

Course syllabus ECON-S462 (Fall 2019)

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Lectures: Tuesdays 16-18h, room R42.4.502.

Exercise sessions: By group, see UV for allocations.

Office hours: by email appointment.

1 Course objective

This course is one of the mandatory core courses in the *Master in Management Science* curriculum at Solvay Brussels School, ULB. The course objectives are: (i) to train students to be business practitioners with a strong background in standard economic models with a focus on price setting mechanisms; (ii) to learn theoretical concepts and to transpose these to applied work situations; and (iii) to guide evidence-based and data-driven decision making as managers in real businesses.

The course largely draws from micro-economic theory, industrial organization and quantitative analysis, but with applications from an applied and data-drive perspective. The generality of the frameworks we study, combined with exercises and case studies will help students think about the kinds of markets they will encounter throughout their careers as managers, and how to develop pricing and production strategies in different competitive environments.

2 Prerequisites

This course is targeted at the level of students that have completed the BA in Economics at ULB. Students should be comfortable with utility maximization and profit minimization with calculus, marginal concepts and partial derivatives, elasticities, regression analysis etc.

Students who have a Bachelor degree in Economics at ULB should be well-prepared. Other students should review the content of the following courses to see if they are up to speed: *MATH-S101*: Mathematics, analysis and linear algebra. *STAT-S101*: Descriptive statistics and elements of probability. *ECON-S202*: Microeconomics theory. *MATH-S201*: Mathematics, functions of multiple variables. *STAT-S202*: Probability, statistical inference and operations research. *STAT-S301*: Introduction to econometrics.

Some useful references to prepare for this course include:

- Varian, H. (2014). *Intermediate microeconomics with calculus*, Norton New York.
- Nicholson, W. and Snyder, C.(2016). *Microeconomic theory: basic principles and extensions*, Cengage Learning. (Chapter 2: Mathematics for Microeconomics)

3 Organization

This course consists of 12 weekly theory sessions of 2h each, and 6 sessions of practice sessions of 2h each. See GeHol for the calendar. Both theory and practice sessions are integral part of this course, and build on each other. Educational research confirms over and over again: the solution is in the problems: students need drill in order to internalize micro theory. All course content is in English. The following topics are covered:

1. Choice and demand
2. Estimating demand
3. Production and costs
4. Profit maximization
5. Market structure, no strategic interaction
6. Oligopoly
7. Price setting mechanisms I
8. Price setting mechanisms II
9. Asymmetric information
10. Risk and uncertainty
11. Dynamics
12. Closure and Q&A

4 Required readings

Lectures draw from several sources, including

Nicholson, W. and Snyder, C.(2016). *Microeconomic theory: basic principles and extensions*, Cengage Learning.

We aim to make the online content on UV contingent so that this textbook is not necessary. However, if you want to order the textbook either in hard copy or ebook, which includes additional learning materials such as test banks, it is advised to order through this [link](#). If you order before the end of October, you get a 25% discount if you use this voucher:

LEBACKTOUNIVERSITY25.

5 Course assessment

In order to pass this course, you must get a final grade of at least 10 out of 20 points. The final grade is allocated as follows:

- 25% on mid-term exam (Nov 12, 2019).

- 75% on final exam. (January 2020 exam period).

Both exams are written closed book. The midterm exam lasts 2 hours, the final exam 3 hours. The exam contains both theoretical and quantitative questions. Students who fail the course over the semester can do a retake exam during the August exam period, where the final grade is on 100% of that exam.