

# Industrial Organization

PhD in Economics and Management

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## Syllabus

The aim of the course is to provide the students with a basic knowledge of the modern theories of industrial organization.

In order to give to the students a glimpse of the research that can be conducted in IO, the second part of the course will be devoted to discuss some research topics. These lectures will be mainly based on papers taken from the relevant literature.

### Main textbook:

Belleflamme P. & Peitz M. (2010): *Industrial Organization, Markets and Strategies*, Cambridge University Press

### Exam

Written exam, with 2 essay questions and 2 exercises.

## Course Outline

### SECTION I – Traditional Industrial Organization

#### 1. Static imperfect competition (Chapter 3)

- Price and quantity competition
- Price competition with differentiated products
- Price competition with capacity constraints

#### 2. Product Differentiation (Chapter 5)

- Horizontal & vertical product differentiation
- Product positioning

#### 3. Advertising (Chapter 6)

- Persuasive and informative advertising
- Advertising intensity
- Advertising and competition

#### 4. Consumer Inertia (Chapter 7)

- Uninformed consumers & search costs
- Switching costs

#### 5. Vertical Relations (Chapter 17)

- The double marginalization problem
- Resale Price Maintenance and exclusive territories
- Exclusive dealing

## SECTION II – Research Topics in IO

### 6. Economics of Network Externalities

- Demand with network externalities; critical mass and feedback effect
- Technology adoption and path-dependence
- Technology adoption with technological progress
- Cournot oligopoly with network effects; competition between (in)compatible technologies
- Two-sided networks

#### Readings:

- Economides N.; Himmelberg C. (1995). Critical Mass and Network Size with Application to the US Fax Market. Discussion Paper EC-95-11, Stern School of Business, NYU.
- Katz, M. L. and Shapiro, C. (1984). Network Externalities, Competition and Compatibility, *American Economic Review*, vol. 75 (3), pp. 424-440.
- Arthur, B. (1989). Competing Technologies, Increasing Returns and Lock-in by Historical Events. *Economic Journal*, 99:106-131.
- Katz M. L.; Shapiro C. (1986). Technology Adoption in the Presence of Network Externalities. *Journal of Political Economy*, 94, 822-841.
- Parker G. G.; Van Alstyne M. W. (2005). Two-Sided Network Effects: a Theory of Information Product Design. *Management Science*, 51 (10), 1494-1504.

#### Additional readings (suggested):

- Economides, N. (1996). The Economics of Networks. *International Journal of Industrial Economics*, 14:673-699.
- Rysman M. (2009). The Economics of Two-Sided Markets. *Journal of Economic Perspectives*, 25 (3), 125-143.
- Rochet J.; Tirole J. (2006). Two-Sided Markets: A Progress Report. *RAND Journal of Economics*, 35(3), 645-67.

### 7. Economics of Innovation

- Cumulative innovation and patents
- Patent thicket and the tragedy of the anticommons
- Weak patents
- Imitation and innovation
- Property rights in the digital era; file sharing and piracy

#### Readings:

- Green, J.R.; Scotchmer S. (1995). On the Division of Profit in Sequential Innovation. *Rand Journal of Economics*. 26:20-33.
- Scotchmer S. (2004): *Innovation and Incentives*, The MIT press
- Cohen, W. M.; Nelson, R. R.; Walsh, J. (2000). Protecting Their Intellectual Assets. Appropriability Conditions and Why US Manufacturing Firms Patent (or Not). NBER working paper n.7552.
- Farrell, J.; Shapiro, C. (2008). How Strong are Weak Patents. *American Economic Review*, 98(4):1347–1369.
- Bessen, J.; Hunt, R. (2007). An Empirical Look at Software Patents. *Journal of Economics & Management Strategy*, 16(1):157–189.
- Bessen, J.; Maskin, E. (2009). Sequential Innovation, Patents and Imitation. *Rand Journal of Economics*. 40:611-635
- Belleflamme P.; Peitz, M. (2010). Digital Piracy: Theory. CORE Discussion Paper n. 2010/60.