



Teaching Guide

Identifying Data					2021/22
Subject (*)	Econometrics II			Code	611G01027
Study programme	Grao en Economía				
Descriptors					
Cycle	Period	Year	Type	Credits	
Graduate	2nd four-month period	Third	Obligatory	6	
Language	SpanishGalician				
Teaching method	Face-to-face				
Prerequisites					
Department	Economía				
Coordinador	Lado González, Eva M ^a	E-mail	eva.lado@udc.es		
Lecturers	Lado González, Eva M ^a Lodeiro Hermida, Maria Jose Rey Graña, Carlota	E-mail	eva.lado@udc.es maria.lodeiro@udc.es carlota.rey@udc.es		
Web					
General description	This subject is an extension of the contents of the Econometrics I course taught in the first four-month period. It analyzes several topics of great theoretical and applied interest for the specification and estimation of econometric models.				



Contingency plan

1. Modifications to the contents

- No changes will be made.

2. Methodologies

*Teaching methodologies that will be maintained. All the teaching methodologies developed in the guide will be maintained:

- Initial activities
- Lecture session
- Workshops
- Practices through ICT
- Objective test
- Personalized attention

*Teaching methodologies to be modified:

In the case of blended learning, face-to-face teaching will be shared with non-face-to-face teaching and in the case of non-face-to-face teaching, all face-to-face teaching will be replaced by online classes; in both cases the Teams application will be used to teach the subject in non-face-to-face mode.

3. Mechanisms of personalized attention to students. The response through any of these mechanisms will be done, preferably, during the tutoring schedule of the faculty, unless the demand for personalized tutoring requires an extension of the announced schedule.

- E-mail: Daily, according to the needs of the students. This tool can be used at any time. It is useful to make consultations, request virtual meetings to solve doubts and to follow up on the subject.

- Teams: Teams will also be used as a means of communication with students and for individual or group tutorials, understanding that this tool is more agile than e-mail so it can be used daily, according to the needs of the students.

- Moodle: The Moodle news forum will be used to inform students about all those aspects that affect the normal development of the subject, thus maintaining a permanent contact with them (notice about test dates, instructions for activities, grades, change of a specific date, tutorials, etc.).

4. Modifications in the evaluation

*Observations of evaluation: Regarding the evaluation, both in the blended and non-classroom mode, the evaluation criteria set out in the teaching guide will be maintained, with the difference that the minimum required in the objective tests will be eliminated.

In the case that the teaching is carried out in a non face-to-face mode, the evaluation tests will have to be carried out through the Moodle platform or, if possible, through Teams, Forms or any other application that allows the realization of tests and exams.

5. Modifications to the bibliography or webgraphy

- No changes will be made. Students will have at their disposal work materials digitized in Moodle or Teams. Regardless of the teaching modality, numerous materials will be made available to students to prepare the theoretical and practical

contents of the subject, being Moodle or Teams the reference applications as repositories of all the material available to students.

On the other hand, the library of the Faculty of Economics and Business informed, from the beginning of the COVID-19 confinement, of the access to the library resources, which are available free of charge and in electronic format for both students and teachers.



