PART A

MICROECONOMICS B

Coordinator

Dr hab. Mikołaj Czajkowski, prof. UW

Course lecturers

Dr hab. Mikołaj Czajkowski, prof. UW (PL)
Dr hab. Ewa Aksman (EN)
Dr Maciej Sobolewski (PL)

Lecture 30 h
Semestr: spring
Instruction mode: direct

Short course description

The aim of the course is to familiarize students with intermediate microeconomic theory – module B deals with the issues of supply side of the market. The course is graded based on tuition group grade (30%) and a final exam (70%). The final exam is a multiple choice test which verifies theoretical knowledge and practical skills.

Course outline

1. Technology 1 (factors of production, production function, the short run/the long run, factor productivity, isoquants, MRTS)
2. Technology 2 (returns to scale, the elasticity of substitution, isoclines, properties of production function)
3. Costs 1 (accounting costs, economic costs, sunk costs, alternative costs, cost function, the short run/the long run, returns to scale, returns to scope, the learning curve)
4. Costs 2 (optimal choice: cost minimization, isocost line, conditional factor demand, expansion path, optimal division of production)
5. Profit maximization (competitive firm, optimal choice: profit maximization, duality, shutdown condition in the short / long run)
6. Perfect competition (assumptions, the supply curve in the short / long run, the profit maximization problem, long run equilibrium, the elasticity of supply, producer surplus, efficiency)
7. Monopoly (assumptions, monopolistic markup pricing, monopolistic power, Lerner index, multiplant monopoly, social cost of monopoly, regulation of monopoly, natural monopoly)
8. Monopolistic behavior (first-degree, second-degree, third-degree price discrimination, multimarket monopoly, two-part tariff system, peak-load pricing, product bundling, product tying)
9. Game theory 1 (basic concepts, dominant strategies, dominated strategies, pure strategies, mixed strategies, Nash Equilibrium, the Prisoner's Dilemma, repeated games, evolutionary games, sequential games, reaction functions)
10. Game theory 2 (credibility, Subgame Perfect Nash Equlibrium, auctions)
11. Oligopoly 1 (monopolistic competition, the kinked demand curve theory, Cournot model, Bertrand model)
12. Oligopoly 2 (Stackelberg model, price leadership model, competitive edge, cartel, cartel stability)
13. Oligopoly 3 (Cournot competition and Bertrand competition with differentiated products, entry deterrence in Stackelberg model)
14. Oligopoly 4 (localization models, Hotelling's model)
15. Summary

Course prerequisites

none

Official requirements

Intermediate calculus (functions of many variables, differentiation, single-variable and multi-variable optimization, constrained optimization)

Introductory guidelines

Microeconomics A
Mathematical analysis

Learning outcomes

The aim of the course is to familiarize students with intermediate supply-side microeconomic theory. Successful completion of the course provides a basis for theoretical and empirical market analysis based on thorough knowledge of intermediate microeconomics.

Assesment criteria and evaluation methods

1. Completing the course requires passing the final written exam.
   - 1.1. The necessary condition to take the final exam is successfully completing tuition groups; otherwise the final exam will not be graded.
   - 1.2. Completing the course requires scoring 50% or more on the final exam.
   - 1.3. The final grade is calculated using the following formula:

     $$\text{result} = 0.7 \cdot (\text{percentage exam score}) + 0.3 \cdot (0.25 \cdot (\text{tuition group grade}) - 0.25)$$

     Explanation: final exam score enters with the weight of 70%, tuition group grade – 30 % (tuition group grade 3 assures 50%, 5 – 100% of tuition group points possible to collect)
   - 1.4. The exam:
     - 1.4.1. Is a multiple choice test.
     - 1.4.2. All test questions have equal weights.
     - 1.4.3. Negative points are assigned for incorrect answers, so that the wild guess has a zero expected value.
2. Other rules
   - 2.1. The exams will be scheduled according to the Department Regulations, in particular – the planned examination and re-sit examination periods provided in the Academic Calendar of the WNE.
   - 2.2. All students are subject to the same exam schedule (final and retake). There are no other possibilities to take the exam and complete the course (unless by the Dean's decision).
   - 2.3. Missing any of the exams is equivalent of failing it (the 'NK' grade).
   - 2.4. Courses in Polish and English follow the same schedule, rules and cover the same issues. There is a common exam for students participating in the lectures taught in Polish and English – each student can choose the language version.
   - 2.5. We enforce the department's 'Zero tolerance for cheating' rules.
   - 2.6. Grading scale

result (%)	grade
<50-60)	3
<60-70)	3.5
<70-80)	4
<80-90)	4.5
<90-100)	5
100	5!

Course type

Lecture

Form of course crediting

Written exam + tuition group grade

Course mode

Direct

Language of instruction:

Polish
English

Readings

base

- Varian, H. R., Intermediate Microeconomics with Calculus: A Modern Approach, Norton, 2014

supplementary

- Varian, H., Mikroekonomia, Kurs średni - ujęcie nowoczesne, Wydawnictwo Naukowe PWN, 2013, ed. 4
- Perloff, J. M., Microeconomics: Theory and Applications with Calculus, Prentice Hall, 2013
- Nicholson, W., Microeconomic Theory: Basic Principles and Extensions, Cengage Learning, 2011, ed. 11
- Besanko, D., R. R. Braeutigam, Microeconomics, Wiley, 2010, ed. 4
- Browning, E. K., Zupan M. A., Microeconomics: Theory and Applications, Wiley, 2011, ed. 11

supplementary ('easy reading')

- Pindyck, R., D. Rubinfeld, Microeconomics, Prentice Hall, 2012, ed. 8
- Mansfield, E., G. Yohe, Microeconomics: Theory and Applications, Norton, 2004, ed. 11
- Hubbard, G., A. O'Brien, Microeconomics, 2012, ed. 4
- O'Sullivan, A., S. Sheffrin, S. Perez, Microeconomics: Principles, Applications, and Tools, Prentice Hall, 2011, ed. 7
- McConnell, C., S. Brue, S. Flynn, Microeconomics, Irwin/McGraw-Hill, 2014, ed. 20
- Case, K., R. Fair, S. Oster, Principles of Microeconomics, Prentice Hall, 2011, ed. 9

supplementary ('hardcore')

- Mas-Colell, A., M. D. Whinston, J. R. Green, Microeconomic Theory, Oxford University Press, 1995
- Jehle, G. A., P. J. Reny, Advanced Microeconomic Theory, Addison Wesley, 2011, ed. 3
- Varian, H. R., Microeconomic Analysis, Norton., 1992, ed. 3

supplementary ('for math problems')

- Sydsater, K., P. Hammond, Essential Mathematics for Economic Analysis, Prentice Hall, 2012, ed. 4
- Sydsater, K., P. Hammond, A. Seierstad, A. Strom, Further Mathematics for Economic Analysis, Prentice Hall, 2008, ed. 2

workouts

- Bergstrom, T., H. Varian, Mikroekonomia, ćwiczenia, PWN 2003
- Varian, H., T. Bergstrom, Workouts in intermediate microeconomics: For intermediate microeconomics and intermediate microeconomics with calculus, ninth edition, Norton, 2014
- tests – available at course homepage
- additional problems (exam practice) – available at course homepage