

EC 301 ECONOMICS OF INDUSTRIAL ORGANIZATION

Boğaziçi University - Department of Economics

Spring 2020

Instructor: Murat YILMAZ

office: NB 222B, **phone:** 7646, **email:** *muraty@boun.edu.tr*, **office hour:** By appointment.

class hours: Monday 9:00-10:50 (NBZ11), Wednesday 10:00-10:50 (NBZ11)

teaching assistant: Mehmet Akif Güçlü, email: *makifguclu1@gmail.com*

Useful textbooks:

Pepall, Richards, Norman, *Contemporary Industrial Organization: A Quantitative Approach*, 2011.

Carlton and Perloff, *Modern Industrial Organization*, Pearson , 2005.

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

Shy, *Industrial Organization: Theory and Applications*, The MIT Press, 1996.

Tirole, *The Theory of Industrial Organization*, The MIT Press, 1988.

Course Description:

Industrial organization is a subfield of microeconomics devoted to the study of the structure of firms and markets and of their (strategic) interactions. The study of industrial organization adds to the perfectly competitive model real-world frictions such as limited information, transaction costs, costs of adjusting prices, government actions, barriers to entry by new firms to the market. It then considers how firms are organized, how they compete in such a world, how they acquire market power, and how they use this market power once acquired.

In this course we will study the fundamental topics in industrial organization such as market power, monopoly and its behavior, price discrimination, nonlinear pricing, product differentiation, oligopoly, monopolistic competition, entry deterrence, capacity constraints, spatial competition, relation specific investment, quality, and antitrust. Our approach will be mostly theoretical, but we'll look at some relevant case studies and articles that will be useful. Knowledge of intermediate microeconomics is essential, and game theory will be useful.

Grading: CSG (10%), Quizzes (15%), Midterm (35%), Final (40%).

CSG: This is a game called "Competitive Strategy Game" which will be played in groups, online. Details of the game will be described in class and relevant documents/links will be posted on the course webpage. Your CSG score will be based on your game performance and the final writeup at the end of the game.

Quizzes: There will be **4 announced** quizzes. Only the **highest 3** quiz grades will be used to calculate your overall quiz grade. There will be **no make-up for any of the quizzes**.

Exams: All exams will be closed book, closed notes, and no electronic devices will be allowed. Final exam will be cumulative with a weight at least 85% on the post-midterm material. Any changes to an exam date, time, or place will be announced in class and posted on the course's moodle page and you'll be notified through email. It is the responsibility of the student to be aware of these changes. The midterm will take place on the **March 25, Wednesday at 17:30**, the location of which will be announced later. The final exam date will be announced later by the Registrar's Office.

Make-up Exams: In case you have to miss the **midterm exam**, I will NOT ask you to bring any documented excuse. BUT, you have to contact me (either by email or through phone or in person) **at least 12 hours before the midterm** and explain why you will not be able to take the exam. I keep

the right not to accept your excuse. If you do this and it's accepted, then the weight of your midterm will be transferred to the final exam, that is, there is no make-up exam for the midterm. If you don't contact me at least 12 hours before the midterm and miss the midterm, you will get no credit for the midterm. I should mention that the final exam tends to be tougher than the midterm exam, naturally because there will be more topics which will be relatively more advanced. If you miss the **final exam**, you need to apply to the excuse committee for permission to take the makeup. If your excuse is accepted, you can take the make-up exam that will be given during the excuse exam period. The make-up exam for the final will be cumulative. It is also worth mentioning that the make-up exam tends to be relatively more difficult, for fairness reasons.

Problem Sets: There will be 6-7 problem sets available, posted every other week. These problem sets are **not** going to be graded, **however** working on them diligently is the most effective way to prepare for the exams and quizzes. First work on them on your own and then discuss them in groups. Your TA will be holding weekly office hours and/or problem sessions to help you with your questions on these problem sets. Also, you can always email me and setup an appointment for your questions.

Course material: All of the course material (problem sets and their solutions, quiz solutions, exams, and related articles and papers) as well as announcements and grades will be posted on the moodle page of the course. For the course page on moodle visit <https://moodle.boun.edu.tr/>.

Attendance: Attendance is voluntary, but strongly recommended. Most students who receive low grades do so as a result of poor attendance. Regular attendance and class participation can make a difference though, especially when you are on the margin between two letter grades. Also, the quizzes, exams and problem sets will all be based on the lecture notes, which will be a mix of material from different texts.

Electronic Devices: Electronic devices of all sorts will not be allowed in lectures. If you are seen using one during a lecture, a **20% of your entire course score will be dropped** on the spot.

Course Outline: (tentative!)

Part I : *Preliminaries*

- Perfect Competition, Market Power and Welfare
- Overview of the Theory of Firm

Part II : *Monopoly*

- Durable Good Monopoly
- Price Discrimination, Nonlinear Pricing
- Two-part Tariff, Bundling and Tying

Part III : *Strategic Interaction: Oligopoly Models*

- Generalized Cournot Model
- Bertrand Model, with and without Capacity Constraints
- Dynamic Oligopoly Games and Collusion, Stackelberg Model
- Entry Deterrence: Dixit's Model
- Spatial Competition and Location Models: Hotelling's Linear City, Circular City
- Price Competition under Demand Shocks

Part IV : *Additional Topics* (if time permits)

- Boundaries of a Firm: Relation Specific Investment and Hold-up Problem
- Behavioral IO: Loss Aversion, Time-inconsistency
- Quality Signalling Games, R&D, Patents, Open Source