VNIVERSITAT ⍟ DVALÈNCIA

COURSE DATA

Data Subject

Code	35820
Name	Econometrics
Cycle	Grade
ECTS Credits	6.0
Academic year	2022 - 2023

Study (s)

Degree	Center	Acad. year	Period
1313 - Degree in Business Management and Administration	Faculty of Economics	3	First term
1330 - Degree in Business Management and Administration (Ontinyent)	Faculty of Economics	3	First term
1921 - D.D. in Business Management Administration-Law	Doubles Studies Faculty of Law - Faculty of Economics	4	First term
1926 - D.D. in Tourism-Business Management Administration	Faculty of Economics	4	First term

Subject-matter

Degree	Subject-matter	Character
1313 - Degree in Business Management and Administration	18 - Econometrics	Obligatory
1330 - Degree in Business Management and Administration (Ontinyent)	18 - Econometrics	Obligatory
1921 - D.D. in Business Management Administration-Law	5 - Year 4 compulsory subjects	Obligatory
1926 - D.D. in Tourism-Business Management Administration	5 - Asignaturas de cuarto curso	Obligatory

Coordination

Name	Department
PEREZ VAZQUEZ, PEDRO JOSE	10 - Economic Analysis
RICO BELDA, PAZ	10 - Economic Analysis
SALVADOR MUÑOZ, CARLOS	10 - Economic Analysis

SUMMARY

Econometrics is held during the first semester in the third year of the GADE degree. The general framework is the module of quantitative methods.

Econometrics is compulsory and has a total of 6 credits (150 hours).

The objective of econometrics is to provide basic concepts and knowledge in this discipline, which combines economic theory, mathematics and statistics. The final objective for students is to learn analytic and quantitative instruments in order to adequately analyze the economic and entrepreneurial reality. To this end, this subject consists in estimation, hypothesis testing and forecasting with regression models. It also tackles the problems derived from the possible non-fulfilment of some hypothesis formulated in the classical regression model.

The mathematical-statistical character of Econometrics implies that students should use calculus and statistics contents learnt in previous courses. It will train students in a wide spectrum of capacities, both theoretical and practical. With the help of computer instruments, this will provide students with a comprehensive vision of quantitative methods used in analysing and predicting the economic and business reality.

The syllabus consists in the development of classical linear regression model with its basic assumptions and the problems associated to them. It has a total of six topics, which can be divided into three blocks. The first bock introduces the student in econometric models and economic data, the second one develops the classical regression model and the final bock deals with the implications of relaxing the assumptions of the classical regression model.

PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

Other requirements

There are no pre-requisites to take this course. However, it is highly advisable to have passed already the first -year courses of Mathematics I, Mathematics II and Statistics I, as well as the second year course of Statistics II.

OUTCOMES

1313 - Degree in Business Management and Administration

- Demonstrate capacity for analysis and synthesis.

- Be able to solve problems.

- Be able to work in a team.
- Be able to apply analytical and mathematical methods for the analysis of economic and business problems.

LEARNING OUTCOMES

Students of Econometrics are expected

* To complete the contents of quantitative methods module started in previous courses such as Mathematics I Mathematics II, Statistics I and Statistics II.

*To manage basic econometric concepts, techniques and instruments related to the linear regression model such as descriptive and exploratory analysis of data, the specification of regression models, the estimation of model parameters from the sample information, the analysis of adequacy of the model to the real world and testing hypothesis with the regression model.

*To understand the sequential dynamics of specification estimation and validation of regression models.

