

COURSE OUTLINE: MICROECONOMIC ANALYSIS II

GENERAL

SCHOOL	ECONOMICS AND BUSINESS		
ACADEMIC UNIT	ECONOMICS		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	OA0202	SEMESTER	3rd
COURSE TITLE	Microeconomic Analysis II		
INSTRUCTOR(S)	Professor N. Tzeremes		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		WEEKLY TEACHING HOURS	CREDITS
		3	6
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialized general knowledge, skills development</i>	Mandatory Courses (M4.017)		
PREREQUISITE COURSES:	NO		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	GREEK		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	NO		
COURSE WEBSITE (URL)	https://www.econ.uth.gr/		

LEARNING OUTCOMES

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A

- Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area*
- Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B*

- *Guidelines for writing Learning Outcomes*

The course **Microeconomic Analysis II** aims to develop knowledge and skills in students to understand and apply fundamental principles of microeconomic analysis at the business and market levels. Specifically, students will be able to:

1. Understand the processes of transforming inputs into outputs:

- Analyze the production process and the relationship between inputs and outputs.
- Understand the production function in the short run and long run.
- Identify the constraints and possibilities of production across different time horizons.

2. Minimize production costs:

- Apply techniques for the optimal use of available resources to minimize costs:
 - **Short run:** Analyze fixed and variable costs.
 - **Long run:** Study economies of scale and determine the minimum production cost for various levels of output.

3. Make decisions on production quantities and prices in different markets:

- **Perfect competition:**
 - Determine the optimal production quantity and pricing when operating in a perfectly competitive market.
 - Analyze long-run equilibrium.
- **Imperfect competition:**
 - Analyze and make decisions in markets such as monopolistic competition and oligopoly.
 - Examine pricing strategies and production quantity choices.

4. Determine production quantity and pricing in a monopoly:

- Understand the characteristics of a monopolistic market.
- Determine the equilibrium point (production quantity and price) to maximize profits.
- Analyze the social impacts of monopoly, such as welfare losses.

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

*Search for, analysis and synthesis of data and information, with the use of the necessary technology
Adapting to new situations*

*Project planning and management
Respect for difference and multiculturalism
Respect for the natural environment
Showing social, professional and ethical responsibility and*

<i>Decision-making</i>	<i>sensitivity to gender issues</i>
<i>Working independently</i>	<i>Criticism and self-criticism</i>
<i>Team work</i>	<i>Production of free, creative and inductive thinking</i>
<i>Working in an international environment</i>	<i>.....</i>
<i>Working in an interdisciplinary environment</i>	<i>Others...</i>
<i>Production of new research ideas</i>	<i>.....</i>

The course **Microeconomic Analysis II** aims to develop the following general skills, focusing on the analysis of cost theory, firm behavior in various markets, and strategic decision-making:

1. Search, analysis, and synthesis of data and information using appropriate technologies:

- Developing the ability to analyze data related to production, cost, and market structures.
- Using mathematical and graphical tools to derive and interpret cost, supply, and demand curves.
- Synthesizing data from different time frames (short-run and long-run) to draw strategic conclusions.

2. Independent work:

- Taking responsibility for analyzing complex economic problems related to production, cost, and pricing decisions.
- Applying microeconomic theory concepts to make evidence-based decisions across various market structures.

3. Familiarity with the application of theoretical models:

- Applying theoretical models such as cost theory, perfect competition, monopoly, monopolistic competition, and oligopoly to analyze real-world economic situations.
- Bridging theory and practice to understand firm behavior and the outcomes of their decisions.

4. Critical and self-critical thinking:

- Examining the consequences of production and pricing decisions across different market structures.
- Critically evaluating the effectiveness of models and strategies employed by firms.

5. Promotion of free, creative, and inductive thinking:

- Developing creative approaches to improve firm efficiency.
- Exploring new strategies that could be applied in diverse economic environments.

6. Evaluation and critical analysis:

- Understanding and critically analyzing firm behavior in markets of perfect and imperfect competition.
- Assessing the social and economic impacts of strategies such as price differentiation and cartel formation.

7. Decision-making:

- Familiarizing with the decision-making process related to optimal production quantities, pricing strategies, and profit maximization.

- Understanding strategic interactions among competing firms in oligopolistic markets.

8. Formulation and evaluation of policy proposals:

- Analyzing the outcomes of economic policies affecting markets.
- Proposing improvements to enhance business efficiency and protect social welfare.

SYLLABUS

Cost Theory in the Short Run

- **Production function with one variable input:**
Analysis of the relationship between inputs and outputs when only one input can be varied.
- **Law of diminishing marginal returns:**
Explanation of declining productivity as the quantity of the variable input increases.
- **Average and marginal product of labor:**
Definitions and calculations to measure labor productivity.
- **Production elasticity with respect to labor:**
Analysis of production responsiveness to changes in labor.
- **Three stages of production:**
Characteristics of each stage (increasing returns, diminishing but positive returns, and negative returns).
- **Production costs:**
 - Fixed, variable, and total costs.
 - Graphical and mathematical derivation of curves: Average Fixed Cost (AFC), Average Variable Cost (AVC), Average Total Cost (ATC), and Marginal Cost (MC).

