TEACHING GUIDE OF THE SUBJECT: ECONOMETRIC METHODS AND MODELS.

1. General data

Subject:	**ECONOMETRIC METHODS AND MODELS**	CODE:	**53322**
Typology:	**MANDATORY**	ECTScredits:	**6**
Grade:	**316 –DEGREE IN ECONOMICS**	Academic course:	**2016-17**
Centre:	**(5)SCHOOL OF ECONOMICS AND BUSINESS SCIENCESALBACETE**	Group(s):	**10**
Course:	**3**	Duration:	**Second term**
Main language for teaching:	**Spanish**	Second language:	**English**

Professor's name: VICTOR RAÚL LÓPEZ RUIZ

Office	Department	Phone	email	Tutorials timetable
MelchordeMacanaz 3.09	ECO. ESP. E INT., ECONOMET. E H. INS. EC	2349	Victor.lopez@uclm.es	To arrange according to schedules.

2.Prerequisites

It is recommended to have passed the subjects of Mathematics and Statistics. It is also recommended to have completed the previous course of Introduction to Econometrics.

3.Justification in the curriculum, relationship with other subjects and the profession

Econometric Methods and Models course fits into the third year of degree of Economics (second semester), being recommended right after completing Introduction to Econometrics. The main objective of the course is to provide the basic tools for professional modeling according to the different specific approaches of econometrics in response to complex reality situations, such as: generalization for the randomness of single equation models, approach dynamic relationships , series analysis as processes, concurrency in the economy, mixed data, etc.

Moreover, the ability of the student will be provided both in the management of these instruments as sources and databases available and their ability to perform in a group, economic reports. Competencies and skills economist who must know its reality and environment through sources and data published, as well as the need to operate with different software to implement the methods on economic relations analyzed and evaluate impacts or policies, planning strategically more successful in an environment of uncertainty. Thus, not only it provides a set of methods and models, but you learn to work with them in reality, for what must be complemented by training in economic theory and quantitative information needed, hence its relationship with the subjects of Statistics, Mathematics and Economic Theory.

4.Competencies of the degree that the course contributes to achieve

Competences obtained with the subject	
E03	Ability to find economic data and select relevant facts.
E05	Ability to contribute to the establishment of strategies which will allow for the efficient allocation of resources, the generation of wealth and a suitable distribution of income.
E06	Application of profesional criteria to the analysis of problems, based on the use of technical tools.
E16	To identify relevant sources of financial information and its content, as well as to acquire skills to derive the important information from the data, otherwise completely unknown to non-professionals.

G01	Possession of the skills needed for continuous, self-led, independent learning, which will allow students to develop the learning abilities needed to undertake further study with a high degree of independence.
G02	Ability to understand the ethical responsibility and the code of ethics of professionals working in the field of economics. To know and apply the legislation and recognition of human rights and questions of gender equality.
G03	To develop oral and written communication skills in order to prepare reports, research projects and business projects and defend them before any commission or group of professionals (specialised or non-specialised) in more than one language, by collecting relevant evidence and interpreting it appropriately so as to reach conclusions.
G04	Ability to use and develop information and communication technologies and to apply them to the corresponding business department by using specific programmes for these business areas.
G05	Capacity for teamwork, to lead, direct, plan and supervise multidisciplinary and multicultural teams in both national and international environments so as to create synergies which benefit organisations.

5. Objectives or expected learning results

Results from taking the subject

Specific to the subject

- Know the tools and methods for the quantitative analysis of the overall economy.
- Enable the student to solve problems creatively and innovatively.
- Enable the student to work and autonomous learning as well as personal initiative.
- Enable the student to search for information, analysis, interpretation, synthesis and transmission.

Additional findings

- Enable the student for the application of quantitative methods as support decision-making in uncertain environment.

6.Syllabus

Theme1	**GENERALIZED LEADS SQUARES MODELS**
	
	1.1. EXTENSIONS OF THE BASIC LINEAR REGRESSION MODEL.
	    1.2. STRUCTURAL CHANGE
	    1.3. MODELS WITH AUTOCORRELATION
	    1.4 MODELS WITH HETEROSCEDASTICITY

Theme2	**DYNAMIC MODELS** **2.1.** DISTRIBUTED-LAG MODELS **2.2.** STOCHASTIC PROCESSES (ARIMA) AND TIME SERIES
Theme3	**MULTIEQUATIONAL: SIMULTANEOUS EQUATIONS MODELS** **3.1.** SPECIFICATION, IDENTIFICATION AND ESTIMATION **3.2**. FORECAST AND SIMULATION
Theme4	**SPECIFIC ISSUES** **4.1.** MICROECONOMETRICS: APPLICATION TO SURVEY DATA **4.2** ANALYSIS OF PANEL DATA **4.3** MACRO-ECONOMETRICS MODELS: APPLICATIONS

