

Course: Microeconomics I

Status: Obligatory

Hours: 60 Hours

Credits: 4

Main Objective:

The main objective of the Microeconomic course is to situate students with Individual Decision Making Theory and Production Theory with emphasis on the formation of preferences and the rules of choice, consumer choice, classical demand theory, aggregate demand and production.

Content:

1. Preference and Choice.

- 1.1. Preference Relations.
- 1.2. Choice Rules.
- 1.3. The Relationship between Preference and Choice Rules.

2. Consumer Choice.

- 2.1. Commodities.
- 2.2. The Consumption Set.
- 2.3. Competitive Budgets.
- 2.4. Demand Functions and Comparative Statics.
- 2.5. The Weak Axiom of Revealed Preference (WARP).
- 2.6. The Law of Demand.

3. Classical Demand Theory.

- 3.1. Preference Relations: Basic Properties.
- 3.2. Preference and Utility.
- 3.3. The Utility Maximization Problem.
- 3.4. The Expenditure Minimization Problem.
- 3.5. Duality: a Mathematical Introduction.
- 3.6. Relationships between Demand, Indirect Utility, and Expenditure functions.
- 3.7. Integrability.
- 3.8. Welfare Evaluation of Economic Changes.
- 3.9. The Strong Axiom of Revealed Preference (SARP).

4. Production.

- 4.1. Production Sets.
- 4.2. Profit Maximization and Cost Minimization.
- 4.3. The Geometry of Cost and Supply in the Single-Output Case.
- 4.4. Aggregation.
- 4.5. Efficient Production.
- 4.6. Remarks on the Objectives of the Firm.

5. Choice under Uncertainty.

- 5.1. Expected Utility Theory.
- 5.2. Money Lotteries and Risk Aversion.
- 5.3. Comparison of Payoff Distribution in Terms of Return and Risk.
- 5.4. State-dependent Utility.
- 5.5. Subjective Probability Theory.

6. General Equilibrium Theory.

- 6.1. Pure Exchange: The Edgeworth Box.
- 6.2. The One-Consumer, One-Producer Economy.
- 6.3. The 2 x 2 Production Model.
- 6.4. General Versus Partial Equilibrium Theory.

7. Equilibrium and Its Basic Welfare Properties.

- 7.1. The Basic Model and Definitions.
- 7.2. The First Fundamental Theorem of Welfare Economics.
- 7.3. The Second Fundamental Theorem of Welfare Economics.
- 7.4. Pareto Optimality and Social Welfare Optima.
- 7.5. First-Order Conditions for Pareto Optimality.
- 7.6. Applications.

Method

Lectures, reading of the textbook with lists of exercises done by the students and four (04) exams for evaluate learning.

Objectives

At the end of this course the student should know how to relate the concepts of Individual Decision Making Theory and Production Theory with the academic production carried out by economists in the field, as well relate the theory with applications made in both the professional and academic markets. The topics of Choice under Uncertainty, General Equilibrium Theory and Welfare Economics are related to a broader understanding of microeconomics, and can be applied in frontier research.

Schedule (note: dates on dd/mm format)

Lecture 01 – 05/04 – Introduction.

MAS-COLELL ET. AL. Cap 1.

Presentation of the discipline, the syllabus, the objectives of a microeconomics course and the way of thinking of the economists and its field. Presentation of the basic axioms of the principles of rational choice.

Lecture 02 – 07/04 – Preference and Choice.

MAS-COLELL ET. AL. Cap 1.

Lecture 03 – 26/04 – Consumer Choice.

MAS-COLELL ET. AL. Cap 2.

Lecture 04 – 03/05 – Classical Demand Theory.

MAS-COLELL ET. AL. Cap 3.

Lecture 05 – 10/05 – Aggregate Demand.

MAS-COLELL ET. AL. Cap 4.

Lecture 06 – 17/05 – Exam 01.

First Exam covering topics 1, 2 e 3.

Lecture 07 – 24/05 – Production.

MAS-COLELL ET. AL. Cap 5.

Lecture 08 – 31/05 – Cost Functions.

MAS-COLELL ET. AL. Cap 5.

Minimizing costs and maximizing profits. Producer surplus in the short and long term, efficient production.

Lecture 09 – 07/06 – Exam 02

Second Exam covering topic 4.

Lecture 10 – 14/06 – Choice under Uncertainty.

MAS-COLELL ET. AL. Cap 6.

Lecture 11 – 21/06 – Subjective Probability Theory

MAS-COLELL ET. AL. Cap 6.

Lecture 12 – 28/06 – Exam 03.

Third Exam covering topic 5.

Lecture 13 – 05/07 – General Equilibrium Theory.

MAS-COLELL ET. AL. Cap 15.

Lecture 14 – 12/07 – Equilibrium and Its Basic Welfare Properties.

MAS-COLELL ET. AL. Cap 16.

Lecture 15 – 14/07 – Exam 04.

Fourth Exam covering topics 6 and 7.

Evaluation

Four exams worth 2.5 points each and dealing with the different contents of each subject. The first exam covers topics 1, 2 and 3. The second exam is about topic 4. The third exam covers the topic 5. And the fourth exam covers topics 6 and 7.

References

Obligatory:

MAS-COLELL, A.; WHINSTON, M. D.; GREEN, J. P. (1995). *Microeconomic Theory*. New York, NY: Oxford University Press.

Complementary:

JEHLE, G. A.; RENY, P. J. (2011). *Advanced Microeconomic Theory*. 3^a Edition. Harlow, Essex: Financial Times Prentice Hall - Pearson.

KREPS, D. M. (2013). *Microeconomic Foundations I: Choice and Competitive Markets*. Princeton, New Jersey: Princeton University Press.

NICHOLSON, W. (1999). *Microeconomic Theory: Basic Principles and Extensions*. 7^a Edition. The Dryden Press.

VARIAN, H. R. (1992). *Microeconomic Analysis*. 3^a Edition. New York, NY: W. W. Norton & Company.