Universidad Rey Juan Carlos

TEACHING GUIDE

ECONOMETRICS II

GRADO EN ECONOMÍA (INGLÉS)

ACADEMIC YEAR 2023-24

Date: 11-07-2023

I.-Subject Identification	
Type	OBLIGATORIA
Teaching period	3 course, 2Q semester
Nº of credits	4.5
Language in wich the subject is taught	English

II.-Presentation

Aims:
The aim of Econometrics II is to deepen the knowledge and use of basic tools to achieve and understand empirical works applied to the analysis of economic problems. We will study extensions of the linear regression model that we saw in Econometrics I. Special emphasis will be put on the application of Econometrics to the study of economic problems and undertaking and interpreting empirical work. One of the objectives of the course is that students learn how to use econometric software and interpret the results obtained with this software.
Recommendations:
Students must have studied Econometrics I and review the basic concepts acquired in that course to understand Econometrics II. "Aula Virtual" will be used as a tool for teacher-student communication, therefore, students are advised to check "Aula Virtual" at least once a week.

III.-Competences

Generic competences

CT01. Ability to analyse and synthesise
CT03. Oral and written communication in native language
CT06. Ability to analyse and search for information from different sources
CT07. Ability to solve problems
CT08. Ability to make decisions
CT09. Ability to work in a team
CT15. Ability to learn independently
CT17. Creativity
CB02 . That students are able to apply their knowledge to their work or vocation in a professional manner and have the skills that are typically demonstrated through the preparation and defense of arguments and problem solving within their field of study.
CB03 . That students have the ability to gather and interpret relevant data (usually within their field of study) to express judgments that include a reflection on relevant topics related to social, scientific or ethical areas.
CB04 . That students are able to transmit information, ideas, problems and solutions to both specialized and non-specialized audience.
CB05 . That students have developed the learning skills needed to undertake further studies with a considerable degree of autonomy.

Specific competences

CE01. Ability to put knowledge of economics into practice
CE02. Information search and research skills
CE03. Design and management of projects relating to different areas of economics
CE19. Forecasting with different economic variables

IV.-Contents

IV.A.-Syllabus

I.- Further issues in linear regression model

Chapter 1. Dummy Variables and structural change.

Defining Structural Change. Modelling Structural Change with Dummy Variables. Chow Test.

Chapter 2. More on linear regression model: Multicollinearity and Data Scaling.

Multicollinearity. Effects of Data Scaling

II.- Violations of Classical Linear Regression Assumptions

Chapter 3. Heteroskedasticity.

Causes of Heteroskedasticity. Properties of OLS under Heteroskedasticity. Testing for Heteroskedasticity. Weighted Least Squares.

Chapter 4. Serial Correlation.

Regression model with serially correlated Errors. Causes of Serial Correlation. Properties of OLS under Serial Correlation. Testing for Serial Correlation. Generalised Least Squares.

IV.B.-Training activities

Type	Title
Attendance to theoretical classes and tutorials, preparation of classes and tests.	Exercises on Chapters 1, 2, 3 and 4.

V.-Student worload	
Lecture classes	25
Pratical classes/resolution of exercises, case studies, etc.	16
Practical sessions in technological laboratories, hospitals, etc.	0
Tests	4
Academic tutorials	13.5
Related activities: conferences, seminars, etc.	0
Preparation of lecture classes	44
Preparation of practices, exercises, cases studies work	30
Test preparation	2.5
Total student workload	135

VI.-Methodology and academic programme		
Type	**Period**	**Content**
Master classes	Week 1 to Week 14	Classroom teaching.
Work placements	Week 14 to Week 14	Practices with econometric software and exercises.
Academic Tutorials	Week 1 to Week 14	There will be a follow-up of the student with tutorials.