Study programme competences / results	
Code	Study programme competences / results
A1	CE1- Contribuír á boa xestión da asignación de recursos tanto no ámbito privado como no público.
A2	CE2-Identificar e anticipar problemas económicos relevantes en relación coa asignación de recursos en xeral, tanto no ámbito privado como no público.
A3	CE3-Aportar racionalidade á análise e á descripción de calquera aspecto da realidade económica.
A4	CE4-Avaliar consecuencias e distintas alternativas de acción e seleccionar as mellores, dados os obxectivos.
A5	CE5-Emitir informes de asesoramento sobre situación concretas da economía (internacional, nacional ou rexional) ou de sectores da mesma.
A6	CE6-Redactar proxectos de xestión económica a nivel internacional, nacional ou rexional. Integrarse na xestión empresarial.
A7	CE7-Identificar as fontes de información económica relevante e o seu contido.
A8	CE8-Entender as institucións económicas como resultado e aplicación de representacións teóricas ou formais acerca de cómo funciona a economía.
A9	CE9-Derivar dos datos información relevante imposible de recoñecer por non profesionais.
A10	CE10-Usar habitualmente a tecnoloxía da información e as comunicación en todo a seu desempeño profesional.
A11	CE11Leer e comunicarse no ámbito profesional en máis dun idioma, en especial en inglés.
A12	CE12-Aplicar á análise dos problemas criterios profesionais baseados no manexo de instrumentos técnicos.
A13	CE13-Comunicarse con fluidez no seu contorno e traballar en equipo.
B1	CB1 - Que os estudantes demostren posuir e comprender coñecementos nun área de estudo que parte da base da educación secundaria xeral, e que soe encontrar nun nivel que, aínda que se apoia en libros de texto avanzados, inclúe tamén algúns aspectos que implican coñecementos procedentes da vangarda do seu campo de estudo.
B2	CB2 - Que os estudantes saiban aplicar os seus coñecementos ó seu traballo ou vocación dun xeito profesional e posúan as competencias que se demostran por medio da elaboración e defensa de argumentos e a resolución de problemas dentro da su entorna de traballo.
B3	CB3 - Que os estudantes teñan a capacidade de reunir e interpretar datos relevantes (normalmente dentro da su área de estudo) para emitir xuízos que inclúan unha reflexión sobre temas relevantes de índole social, científica ou ética
B4	CB4 - Que os estudantes poidan transmitir información, ideas, problemas e solucións a un público tanto especializado como non especializado
B5	CB5 - Que os estudantes desenvolvesen aquelas habilidades de aprendizaxe necesarias para emprender estudos posteriores cun alto grao de autonomía
B6	CG1- Que os estudantes formados se convertan en profesionais capaces de analizar, reflexionar e intervir sobre os diferentes elementos que constitúen un sistema económico
B7	CG2 - Que os estudantes coñezan o funcionamento e as consecuencias dos sistemas económicos, as distintas alternativas de asignación de recursos, acumulación de riqueza e distribución da renda e estean en condicións de contribuír ao seu bo funcionamento e mellora
B8	CG3 -Que os estudantes sexan capaces de identificar e anticipar os problemas económicos relevantes, identificar alternativas de resolución, seleccionar as máis axeitadas e avaliar os resultados aos que conduce.
B9	CG4 -Que os estudantes respecten os dereitos fundamentais e de igualdade de oportunidades, non discriminación e accesibilidade universal das persoas con minusvalidez.
C1	CT1-Expresarse correctamente, tanto de forma oral coma escrita, nas linguas oficiais da comunidade autónoma.
C2	Dominar a expresión e a comprensión de forma oral e escrita dun idioma estranxeiro.
C3	Utilizar as ferramentas básicas das tecnoloxías da información e as comunicacións (TIC) necesarias para o exercicio da súa profesión e para a aprendizaxe ao longo da súa vida.
C4	CT2-Desenvolverse para o exercicio dunha cidadanía aberta, culta, crítica, comprometida, democrática e solidaria, capaz de analizar a realidade, diagnosticar problemas, formular e implantar solucións baseadas no coñecemento e orientadas ao ben común.
C5	CT3-Entender a importancia da cultura emprendedora e coñecer os medios ao alcance das persoas emprendedoras.
C6	CT4-Valorar criticamente o coñecemento, a tecnoloxía e a información dispoñible para resolver os problemas cos que deben enfrontarse.
C7	CT5-Asumir como profesional e cidadán a importancia da aprendizaxe ao longo da vida.
C8	CT6-Valorar a importancia que ten a investigación, a innovación e o desenvolvemento tecnolóxico no avance socioeconómico e cultural da sociedade.