DESCRIPTION OF CONTENTS

1. Econometric models and economic data

2. Simple linear regression: geometry

3. Simple linear regression: statistics and hypothesis testing

4. Generelization: multiple linear regression

5. Non-linear models and transformation of variables

6. Analysis with qualitative information

7. Failure of the basic assumptions I

8. Failure of the basic assumptions II

WORKLOAD

ACTIVITY	Hours	% To be attended
Theory classes	30,00	100
Classroom practices	30,00	100
Development of individual work	10,00	0
Study and independent work	40,00	0
Preparation of evaluation activities	15,00	0
Preparing lectures	7,00	0
Preparation of practical classes and problem	18,00	0
TOTAL	150,00	

TEACHING METHODOLOGY

The methodology used in teaching Econometrics tries to combine both the individual capabilities of students and their learning process through group working. Econometrics is divided into theory course and practical course.

THEORY COURSE.

The teacher will make an exposition of the most relevant aspects of each topic of the syllabus. Students will prepare beforehand the theory sessions through recommended references. Any queries derived from this preparation of the lecture will be solved in the following session. A reference bibliography as well as complementary material is provided in the syllabus.

PRACTICAL COURSE.

The aim is to consolidate the concepts introduced in the theory course, through problem solving and the use of case studies. A combination of exercises, both theoretical and practical together with the case studies will serve to understand econometric model building. This process will be made through a specific econometric software. All the exercises and case studies to be used during the course are available in the "Aula virtual". Students are encouraged to solve the complete set of exercises in order to evaluate themselves their learning progression in Econometrics.

The exercises, problems and case studies are designed for the practical application to the real world of the capabilities acquired in the theory course. The final aim is to complete the training process in the use of analytic instrumental and their application to building econometric models.

The follow up of practical learning will be made along the course in a systematic manner. The continuous evaluation method may be based on their participation and involvement in the course as well as on the performance of practical activities or other tasks.

EVALUATION

The subject of Econometrics will be evaluated through :

1.- A **final written exam** with a theoretic-practical character, in order to evaluate the results of the learning process and whether it is adequate to the competences related to the study subject. The exam will be weighted 60%-80%. However, an approved in this written test will be required to pass the subject, in addition to the qualification obtained in the other evaluation procedures.

2.- The remainder 40%-20% will be the result of **continuous evaluation.** The continuous assessment activities are **not recoverable** and their grade will be maintained for the second sitting.

The exam should get a pass or better mark in order to pass the Econometrics subject.

The specific weight of the final exam and of the continuous evaluation will be fixed by the teacher the first day in the presentation of the subject.

REFERENCES

Basic

- Uriel, E. (2013), Introducción a la Econometría, Manual electrónico, Valencia (http://www.uv.es/~uriel/libroes.htm)
- Wooldridge, J.M. (2015) Introducción a la Econometría. Un enfoque moderno. 5ª Edición. Editorial Cengage
- Uriel, E. (2013), Introduction to Econometrics, Electronic textbook, Valencia (http://www.uv.es/~uriel/libroes.htm)
- Contreras, D. y Belaire, J. (2000): Introducció a lEconometria. Universitat de València.

Additional

- Uriel, E. y Gea, I. (1997). Econometría Aplicada, Editorial AC.
- Gujarati, D.N., y Porter, D.C. (2010). Econometría. 5ª edición. McGraw-Hill.
- Stock, J. H. y Watson, M. M. (2012). Introducción a la Econometría. 3ª edición. Editorial Pearson
- Kennedy, P. (1999). Introducción a la Econometría. Fondo de Cultura Económica de España.

- Matilda García, M., Pérez Pascual, P. y Sanz Carnero, B. (2017). Econometría y Predicción. 2ª edición. McGraw-Hill Interamericana de España. Madrid. España

- García Fernández, R. M., Herrerías, J. M. y Palacios González, F. (2017). Econometría: ejercicios resueltos. Editorial Pirámide.

- Econometría en tu móvil: https://play.google.com/store/apps/details?id=com.do_apps.catalog_337

- Econometría en YouTube: https://www.youtube.com/playlist?reload=9&list=PLwJRxp3blEvZyQBTTOMFRP_TDaSdly3gU

- Recursos docentes MOOC: https://www.coursera.org/learn/regression-models y https://www.edx.org/course/data-science-linear-regression