VII.-Assessment methods

VII.A.-Assessment weighting

Continuous ordinary assessment:
The distribution and characteristics of the assessment tests are those described below. Only in exceptional case and for special reasons may the teacher add changes to the Guide. These changes will require the prior consultation with the Subject Head and the prior and explicit authorisation of the Degree Programme Coordinator, who will notify the Vice-Rector?s office in charge of Academic Affairs of the modifications made. In any case, the changes proposed must take into account the stipulations of the verified report. In order for these changes to take effect, they must be duly communicated at the start of the course to the students using Aula Virtual.
The combination of activities that are not re-assessable cannot exceed 50% of the subject grade and, in general, cannot have a minimum grade (except for the case of laboratory or clinical work placements, where duly justified), and tests which exceed 60% of the subject weighting cannot be added.
Extraordinary assessment: Students who do not manage to pass the ordinary assessment, or who did not attend, will be subject to completion of an extraordinary assessment to verify their acquisition of the skills established in the guide, only for activities that are re-assessable.

Description of the tests for assessment and their weights.

REGULAR EVALUATION:
There will be two tests carried out throughout the semester.
Test 1: Related to the content of chapters 1 and 2 and held between weeks 6 to 8. Weight in the final grade: 50%. Reevaluable. Minimum mark: 5
Test 2: Related to the content of chapters 3 and 4 and held at the end of the semester. Weight in the final grade: 50%. Reevaluable. Minimum mark: 5
EXTRAORDINARY EVALUATION:
Students will have a similar test to the one of the regular evaluation including those parts that they did not pass in the regular evaluation.

VII.B. Assessment of students with an academic exemption

Student who wish to opt for this assessment will have to get an academic exemption for the subject, which they will have to request from the Dean or Director of the Centre which teaches their course. An academic exemption may be granted where the subjects own characteristics allow for it.

Subject with the possibility of an exemption: Yes

VII.C. Review of assessment tests

In accordance with the exam appeal regulations of the Universidad Rey Juan Carlos.

VII.D.-Students with a disability or special educational needs

Curricular adaptations for students with a disability or special educational needs will be determined by the Disabled Students Support Department, in accordance with the regulations governing the Disabled Students Support service, approved by the Universidad Rey Juan Carlos Council, in order to guarantee equal opportunities, inclusive treatment, universal accessibility and a greater guarantee of academic success.

For this purpose, this Department will have to issue a curricular adaptation report, therefore students with disabilities or special educational needs must contact the Department to analyse the different alternatives together.

VII.E.-Academic behaviour, academic integrity and honesty

The Universidad Rey Juan Carlos is completely committed to the highest standards of academic integrity and honesty. Therefore, studying at the URJC means you accept and agree to the academic integrity and honesty values described in the University's Code of Ethics. In order to monitor this procedure, the University has Regulations on academic behaviour at the Universidad Rey Juan Carlos and uses different tools (anti-plagiarism, supervision?) which provides a collective assurance that these essential values are completely developed

VII.-Bibliography
Referecence Generic
Title: Basic Econometrics. 5th Edition (2009), **Authors:** Damodar N. Gujarati y Dawn C. Porter, **Publisher:** McGraw Hill.
Title: Principles of Econometrics (2018) (Fifth Edition) **Authors:** Hill, C. R.; Griffiths, W.E. y Lim, G.C., **Publisher:** John Wiley &Sons Inc.
Title: Introductory Econometrics. A modern approach. 7th edition (2020), **Author:** Wooldridge, J.M., **Publisher:** South-Western Cengage Learning
Title: Introduction to Econometrics, 3rd Edition (2015) . **Authors:** Stock, J.H. and Watson, M.M., **Publisher:** Pearson,
Title: Essentials of Econometrics. 5th Edition (2021). **Author:** Gujarati, N. J. , **Publisher:** Sage Publications
Reference literature

IX.-Lecturers/Teachers/Professors	
Lecturer/teacher/professor´s name	AMADEO FERNANDO NAVARRO ZAPATA
E-mail address	amadeo.navarro@urjc.es
Department/field	Economía Aplicada I e Historia e Instituciones Económicas
Category	Profesor/a Ayudante Doctor/a
Academic qualifications	Doctor
Subject Coordinator	No
Academic tutorial timetable	Para consultar las tutorias póngase en contacto con el/la profesor/-a a través de correo electrónico
Nº of Quinquenios	0
Nº of Sexenio	0
Nº period for technology transfer	0
Stretch Docentia	0