Learning outcomes			
Learning outcomes	Study programme competences / results		
To know and understand the consequences on the estimators of the classical model if some of its hypotheses are not fulfilled.	A1 A2 A3 A4 A7 A8 A9 A10 A12 A13	B1 B2 B3	C1 C3 C4 C5 C6 C7 C8
Know how an econometric model can incorporate qualitative information.	A1 A2 A3 A4 A7 A8 A9 A10 A12 A13	B3 B4 B5 B6	C3 C4 C5 C6 C7 C8
Know and understand how dynamic and multi-equation models can be specified and estimated.	A1 A2 A3 A4 A7 A8 A9 A10 A12 A13	B9	C3 C4 C5 C6 C7 C8
Know and understand the usefulness of econometric models for analyzing economic relationships in the real economy.	A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13	B1 B3 B7 B8 B9	C1 C3 C4 C5 C6 C7 C8
Use appropriate computer tools for the application of the above competencies.	A7 A9 A10		C2 C3



Contents	
Topic	Sub-topic
1) The generalized linear regression model (GLRM).	1.1 Model hypothesis. Consequences of the OLS estimation of this model. 1.2 Generalized least squares estimators (GLS). Obtaining. 1.3 Heteroscedasticity: structure, causes, contrasts, estimation and prediction. 1.4 Autocorrelation: structure, causes, contrasts, estimation and prediction.
2) Dummy variables in econometric models.	2.1. Definition and incorporation into the model. 2.2. Sample stability tests.
3) Simultaneous equation models.	3.1. Introduction. Expression of the model. 3.2. Hypotheses that define it. 3.3. Properties of OLS estimators. Instrumental variables estimation (VI). 3.4. Two-stage least squares estimation (MC2E).

Planning				
Methodologies / tests	Competencies / Results	Teaching hours (in-person & virtual)	Student's personal work hours	Total hours
Introductory activities	A2 A7 A9 A11 B1	3	0	3
Guest lecture / keynote speech	A9 A11 B2 B8 B9	17	34	51
Workshop	A1 A3 A4 A8 A13 B3 B4 C1 C4 C5 C7 C8	15	30	45
ICT practicals	A5 A6 A7 A10 A12 C2 C3	7	28	35
Objective test	B5 B6 B7 B8 C6	2	9	11
Personalized attention		5	0	5

(*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies	
Methodologies	Description
Introductory activities	The course will begin with an expository session in which the subject will be presented, the activities to be developed by the students and the evaluation criteria will be explained in detail and, finally, the basic concepts of the econometrics subjects previously studied will be reviewed.
Guest lecture / keynote speech	Expository teaching consisting of lectures given by the professors, in which the theoretical content of the program will be developed by means of oral exposition complemented by audiovisual means. Examples and exercises will be included to show the functionality and limitations of the exposed methods.
Workshop	Each workshop is an interactive session in which applications, exercises and problems are carried out, allowing students to understand the theoretical foundations of the subject and to learn to critically evaluate the results obtained.
ICT practicals	These are interactive sessions dedicated to learning the appropriate computer tools to carry out empirical applications of the methods presented in the theoretical sessions.
Objective test	Written test to assess the degree of learning.

Personalized attention	
Methodologies	Description



Workshop ICT practicals Objective test	<p>It is the time that the teacher reserves to attend and solve doubts to the students, either individually or in small groups. The attention will be provided during class hours, in the practical hours through ICT and in the weekly tutoring schedule.</p> <p>Personalized attention for students with recognition of part-time dedication and academic dispensation of exemption from attendance will be provided mainly during the weekly tutoring schedule of the professors.</p>
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Assessment			
Methodologies	Competencies / Results	Description	Qualification
Workshop	A1 A3 A4 A8 A13 B3 B4 C1 C4 C5 C7 C8	The active presence of students in these classes is recommended, in which they must solve and deliver the tests, problems, exercises and questions that are proposed to them and in the manner indicated during the course. These activities will represent in the evaluation up to a maximum of 3 points out of 10.	30
Objective test	B5 B6 B7 B8 C6	Written test for the evaluation of learning. You can combine different types of theoretical and practical questions. This test will represent in the evaluation up to a maximum of 7 points out of 10	70

