Teaching Plan

1. Course Description

- **Name of the course:** Microeconomics I
- **Academic year:** 2011/2012 **Course:** 1 **Term:** 3
- **Career:** ECO/ADE GRAU **Code:** 20836
- **Number of credits ECTS:** 5 **Total student hours:** 125
- **Teaching language:** spanish/english
- **Professor:** Patricia Funk

2. Introduction to the subject

Microeconomics I is the first subject of the training cycle in Economic Theory. Its importance and, at the same time, complexity arises from the fact that it is the first time the student becomes familiar with current economic models. Over the course the student will learn all the basic economic models of consumer theory, production theory, and partial equilibrium.

The course requires basic mathematical skills and basic knowledge of economics. As the subject requires a change in the way of thinking (from real events to models and the other way round) it can be considered as the learning of a new language.

The Bologna methodology attempts the learning process to be continuous, which facilitates both student preparation and teaching. To think that in this course it is possible to jump steps is like thinking that in the learning process of a language one can skip steps and then want to write essays.

3. Requirements to follow training route

This course teaches a new approach to the analysis of economic phenomena. Its importance stems from the fact that it teaches how to build the first mathematical-economic models.

This course can be considered the foundation for the understanding of all the theoretical subjects in the following years. It also constitutes the first part of the training cycle in Economic Theory.

The basic skills required to start the learning process in this subject are:

1. Knowledge of the economic reality. Besides the skills acquired during the studies it is necessary that the student knows the economic reality by their own.
2. Ability of abstraction of the most important microeconomic phenomena. It is necessary to filter information in order to create simplified models.
3. Ability to relate the results of mathematical models with the actual facts.
4. Ability to contrast the model results with actual results, with the aim of improving the model.

The background needed to follow this course can be divided in two groups:

1. Basic mathematical skills: Algebra, Geometry, Trigonometry, Function Analysis, Optimization.
   Most of these skills are basic and are obtained before the student's access to college. Given that the subject requires a good mathematical background, it is recommended for students with a weak mathematical background to try to strength it as soon as possible.
   Some of the topics require some mathematical tools that are taught at the same time in a different subject (Mathematics III). This is not a problem, since there is an alternative way of solving problems. The student who wants to apply these mathematical tools in the exam, can do it.

2. Basic economic knowledge.
   In the course Introduction to Economics, during the first term of first year, the student learns to analyze economic phenomena.
   Microeconomics I builds on this knowledge to show how to build models of the economic reality.

In-depth and constructive knowledge of Microeconomics I allows the student to access the rest of the studies with a solid foundation.

4. Competencies to achieve in this course

General competencies	Specific competencies
Instrumental 1. Ability to summarize 2. Ability to manage information 3. Ability of abstraction 4. Adaptation and clarity of ideas **Interpersonal** 4. Ability to work in group 5. Critical capacity **Systemic** 6. Creativity (ability to generate new ideas) 7. Autonomy (ability to work autonomously)	1. Analysis of microeconomic models 2. Knowledge of the economic reality 3. Ability to apply basic mathematical concepts to economics 4. Analysis of situations from the perspective of economic models

4. Learning Objectives

The ultimate goal of this course is that students are able to understand and learn to work with economic models. Through the training route, the student becomes familiar with the process of construction and solution of these models. At the end of this process the student must be prepared to build such models, specifically models of consumer theory, theory of the firm and partial equilibrium. Such models are the basis for the rest of the cycle in Economic Theory.

5. Contents

Part One: Consumer Choice and Demand

1. Elements of the problem.
   Limits of consumer choice: the budget constraint. Reasons for choice: preferences. Representation of preferences: Utility.

2. The choice.
   The formal problem of maximization of preferences and derivation of the demand function.

3. Revealed preference and Slutsky equation.
   Weak and strong axioms of revealed preference. Price indices. The Slutsky equation: Income and substitution effects. Income and substitution effects of Hicks.

4. Consumer surplus and market demand.
   Consumer surplus: Discrete goods and continuous goods. Market demand: Aggregation of individual demands. The elasticity of demand and its relation with income.

Part Two: The Firm and the Supply Function.

5. Technology.
   Technological constraint. Different types of technology. Marginal product and marginal rate of technical substitution. Returns to scale.

6. Benefit maximization and cost minimization.
   The formal problem of profit maximization. The cost minimization problem. Cost functions: marginal cost and average cost.

7. Supply curve.
   The supply function of a competitive firm. The relation of the supply with marginal costs. The producer surplus. Supply curve of an industry.

Part Three: The demand and the supply.

