

SYLLABUS (9 CREDITS)

1. REVIEW OF BASIC MICROECONOMICS CONCEPTS

The firm cost function. Consumer's surplus. Producer surplus. Equilibrium of an industry under perfect competition. Equilibrium under Monopoly.

2. GAME THEORY TOOLS

Games in normal form and Nash equilibrium

Games in extensive forms and subgame perfection

Static asymmetric-information games and Bayesian Nash equilibrium

Dynamic asymmetric-information games and perfect Bayesian Nash equilibrium

3. NATURAL MONOPOLY

The regulation of natural monopoly. Alternative price rules for the regulated natural monopoly: marginal cost pricing, average cost pricing, rate-of-return regulation, the Price Cap. The regulation of the price of the "essential facility".

Liberalization of natural monopoly in the European Union.

4. STATIC IMPERFECT COMPETITION

Price competition: the standard Bertrand model. Price competition with uncertain costs. Price competition with differentiated products. Asymmetric competition with differentiated products.

Quantity competition: the linear Cournot model. Implications of Cournot competition.

Price vs. quantity competition: Limited capacity and price competition. Differentiated products: Cournot vs. Bertrand

Strategic substitutes and strategic complements

Estimating market power

5. COLLUSION

Stability of collusive agreements. Detecting collusion. Collusion and anti-trust.

6 HORIZONTAL MERGERS

Profitability of mergers. Welfare analysis of mergers. Public policy towards mergers in the EU.

7. PRODUCT DIFFERENTIATION

Horizontal product differentiation

Vertical product differentiation

Competition with differentiated products

Advertising and branding

Consumer behavior and firm strategy

Public policy

8. PRICE DISCRIMINATION

Group pricing and personalized pricing. Menu pricing. Bundling. Price discrimination and anti-trust policy

9. ADVERTISING

Different views on advertising.

Price and non-price strategies in monopoly

The Dorfman-Steiner model.

Advertisement and competition

Informative advertisement, persuasive advertisement.

10. VERTICALLY RELATED MARKETS

Double marginalization.

Resale-price maintenance and exclusive territories.

Exclusive dealing.

Vertical oligopoly and vertical mergers.

Vertical restrictions and public policy in the EU.

11. MARKET FORECLOSURE

Entry deterrence.

Exclusive contracts. Bundling, and foreclosure.

Predatory pricing.

Public policy towards foreclosure

12. INNOVATION AND R&D

Market structure and incentives to innovate: monopoly vs. perfect competition; incentive to innovate in oligopolies; patent licensing. When innovation affects market structure. R&D innovation and spillovers. R&D cooperation and anti-trust policy.

13. INTELLECTUAL PROPERTY (IP)

Innovation and IP. Protecting innovations. Cumulative innovations. Intellectual piracy in the digital economy.

14. NETWORK EXTERNALITIES

Innovation adoption with network effects.

Firm strategy.

Public policy

15. COMPETITION POLICY

Competition laws: Antitrust legislation in the USA; competition legislation in the EU.

Competition policy in the EU and in the USA.

MAIN REFERENCES:

Paul Belleflamme and Martin Peitz, *Industrial Organization*, CUP, 2015.

Luis M. B. Cabral, *Introduction to industrial organization*, The MIT Press, Cambridge, Mass., 2017.

Lecture notes to be made available along the course.

Official documents of the European Union to be specified along the course.