

# THEORY OF THE FIRM

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## 1 Description of the Course

Industrial organization extends the theory of the firm by analyzing market frictions, imperfect competition, limited information, and regulations. In the first part of the course we will study behavior of monopolies: how they set prices in static and dynamic settings, what are the optimal ways to sell products, how they choose product quality, and how monopolies can affect social welfare. In the second part we extend the analysis to multiple firms and study the behavior of oligopolies. The major interest is in different forms competition and collusion. In the third part, we extend the analysis to the situations where the buyers are boundedly rational: for example, how to treat buyers who are unable to make very complex comparisons. The final part of the course takes a more general view and uses mechanism design to discuss which allocations are generally implementable and kind of institutions deliver the optimum.

## 2 Topics

1. **Monopoly:** pricing, durable goods, product selection, quality, advertising, product differentiation, price discrimination.
2. **Oligopoly:** static models of competition, Dynamic models of competition, competition with differentiated products, vertical differentiation, monopolistic competition, entry, search, sales.
4. **Bounded rationality:** rational buyer model, quacks, obfuscation.
5. **Mechanism design:** institution-free approach.

## 3 Requirements

Requirements include weekly problem sets, a midterm (40%), and a final exam (60%).

## 4 Textbooks

### Main text:

1. Jean Tirole. The Theory of Industrial Organization. The MIT Press, January 1988.

### For some of the topics we will use chapters from:

2. Xavier Vives. Oligopoly Pricing: Old Ideas and New Tools. The MIT Press, March 2000.
3. Rakesh Vohra and Lakshman Krishnamurthi, Principles of Pricing: An Analytical Approach, Cambridge University Press, 1 edition, March 2012.
4. Ran Spiegler, Bounded Rationality and Industrial Organization, Oxford University Press, USA, 1 edition, February 2011.