

Quantitative and Statistical Methods I

6 ECTS

TERM 1

MANDATORY

Overview and objectives

The objective of this course is to familiarize students with the basic most widely used and up-to-date methodologies of applied econometric data analysis, aimed at giving an understanding of the different techniques and enabling students to conduct empirical research projects.

Course outline

Part I. Introduction to Regression Analysis

Part II. Linear Regression Model

Part III. Advanced Estimation Methods

Required activities

The course will be structured into 4 hours of lectures a week. In addition, the students will have to hand in assignments.

Evaluation

Exam (80%) and problem sets / assignments (20%).

Materials

- Greene, W. H. Econometric Analysis. Prentice Hall. Various editions

- Stock, J. and Watson, M. (2006). Introduction to Econometrics. Addison-Wesley.

Additional references will be provided at the beginning of the course.

Competencies

To (be able to) communicate with determination and in the English Language, the results and implications of the required analytical study using a language that the receiver can relate to.

To work within a heterogeneous team of researchers as economic analyst using specific group techniques.

To fit in diverse professional environments and varied types of collaborations in different professional projects

To possess and understand the knowledge that provides a basis or opportunity to be original in the development and / or application of ideas, often in a research context.

That students know how to apply the acquired knowledge and their ability to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study

That the students be able to integrate knowledge and face the complexity of making judgments based on information that, being incomplete or limited, include reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments.

That the students be able to communicate their conclusions and the knowledge and the ultimate reasons that sustain them to both, specialized and non-specialized publics in a clear and unambiguous way.

That students possess the learning skills that allow them to continue studying in a way that will be largely self-directed or autonomous.

To identify and apply the insights of the theory, the models, and the analytical tools of modern economy to its global dimension

To understand and apply the quantitative methods used to solve complex problems of the economy.

To evaluate, with theoretical and quantitative instruments, the complex realities of the economy to understand the way it works.

Learning outcomes

Recognizes the statistical, econometric and analytical instruments required for economic analysis.

Applies analytical and quantitative tools to economic problems, formulating the suitable hypotheses and using the necessary tools.

Analyses complex problems.

Uses evidence to solve new problems and develops an adequate analysis.