

# Advanced Industrial Organization

## Higher School of Economics

### Fall 2018

Lecture time: TBA

Course website: TBA

Instructor: Levent Celik

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Office hours: TBA

#### 1. Course Description

- a. Title of the course: Advanced Industrial Organization (MA-level)
- b. Pre-requisites: Calculus, Microeconomic theory, Game theory (please consult the instructor)
- c. Course type: Elective
- d. Abstract: We will study major topics in modern industrial organization (IO). The main focus will be on theoretical issues. The first part of the course will emphasize complete information models while the second part will focus on firm/individual behavior under incomplete/asymmetric information. The course will follow various field articles.

#### 2. Learning Objectives

Industrial organization (IO) is broadly the economic study of firm behavior and market structure. The goal of the course is to familiarize students with major topics in modern industrial organization (IO), and in parallel, illustrate methodological tools for conducting research in IO and more broadly in applied microeconomic theory. The main focus will be on theoretical issues.

In the first part of the course, we will study complete information models and cover subjects such as product differentiation, monopoly theory, oligopoly theory, multi-product firms, price discrimination, repeated games, bargaining theory and dynamic pricing. In the second part, we will focus on firm/individual behavior under incomplete/asymmetric information. We will cover several subjects such as adverse selection, signaling, screening, cheap talk, verifiable information disclosure, advertising, consumer search and auction theory.

#### 3. Learning Outcomes

By the end of this course, it is expected that the student will: 1) be exposed to the main topics in modern industrial organization; 2) learn how to model and study strategic firm behavior; 3) be able to read and critically analyze scientific articles on industrial organization; 4) be able to formulate his/her own research questions.

#### 4. Reading List

The course will follow various articles. We will also cover topics from

- Tirole, Jean: *The Theory of Industrial Organization*, MIT Press, 1989.
- Belleflamme, P. and M. Peitz: *Industrial Organization: Markets and Strategies*, Cambridge University Press, 2010. (henceforth, BP)
- Mas-Colell, Andreu, Whinston, Michael, and Jerry Green: *Microeconomic Theory*, Oxford University Press, 1995. (henceforth, MWG)

#### 5. Tentative Course Plan (a detailed reading list will be available at the beginning of the semester)

##### A. Complete information

1. A quick refresher in game theory
2. Product differentiation: horizontal vs. vertical
3. Monopoly theory: multi-product monopoly, intertemporal pricing, durable-goods monopoly
4. Price discrimination: first and third-degree price discrimination
5. Models of oligopolistic competition
6. Capacity constraints and price competition
7. Entry deterrence/entry accommodation (if time permits)

##### B. Incomplete/Asymmetric information

1. Perfect Bayesian equilibrium (PBE) and its refinements
2. Adverse selection: Akerlof's lemons model
3. Signaling: beer-quiche game, Spence job-market signaling game, quality-signaling by price
4. Screening: Stiglitz-Rothschild competitive screening model, second-degree price discrimination
5. Cheap talk communication
6. Verifiable information disclosure, product certification
7. Economics of advertising
8. Consumer search
9. Auction theory (if time permits)

#### 6. Grading System

There will be two in-class **tests** throughout the semester (first one counting for 30% and the second one for 40% of the final course grade). There will be two graded home assignments. Each will count for 10% of the final course grade. I expect attendance and participation in the lectures. This will count for 10% of the final course grade.

## 7. Academic Integrity

The Higher School of Economics strictly adheres to the principle of academic integrity and honesty. Accordingly, in this course there will be a zero-tolerance policy toward academic dishonesty. This includes, but is not limited to, cheating, plagiarism (including failure to properly cite sources), fabricating citations or information, tampering with other students' work, and presenting a part of or the entirety of another person's work as your own. HSE uses an automated plagiarism-detection system to ensure the originality of students' work. Students who violate university rules on academic honesty will face disciplinary consequences, which, depending on the severity of the offense, may include having points deducted on a specific assignment, receiving a failing grade for the course, being expelled from the university, or other measures specified in HSE's Internal Regulations.