8. The equilibrium.
   Equilibrium in a competitive market. Comparative statics. Taxes and welfare.

6. Evaluation

The Course in Microeconomics I will be evaluated through

- **Compulsory continuous evaluation**
  Solving problem sets and participation in seminars
- **Mandatory final evaluation - final exam**

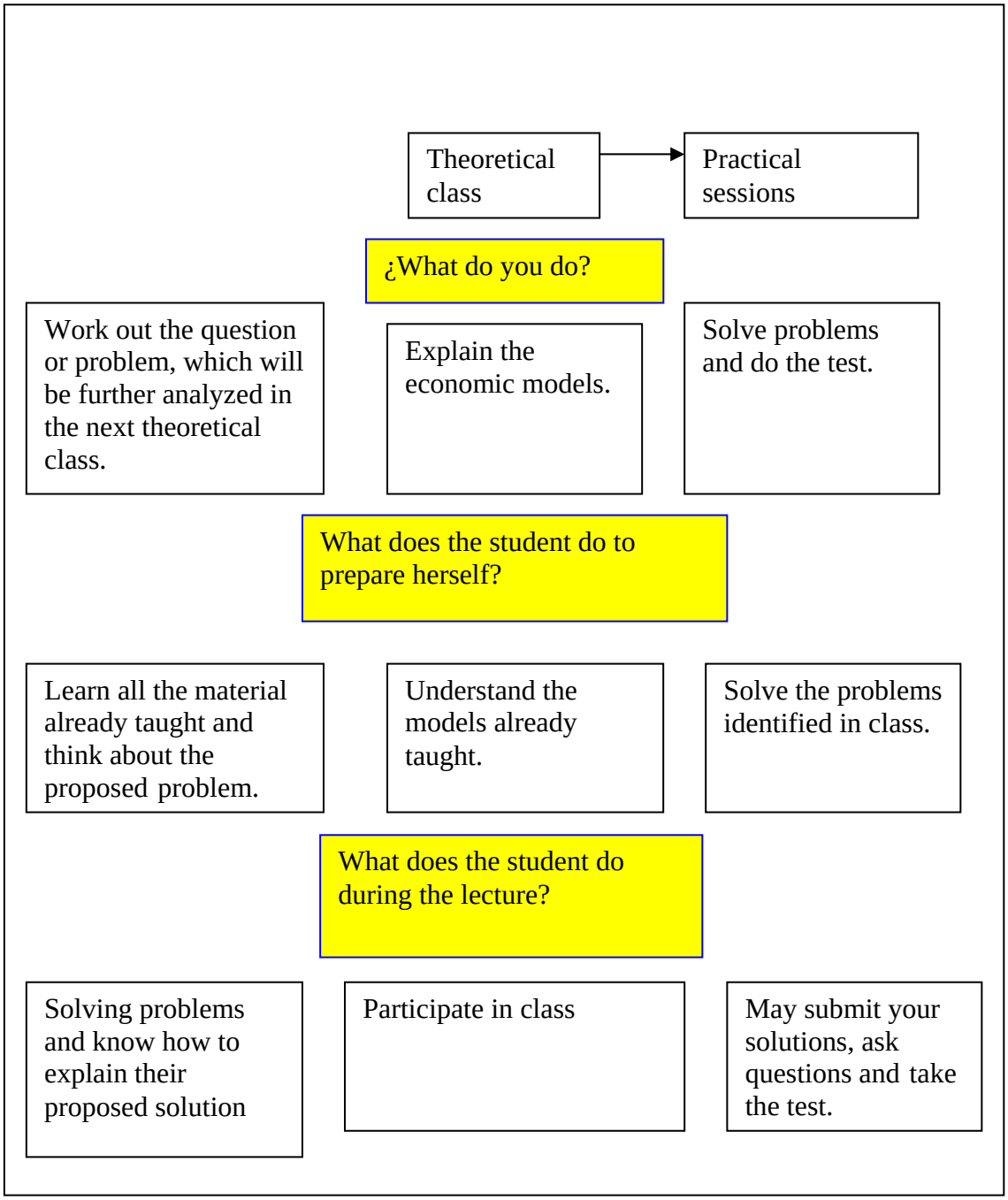
Relative weight of each type of evaluation:

Attendance Seminars (10%) / Problem Sets (10%)/ Seminar Participation (10%):	30%
Final exam:	70%

7. Bibliography and teaching resources

Varian, H. R. *Intermediate Microeconomics.* 7th or 8th. Edition.

8. Methodology



9. Activities Schedule

Week	*Classroom activities*	*Activities outside the classroom*
Week 1: April 10 to 13 1 theory class	Introduction, consumer preferences	*Read theory (Varian 1,3)* *Solve problems*
Week 2: April 16 to 20 2 theory classes	Consumer Preferences, Utility	*Read theory (Varian, 3,4)* *Solve problems*
Week 3: April 23 to 27 1 theory class Practical session	Budget constraint and Consumer Choice	*Read theory (Varian 2,5)* *Solve problems*
Week 4: April 30 to May 4 1 theory class Practical session	Consumer Choice	*Read theory (Varian 5)* *Solve problems*
Week 5: May 7 to May 11 2 theory classes Practical session	Demand	*Read theory (Varian 6)* *Solve problems*
Week 6: May 14 to May 18 2 theory classes Practical session	Revealed Preference and Slutsky Equation	*Read theory (Varian 7, 8)* *Solve problems*
Week 7: May 21 to May 25 2 theory classes Practical session	Consumers' Surplus Aggregate Demand	*Read theory (Varian14, 15)* *Solve problems*
Week 8: May 28 to June 1 1 theory class Practical session	NOT IN CLASS: Technology (study at home!) Profit maximization	*Read theory (Varian 18, 19)* *Solve problems*
Week 9: June 4 to June 8 2 theory classes Practical session	Cost minimization Cost curves and firm's supply	*Read theory (Varian 20, 21, 22)* *Solve problems*
Week 10: June 11 to June 15 2 theory classes Practical session	Industry supply Partial equilibrium	*Read theory (Varian 23, 16)* *Solve problems*