Assessment comments



A) EVALUATION REGULATIONS 1. Evaluation conditions 1.1 Rules for the realization of the face-to-face evaluation tests

According to the regulations approved by the Board of the Faculty of Economics and Business, it is forbidden to access the classroom in which the test is held with any device that allows communication with the outside and / or storage of information, including notes of the subject or similar. If a person is seen with such a device within reach during the test, it will be assumed that he/she is using it for fraudulent purposes and the corresponding regulations will be applied. Persons who bring such devices on the day of the test - including cell phones or smart watches - and have nowhere to leave them, must deposit them at the entrance of the classroom before the start of the test. The faculty is not responsible for their possible loss or misplacement. 1.2 Rules for taking the controlled evaluation tests through Teams

Test takers must be connected to Teams at all times, unless otherwise specified in the instructions for that particular test. If a person disconnects from Teams while taking the test or leaves the field of view of the camera during the test, the test will be considered undelivered. Each student must have the webcam activated at all times; disconnection of the camera will be considered equivalent to a disconnection from Teams, and will result in the test being considered undeliverable.

The faculty will record the test as a guarantee of the identification of the student and the completion of the evaluation process required by the Organic Law of Universities. It is the responsibility of each student to configure their space to avoid the violation of privacy or personal data of themselves or third parties. In all matters relating to the recording of these tests, the regulations of the university will be strictly applied. Unless otherwise stated, the same rules apply as for a face-to-face test: no device that allows communication with third parties and/or storage of information, including subject notes or similar, cell phones, smart watches, tablets, computers, etc., may be accessed. If a person is seen with such a device within reach during the test, it will be assumed that he/she is using it for fraudulent purposes and the corresponding regulations will be applied. 2. Student identification

The student must prove his or her identity in accordance with the regulations in force. For this purpose, the faculty may require at any time the identification of the student, who must prove it by means of the student card of the UDC, the national identity card, or an identification document that in the opinion of the faculty is equivalent to the above.

3. Procedure for action in the event of fraudulent performance of an activity that counts in the evaluation.

The fraudulent performance of the tests or evaluation activities will directly imply the grade of '0' in the subject in the corresponding call, thus invalidating any grade obtained in all the evaluation activities for the extraordinary call. B) TYPES OF GRADE

1. No-show grade

According to the regulations approved by the Board of the Faculty of Economics and Business, only those students who have submitted activities that together account for less than 20% of the final grade of that opportunity will be graded as "No-shows". 2. Students with recognition of part-time dedication and academic dispensation of attendance exemption. The same evaluation rules will be applied as for students enrolled full time, both in the first and second opportunity. Part-time students are exempt from class attendance, but have the same obligation to attend any type of face-to-face evaluation test as full-time students.