4.4 STRATEGIC INFORMATION SYSTEMS: SIMULATION							

7. Activities and methodology

Training activity	Methodology	Competencies	ECTS	Hours	Ev	Man	Rec	Description
Classroom teaching (theory) [Face to face]	Exposition/master class	E03 E05, E06, E16, G01, G04	1.20	30.00	Yes	No	No	To explain the basics. Master classes are attached to practices with the cooperative method and involve practical exercises and empirical models. The goal is to deepen educational content, eliminating the student can obtain by other means and promoting self-learning.
Classroom teaching (practices) [Face to face]	Cooperative/ collaborative learning	E03, E06, E16, G01, G03, G04, G05	0.67	16.75	Yes	No	No	Project developments, cases, and management software throughout the course, according to the evolution of matter under the direction of Professor.
Classroom teaching (theory) [face to face]	Combination of methods	E03, E06, E16, G01, G04	0.13	3.25	Yes	No	No	Instrumental character. Students acquire the necessary knowledge about manage of economic data banks, as well as on the use of economic and econometric software.
Reporting [AUTONOMOUS]	Workgroups	E03 E05, E06, E16, G01, G03, G04, G05	1.20	30.00	Yes	Yes	No	Development project: construction of a single-equation model under the direction of Professor. Indispensable for the student to reach the objectives and to obtain a final positive evaluation.
Reporting [AUTONOMOUS]	Case study	E05, E06, G01, G03 AND G04	0.56	14.00	Yes	No	No	Accomplishment of cases and tasks proposed during the course, at least one per block agenda.
Presentation of report or themes [face to face]	Combination of methods	G03 G05	0. 04	1.00	Yes	No	No	Presentation of the project for final evaluation.
Testing online [AUTONOMOUS]	Autonomous work	G01, G03	0.24	6.00	Yes	No	No	Testing by Moodle platform where students can learn what

							Ev	Man	Rec	
										he has learned about the subject, and in which their theoretical and practical knowledge will be validated. It will be developed by the 12th week of the semester.
Group tutorials [face to face]	Directed or supervised work	E05, G03, G05	0.2	4	1.00	No	--		--	The Professor assigns and validates a theme proposed for the development of the project, revealing the group development guidelines and submission.
Final test [face to face]	Evaluation tests	E05, E06, E16, G01, G03	0.08		2.00	Yes	Yes	Yes		It will consist of two blocks: theoretical issues of reasoning for the student, and practical, in which different exercises on a case are proposed. The day fixed for the final exam is performed.
			Total:	6.00	150.00					

Total credits of classroom work	2.16	Total hours of classroom work:	54.00
Total credits of autonomous work:	3.84	Total hours of autonomous work:	96.00

Ev:Evaluable training activity
Man:Mandatory training activity
Rec:Recoverable training activity

8.Evaluation criteria

Evaluation system	%	Description
Elaboration of theoretical works	20.00%	Items: dynamic or multi-equational models. Attention not only to the content but to the correct use of scientific methods and the oral presentation will be given.
Resolution of problems or cases	10.00%	Individual work. Participation and positive outcome of the practical sessions, seminars, tutorials, case ... It will mean 10% of the final grade, requiring a minimum of participation (attendance and non-attendance via Moodle platform).
Progress tests	10.00%	Test of progress that will 10% of the final grade.
Final exam	60.00%	Final exam will be divided into two parts: theoretical and practical, the student will have to overcome.
Total:	100.00%	

Criteria of evaluation of the regular call:

The evaluation is based on a continuous system in which the effort and student progress in developing a range of skills are valued.

The test of progress will be made through practical exercises at the end of the semester.
Individual works are cases for delivery according to the school schedule. Participation and positive outcome of the practical sessions, seminars, and tutorials will be valued.
Groupware in evaluating this work attention not only to the content but to the correct use of scientific methods and the oral presentation will be given.
Final test, through the development of two blocks: theoretical issues and practical exercises.
To make the average, in the final examination it is necessary to obtain a minimum score of 4 points out of 10 on one side and five on average.

Special features of the extraordinary announcement:
There must be delivered course work (theoretical work) and conducted the exhibition of the same.

Special features of the special call for completion:
There must be delivered course work (theoretical work) and conducted the exhibition of the same.

9.Sequence of work, schedule, milestones and temporary investment

Non assignable to topics

-Training activities	Hours
-Presentation of report or themes [face to face] [combination of methods]	1
-Testing online [AUTONOMOUS] [autonomous work]	6
-Group tutorials [face to face] [Directed or supervised working]	1
-Final test [face to face] [evaluation tests]	2

Module 1 (of 4): I. GENERALIZED LEAST SQUARES MODELS

Training activities	Hours
-Classroom teaching theory face to face (Masterclass) 30h in total	8
-Classroom teaching practices collaborative learning 16.75h in tot	3.75
-Reporting [AUTONOMOUS] [workgroups] (30 h tot.)	8
-Reporting [AUTONOMOUS] [case study] (14 h tot.)	3
-Forums and debates online [AUTONOMOUS] [combination of methods] (6 h tot.)	1
-Study or test preparation [AUTONOMOUS] [combination of methods] (40 h tot.)	12

