

## UNDERGRADUATE PROGRAM

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# ECONOMICS & MANAGEMENT

## INDUSTRIAL ECONOMICS

### LECTURER

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### OBJECTIVE

This Industrial Economics course is a continuation of the Microeconomics 1, 2 and 3 courses of the undergraduate program in economics and management. The objective is to introduce firm strategy in oligopolistic environments. We first detail the importance of the delimitation of relevant markets in competitive analysis. We then introduce the product differentiation strategy (e.g., Hotelling model). The next step is to include some elements of competitive dynamics. We provide two ways to do this: i) adding several decision steps (e.g. choice of firms' location, choice of product quality); ii) free entry of firms into the market. Finally, we introduce the economics of two-sided markets.

## PREREQUISITES:

Microeconomics courses for the first two years of the undergraduate program, Microeconomics 1 to 3.

Mathematics course, optimization under constraints

## COURSE OUTLINE:

### Introduction

1. What is industrial economics?
2. What is the purpose of industrial economics?
3. The history of industrial economics
  - 3.1 The Harvard School
  - 3.2 The Chicago School
  - 3.3 The Post-Chicago School
4. Market definition and performance
  - 4.1 How to define markets?
  - 4.2 How to measure market power?

### Chapter 1. Static imperfect competition

1. Quantity competition with  $n$  firms
  - 1.1 Model assumptions
  - 1.2 Model equilibrium
  - 1.3 The oligopoly's pricing formula
  - 1.4 The model in practice
2. Price competition with differentiated products
  - 2.1 Representative consumer models
  - 2.2 Unit demand models
    - 2.2.1 The Hotelling Line (1929)
    - 2.2.2 The Salop's Circle Model (1979)
3. Price competition *vs.* quantity competition
  - 3.1 Direct comparison with a unified model
  - 3.2 Strategic substitutes *vs.* strategic complements
  - 3.3 How to choose in a given market

## Chapter 2. Dynamic aspects of imperfect competition

1. Sequential choices
  - 1.1 Leader and follower
  - 1.2 Location choice
  - 1.3 Quality choice (model of vertical product differentiation)
  - 1.4 The Kreps and Scheinkman's model (1983)
  - 1.5 The concept of commitment (Th. Schelling)
2. Free entry models
  - 2.1 The Cournot model with free entry
  - 2.2 The Salop model with free entry
  - 2.3 Natural oligopolies
  - 2.4 Monopolistic competition (Chamberlin, 1933)
  - 2.5 The theory of contestable markets (Baumol, Panzar, and Willig, 1982)

## Chapter 3: Introduction to two-sided markets

1. Definitions and typology of platforms
2. Pricing of a monopoly platform (Rochet & Tirole, 2002)
3. Risks linked to plateformes
  - 3.1 In terms of competition
  - 3.2 In terms of use of personal data

## REFERENCES :

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2. Besanko D., D. Dranove, M. Shanley & S. Schaefer (2012), *Economics of Strategy*, John Wiley & Sons Inc.
3. Carlton D.W. & J.M. Perloff (2008), *Modern Industrial Organization*, 4<sup>th</sup> ed., Pearson.
4. Motta M. (2004), *Competition Policy: Theory and Practice*, Cambridge University Press
5. Tirole, J. (1988), *The Theory of Industrial Organization*, The MIT Press
6. Tirole, J. (2019), *Economics for the Common Good*, Princeton University Press
7. Varian, H. (2014), *Intermediate Microeconomics: A Modern Approach*, 9<sup>th</sup> ed., W. W. Norton & Company