C) EVALUATION OPPORTUNITIES 1. First opportunity

The evaluation of the subject will consist of one or more workshops and an objective test: the workshops will have a maximum grade of 30%, the remaining 70% of the subject will correspond to an objective test (or exam that will take place at the end of the syllabus) in which the contents of the subject (topics 1, 2 and 3) will be evaluated, being necessary to obtain a minimum of 2.5 points out of 7 in this test. Therefore, in order to pass the subject it is necessary to obtain a minimum of 2.5 points out of 7 in the objective test and to obtain at least 5 points in the sum of the grades of the workshops and the objective test. Students who do not pass the subject in this way or who, having passed it, wish to do so, may repeat the objective test (out of 7 points) on the date approved by the Faculty of Economics and Business for the official examination of the first opportunity. If a person takes both opportunities (both objective tests), the grade to be used in the calculation of the final grade will be that of the second attempt, regardless of whether it is higher or lower than the grade obtained in the first attempt. This grade will be added to the grades obtained in the workshops carried out throughout the course. In order to pass the subject, at least 5 points must be obtained (after adding the grades of the workshops and the objective test) with a minimum of 2.5 points in the objective test. Students who do not reach the minimum grade in the objective test (2.5 points out of 7) and who in the global computation of the evaluation obtain a score equal to or higher than 5 points, will not pass the course and will appear in the minutes with a grade of 4.5. 2. Second opportunity The second opportunity exam will be held on the day and time set by the Faculty of Economics and Business for the official exam of the second opportunity. In the workshops carried out during the course, the grade obtained in the first opportunity will be maintained, so that they will not be repeated in the July exam. Therefore, the grade of the second opportunity will be obtained by adding the grade of the workshops to that of the objective test (in which the minimum grade of 2.5 points out of 7 must be reached). In order to pass the subject, the final grade must be equal or higher than 5 points. Students who do not reach the minimum grade in the objective test (2.5 points out of 7) and who in the global computation of the evaluation obtain a score equal to or higher than 5 points, will not pass the subject and will appear in the minutes with a grade of 4.5. 3. Advanced convocation The evaluation corresponding to the advanced opportunity will be developed through a single test to be held on the date and time established by the center. This test will be evaluated with a maximum of 10 points and will be based on the complete syllabus described in the "Contents" section of the guide for the current academic year. In order to pass the subject it will be necessary to obtain a minimum of 5 points in this objective test. These evaluation conditions are specific for the advanced opportunity and will



only be applied in this case.



Sources of information

Basic	<ul style="list-style-type: none"> - Carrascal, U., González, Y. y Rodríguez, B. (2000). Análisis econométrico con EViews. RA-MA - Guisán, M.C. (1997). Econometría. McGraw-Hill - Gujarati, D. y Porter, D. (2011). Econometría. McGraw-Hill - Fernández Gallastegui, Alonso (2004). Econometría. Pearson. Prentice Hall - Ramil, M., Rey, C., Lodeiro, M., Arranz, M. (2013). Introducción a la Econometría. Noroeste S.L ISBN 13:978-84-92794-64-5
Complementary	<ul style="list-style-type: none"> - Pena Trapero, J. et al (1999). Cien ejercicios de econometría. Pirámide - Pulido, A. y Pérez, J. (2001). Modelos econométricos. Pirámide - Ramil, M. y Arranz, M. (2001). Modelos de ecuaciones simultáneas. ISBN 84-688-6034-4 - Wooldridge, Jeffrey (2015). Introducción a la econometría. Un enfoque moderno.. Cengage Learning <p>A medida que se avanza no coñecemento das técnicas econométricas é recomendable a lectura de artigos enfocados a resolver problemas reais da economía. Poderanse utilizar, ademáis, outros libros de texto así como distintas fontes de datos e materiais dispoñibles na rede que se detallarán ao longo do curso.</p>

Recommendations

Subjects that it is recommended to have taken before

Statistics I/611G01006
 Mathematics I/611G01009
 Microeconomics and Markets/611G01012
 Statistics II/611G01014
 Macroeconomics/611G01017
 Statistical Methods and Introduction to Econometrics/611G01019
 Econometrics I/611G01022
 Mathematics II/611G02010

Subjects that are recommended to be taken simultaneously

Subjects that continue the syllabus

Other comments

1) PREREQUISITES It is very important that students are familiar with the contents of the subjects Introduction to Econometrics and Econometrics I.2) OTHER CONSIDERATIONS- The delivery of the documentary works to be carried out in this subject will be requested virtually, in digital format and without the need to print them.- The importance of ethical principles related to sustainability values in personal and professional behavior must be taken into account.- Work will be done to identify and modify sexist prejudices and attitudes and influence the environment to modify them and promote values of respect and equality.- We will facilitate the full integration of students who, for physical, sensory, mental or sociocultural reasons, experience difficulties in gaining adequate, equal and profitable access to university life.

(*)The teaching guide is the document in which the URV publishes the information about all its courses. It is a public document and cannot be modified. Only in exceptional cases can it be revised by the competent agent or duly revised so that it is in line with current legislation.