COURSE SYLLABUS

1. COURSE DESCRIPTION

Degree:	**Análisis Económico** **(English teaching)**
Double Degree:	
Course:	**MARKETS, STRATEGIES AND REGULATION** **(Mercados, Estrategias y Regulación - English teaching)**
Module:	**5. Economic Analysis and Econometrics**
Departament:	**Economics, Quantitative Methods and Economic History**
Term:	**First term**
Total Credits:	**6**
Year:	**3rd**
Type of Course:	**Obligatory**
Course Language:	**English**

Teaching model:	**A1**	
a. **Enseñanzas Básicas (EB):**	**70%**	
b. **Theory-into-practice/developmental knowledge-building**	**30%**	
c. **Guided Academic Activities:**		

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2. COURSE COORDINATOR

Coordinator: Dunia López Pintado

Teachers:

EB: Dunia López Pintado

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3. ACADEMIC CONTEXT

3.1. Course Description and Objectives

The objectives of this course are the following: On the one hand, we continue with the study of Game Theory, extending the tools already initiated in the Microeconomics courses from the first and second year of the degree. On the second hand, we will analyze using game theory models from the field of Industrial Organization. We will offer a general view of non-competitive markets focusing on the role of the regulator. Finally, empirical applications of such models will be studied using standard econometric tools with the statistical program of STATA.

3.2. Contribution to the Training Plan

This course is provided in the third year of the Economic Analysis degree. The teaching credits for the course are 6 (4.5 theory, 1.5 practice) which corresponds with 150 hours of work by part of the student.

While presenting the main topics of the course, examples of the potential applications of the theoretical frameworks analyzed will be provided. Moreover, some of the models studied will be contrasted with data from real situations of the Spanish and global economy using standard econometric tools.

In general, this course will provide the students with training for theory and practice that will allow for the effective and versatile development of their profession.

3.3. Recommendations or Prerequisites

This course combines theoretical models with empirical applications as a way of studying in depth the functioning of markets.
Regarding the theoretical part, this course builds on the courses of Microeconomics (first year) and Techniques for Microeconomic Analysis (second year). It is therefore essential to know the tools introduced in the subjects mentioned above. In particular, this course requires familiarity with the mathematical language and its basic elements (functions, graphical representations, continuity, derivatives, etc.).
Regarding the empirical part, this course takes as a starting point the subjects on statistics and econometrics imparted in previous years. In particular, it is necessary to know simple and multiple regression models and it is recommended the familiarity with some econometric software.

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4. SKILLS

4.1 Degree Skills Developed during this Course
The skills students should acquire through autonomous study and class attendance are as follows.
- Develop autonomous learning.
- Analyze real economic problems facing society using a multidisciplinary approach.
- Solve problems using analytical reasoning.
- Promote understanding and use of scientific method in the field of economics as a social science.
- Put the theoretical knowledge acquired into practice using the skills and techniques of economic decision-making learned in the course.

4.2. Module Skills Developed during this Course

It should be noted that the Introduction to Economics course belongs to the Basic Training module in Economics and Business Administration and therefore shares some common objectives with other parts of the same module. This skill is mainly to know and understand the social responsibility resulting from economic activities.

4.3. Course-specific Skills
- Know and apply economic basic knowledge.
- Understand the use of economic models to make predictions about the real world.
- Knowledge of economic institutions and understanding the overall functioning of the economy and the behaviour of economic agents.
- Analyze the market role in allocating resources and setting prices. Formulate microeconomic scenarios that help understand the strategic decision making process.
- Know the main macroeconomic aggregates, their limitations and usefulness.
- Understand how macroeconomic policy works, its usefulness and limitations.

4.3. Course-specific Skills
- Know and apply economic basic knowledge.
- Understand the use of the strategic behavior of agents in order to make predictios about the real world.
- Knowledge of economic institutions and understanding the overall functioning of the economy.
-Analyze the market role in allocating resources and setting prices in frameworks that depart from the standard perfect competition assumption.

- Estimation of econometric models that allow for the better understanding of the markets.

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5. COURSE CONTENT (COURSE TOPICS)	

Unit 1: Market Structures
    1.1 Monopoly
    1.2 Price discrimination
    1.3 Oligopolies: Cournot and Bertrand
    1.4 Concentration Measures

Unit 2: Market Power
    2.1 Product differentiation
    2.2 Advertising and marketing
    2.3 Consumer inertia

Unit 3: Competition Policy
    3.1 Collusion
    3.2 Horizontal integration
    3.3 Vertical integration

Unit 4: Regression with Instrumental Variables
    4.1 The estimator for instrumental variables with a unique regressor and a unique instrument
    4.2 The general model of regression with instrumental
    4.3 Validity of the instruments
    4.4 Applications: estimation of a demand curve (individual or aggregate)

Unit 5: Applications of Market Analysis with STATA
    5.1 Graphical analysis with Stata: dispersion, time series
    5.2 Statistical analysis with Stata: frequency tables, descriptive statistics, analysis of correlations
    5.3 Econometric analysis with Stata: ordinary least squares and instrumental variable method

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6. METHODOLOGY AND RESOURCES

The methodology used for this course is based in two elements:
(1) General teaching: These sessions will be devoted to the theoretical content of the course. Apart from using slides to introduce the models we will also discuss a series of exercises in the blackboard in order to gain comprehension of the topics studied.
(2) Practical teaching: These sessions will be dedicated to promote the reading of research papers, and to develop empirical and econometric techniques in order to test and apply some of the theoretical models studied in class. These sessions will also be devoted to the use of specific software for econometric analysis (GAUSS, STATA)..

7. ASSESMENT

This course is type A1 in the design of the degree. This implies that the proportion of different educational activities is as follows: General Teaching (GT) constitutes 70% of the training activities undertaken in the course. The remaining 30% consists of practical work in seminars (PT). The assessment system will maintain consistency with the training activities undertaken in this type of subject.

GT will be assessed through a final exam which could include theoretical questions as well as exercises. This will make up for 70% of the final grade of the course. PT will be evaluated through continuous assessment which is why the attendance to these sessions could be compulsory. This ongoing evaluation will include both an exam and activities designed to reinforce the specific skills acquired in the practical sessions. PT assessment makes up for the remaining 30% of the final grade of the course.

In order to pass the course the student must have a minimum of 3 points (over 10) in each part, GT and PT.

There will be a second exam for those that have not passed the subject in the first round. Students will have the opportunity of retaking an exam corresponding only with the GT part of the course or, instead, of also retaking the exam regarding the PT part of the course. If this second option is undertaken then the student must inform the teacher in charge 10 days before the exam.
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8. BIBLIOGRAPHY

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W. Green (2010), Econometrics Analysis, Pearson Prentice Hall.

M. Motta (2004), Competition Policy: Theory and Practice, Cambridge University Press

J. Tirole (1988), The Theory of Industrial Organization, The MIT Press.

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