Cost Theory in the Long Run

- **Production function with two variable inputs:**
Analysis of input combinations for production optimization.
- **Isoquant curve:**
Shows all input combinations that result in the same level of output.
- **Marginal Rate of Technical Substitution (MRTS):**
Rate of substitution between inputs while maintaining constant output.
- **Iso-cost line and expansion curve:**
Analysis of economically efficient input combinations as production increases.
- **Production function coefficient and returns to scale:**
Examination of productivity as production scale increases.
- **Long-run total cost elasticity:**
Measurement of total cost responsiveness to changes in output.
- **Short-run and long-run linkages:**
Understanding continuity in cost theory.
- **Long-run average cost curve (LAC):**
Analysis of cost behavior at different production levels.

Perfect Competition

- **Assumptions:**
Key assumptions of a perfectly competitive market, such as product homogeneity and free entry/exit.
- **Short-run equilibrium:**
Determination of firm and industry equilibrium.

- **Short-run supply curve:**
Analysis of the relationship between prices and quantities supplied.
- **Cost changes and effects on short-run equilibrium.**
- **Long-run equilibrium:**
Examination of dynamic changes in production and prices.
- **Long-run supply curve:**
 - Industries with constant, increasing, and decreasing costs.

Monopoly

- **Demand and revenue in a monopolistic firm:**
Analysis of total, average, and marginal revenues.
- **Short-run equilibrium:**
Determination of the profit-maximizing quantity and price.
- **Monopoly power index:**
Measurement of monopoly strength in the market.
- **Short-run supply and long-run equilibrium.**
- **Comparison between perfect competition and monopoly:**
Structural and efficiency differences.
- **Monopoly with multiple plants and price discrimination.**
- **Natural monopoly:**
Government regulation and intervention.

Monopolistic Competition and Oligopoly

- **Product differentiation:**
Characteristics and implications.
- **Industries and product groups:**
Focus on industry analysis.
- **Expected and proportional demand curve:**
Interpretation and application.
- **Oligopoly models:**
 - **Cournot Model:** Reaction functions and mathematical approach.
 - **Stackelberg Model:**
 - Analysis of the leader-follower dynamic in production decisions.
 - Calculation of Stackelberg equilibrium through mathematical models.
 - Examination of strategic advantages of market leadership.
 - **Edgeworth and Chamberlin Models:** Strategic reactions.
 - **Kinked demand curve theory:** Price analysis in oligopoly.
- **Cartels:**
 - Goal of profit maximization.
 - Market-sharing strategies.

TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face-to-face																
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	• Use of the e-class electronic platform for posting: (a) lecture materials, (b) announcements, (c) tutorial exercises. • Utilization of electronic tools for lecture presentations, such as PowerPoint.																
TEACHING METHODS <i>The manner and methods of teaching are described in detail. Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc. The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i>	<table border="1"> <thead> <tr> <th>Activity</th><th>Semester workload</th></tr> </thead> <tbody> <tr> <td>Lectures</td><td>39</td></tr> <tr> <td>Tutorials - Problem-solving exercises</td><td>30</td></tr> <tr> <td>Study of literature:</td><td>105</td></tr> <tr> <td>Exemption-based progress assessment</td><td>4</td></tr> <tr> <td>Final semester examination</td><td>2</td></tr> <tr> <td></td><td></td></tr> <tr> <td>Course total</td><td>180</td></tr> </tbody> </table>	Activity	Semester workload	Lectures	39	Tutorials - Problem-solving exercises	30	Study of literature:	105	Exemption-based progress assessment	4	Final semester examination	2			Course total	180
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STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i> <i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other.</i>	The final grade for the course is determined by: a) Written examinations at the end of the semester (100% of the final grade), consisting of calculation, development, analysis, and comprehension questions covering the taught modules of Microeconomic Analysis I. OR, alternatively, through participation in: b) Midterm exemption-based progress assessment (100% of the final grade).																

<i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	
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ATTACHED BIBLIOGRAPHY

J.M. Perloff (2014), «Microeconomics with Calculus», 3rd Edition, PEARSON
 R.S. Pindyck, D.L. Rubinfeld (2013), «Microeconomics», 8th Edition, PEARSON
 M. Parkin (2012), «Microeconomics», 10th Edition, Addison-Wesley
 R.E. Hall, M. Lieberman (2010), «Microeconomics Principles and Applications»,
 5th Edition, SOUTH-WESTERN CENGAGE Learning
 C.E. Ferguson (1972), «Microeconomic Theory», 3rd Edition, RICHARD D.
 IRWIN, INC