timing.

G11. Be able to flexibly and creatively apply the knowledge acquired, and to adapt it to new situations and contexts.

G13. Demonstrate a level of knowledge sufficient for professional work.

G14. Be aware of the different contexts worked in: the economic situation, the sector, the market, the company and the department.

G18. Apply the relevant knowledge and procedures to a range of complex situations.

G19. Identify the key factors of a problem.

G20. Demonstrate a critical approach to different situations.

E1 Analysis of international trade models.