Period of time: 5 weeks
Group 10. Start date: 25/01/2017. Ending date: 28/02/2017

Module 2 (of 4): II. DYNAMIC MODELS

Training activities	Hours
-Classroom teaching (theory) [face to face] [expositive method/Masterclass] (30 h tot.)	9
-Classroom teaching (practices) [face to face] [cooperative/collaborative learning] (16.75 h tot.)	6
-Classroom teaching (theory) [face to face] [combination of methods] (3.25 h tot.)	1
-Reporting [AUTONOMOUS] [workgroups] (30 h tot.)	12
-Reporting [AUTONOMOUS] [case study] (14 h tot.)	7

Training activities	Hours
-Forums and debates online [AUTONOMOUS] [combination of methods]	2
-Study or test preparation [AUTONOMOUS] [combination of methods] *(40 h tot.)*	14

Period of time: 5 weeks
Group 10. Start date: 03-01-2017. Ending date: 10/04/2017

Module 3 (of 4): III. MULTIEQUATIONAL: SIMULTANEOUS EQUATIONS MODELS

Training activities	Hours
- Classroom teaching (theory) [face to face] [expositive method/Masterclass] (30 h tot.)	6
- Classroom teaching (practices) [face to face] [cooperative/collaborative learning] (16.75 h tot.)	5
-Classroom teaching (theory) [face to face] [combination of methods] *(3.25 h tot.)*	1
-Reporting [AUTONOMOUS] [workgroups] *(30 h tot.)*	7
-Reporting [AUTONOMOUS] [case study] *(14 h tot.)*	4
-Forums and debates online [AUTONOMOUS] [combination of methods] *(6 h tot.)*	2
-Study or test preparation [AUTONOMOUS] [combination of methods] *(40 h tot.)*	8

Period of time: 3 weeks
Group 10. Start date: 04/11/2017 end date: 01/05/2017

Theme 4 (of 4): IV. SPECIFIC ISSUES

Training activities	Hours
-Classroom teaching (theory) [face to face] [expositive method/Masterclass] *(30 h tot.)*	7
-Classroom teaching (practices) [face to face] [cooperative/collaborative learning] *(16.75 h tot.)*	2
-Reporting [AUTONOMOUS] [workgroups] *(30 h tot.)*	3
-Forums and debates online [AUTONOMOUS] [combination of methods] *(6 h tot.)*	1
-Study or test preparation [AUTONOMOUS] [combination of methods] *(40 h tot.)*	6

Period temporary: 2 weeks
Group 10. Start date: 02/05/2017. Ending date: 14/05/2017

Global activity

Training activities	Sum
- Classroom teaching (theory) [face to face] [expositive method / Masterclass]	30
- Classroom teaching (practices) [face to face] [cooperative/collaborative learning]	16.75
- Classroom teaching (theory) [face to face] [combination of methods]	3.25
-Reporting [AUTONOMOUS] [workgroups]	30
- Reporting [AUTONOMOUS] [case study]	14
- Presentation of report or themes [face to face] [combination of methods]	1
- Testing online [AUTONOMOUS] [autonomous work]	6
- Forums and debates online [AUTONOMOUS] [combination of methods]	6
- Study or test preparation [AUTONOMOUS] [combination of methods]	40
- Group tutorials [face to face] [Directed or supervised working]	1
- Final test [face to face] [evaluation tests]	2

Total hours: 150
Group 10. Start of activities: 25/01/2017 end of activities: 14/05/2017

General comments on planning:
The first week is the presentation of the subject, last week also used for doubt that students, exhibitions, and tasks cannot be assigned to submit agenda. This planning is indicative.
The time schedule may be modified to unforeseen circumstances

10.References

Author/s	Title	Editorial	City	ISBN	Year	Description
Baltagi Badi H. (Badi Hani)	A Companion to econometric analysis of panel data	John Wiley & Sons		978-0-470-74403-1	2009	
Calderón Milán, M.J., López Ruiz, V.R. and Tarancón Morán, M.A.	Prácticas de Econometría.	Popular Libros		4-931937-1-3	2001	
Granger, Clive William John	Essays in econometrics: collected papers of Clive W.J. large.	Cambridge University Press,		0-521-79697-0	2001	
Greene, William H. (1951)	Econometric analysis,	Prentice Hall		978-0-13-513245-6	2008	
Gujarati, Damodar N.	Econometrics	McGraw-Hill Inter-American,		970-10-3971-8,	2004	
Maddala, g. S.	Econometrics	McGraw-Hill		9684516754	1988	
Perez Lopez, Cesar	Advanced Econometrics: tools and techniques	Pearson Education		978-84-8322-479-3	2008	
Pulido San Román, Antonio	Modelos econométricos	Pirámide		84-368-1534-3	2001	