MÉTODOS PARA LA INVESTIGACIÓN EN MACROECONOMÍA
RESEARCH METHODS IN MACROECONOMICS

SEMESTER	CREDITS (ECTS)	TYPE	MODE OF DELIVERY	LANGUAGE(S) OF INSTRUCTION
2nd	4	Elective	Face-to-face	English

MODULE	
SUBJECT	Research Methods in Macroeconomics
CENTRE / FACULTY / SCHOOL RESPONSIBLE FOR THE PROGRAMME	International School for Postgraduate Studies (EIP)
MASTER'S DEGREE	Master in Economics
FACULTY / SCHOOL	Facultad de Ciencias Económicas y Empresariales

TEACHING STAFF[1]

Teresa García-Muñoz

CONTACT DETAILS	Dpto. Métodos Cuantitativos para la Economía y la Empresa Facultad de CC Económicas y Empresariales. Office C.102 Email address: tgarciam@ugr.es
OFFICE HOURS	Tutorial hours are available on the link: http://metodoscuantitativos.ugr.es/pages/docencia

Ana I. Moro-Egido

CONTACT DETAILS	Dpto. Teoría e Historia Económica Facultad de CC Económicas y Empresariales. Office B.324 Email address: aimoro@ugr.es
OFFICE HOURS	Tuesday: 08:30 a.m. to 10.30 a.m and 15:30 p.m. to 17:30 p.m.

GENERAL AND SPECIFIC COMPETENCES

BASIC AND GENERAL COMPETENCES

CB6 – To possess and understand knowledge that gives a basis or opportunity to be original in the development and/or application of ideas, often in a research context.

---

[1] Consulte posible actualización en Acceso Identificado > Aplicaciones > Ordenación Docente
(∞) Esta guía docente debe ser cumplimentada siguiendo la "Normativa de Evaluación y de Calificación de los estudiantes de la Universidad de Granada" (http://secretariageneral.ugr.es/pages/normativa/fichasugr/ncg7121/!)

CB7 – That the students know how to apply the knowledge acquired and their ability to solve problems in new or little-known situations within broader (or multidisciplinary) contexts related to their area of study.
CB8 – That the students are able to integrate knowledge and handle the complexity of formulating judgements from information that, being incomplete or limited, includes reflections on the social and ethical responsibilities linked to the application of their knowledge and judgements.
CB9 – That the students know how to communicate their conclusions and the knowledge and underlying reasons that sustain them to specialist and non-specialist audiences in a clear and unambiguous way.
CB10 – That the students possess the learning skills to enable them to continue studying in a way that will necessarily be largely self-managed and autonomous.

CG1 – That the student attain the ability for analysis and synthesis, which includes being capable of defining, distinguishing and relating both the basic concepts and the premises upon which the exposition of any argument is built, as well as stating and basing its content in a concise and critical way, in the context – scientific, political, economic, organizational or whatever the type may be – in which it is presented.

SPECIFIC COMPETENCES
CE1 – Acquire bibliographical information on the current state of economics research
CE5 – Apply advanced techniques to real problems
CE6 – Formulate and answer questions in a way applicable to business strategies
CE7 – Formulate and answer questions in a way applicable to economic policy
CE8 – Formulate and contrast hypotheses related to theoretical assumptions and predictions
CE9 – Plan and organize empirical studies
CE11 - Plan and organize field studies
CE12 - Plan and organize business diagnostic studies
CE14 – Programme in specific software for data analysis
CE16 – Solve technical and practical problems related to the design of empirical studies
CE17 – Solve technical and practical problems related to the organization, presentation and analysis of the data obtained from a study
CE18 – Assist as support staff in research projects
CE20 – Draw up scientific articles
CE22 – Public presentation and defense of own work

OBJECTIVES OR LEARNING OUTCOMES (ACCORDING TO THE MASTER'S PROGRAMME VALIDATION REPORT)

Student will know/understand:
• The different quantitative techniques for the analysis of any economic problem regarding hierarchical data, panel data and time series.
• To identify and properly apply these techniques.
• To describe the hypothesis.
• To classify different types of determinants, and to interpret their specific effect.
• To describe the hypothesis
• To select the main findings of the quantitative analysis

Student will be able to:
• To identify a relevant empirical economic problem,
• Distinguish between different empirical methodologies to address a question.
• Gather evidence (references, empirical, theoretical, etc) to perform an analysis.
• Analyze the empirical evidence to solve a new problem.
• Conduct an empirical analysis with the most relevant methodology.
• Identify relevant conclusions.

BRIEF DESCRIPTION OF THE COURSE CONTENT (ACCORDING TO THE MASTER'S PROGRAMME

VALIDATION REPORT)

The course RESEARCH METHODS IN MACROECONOMICS aims at covering the standard models to deal with empirical applications in Microeconomics They must be able at the end of the course to explore complex databases and to choose the accurate estimators depending on the model they want to test.
The course is divided in the following topics: hierarchical data, panel data and time series. It provides some theoretical foundations and applications using STATA. It offers the students a sufficient knowledge of STATA tools for data analysis and macroeconometrics.

SYLLABUS

THEORY AND PRACTICAL SYLLABUS:
Topic 1: Time series models.
1.0. Introduction
1.1. Time series and stochastic processes
1.2. Autoregressive models, Moving average processes and ARMA.
1.3. Non-Stationary linear processes
1.4. Forecasting with ARIMA models.
Topic 2: Hierarchical data models
2.0. Introduction
2.1. Random intercept
2.2. Random slope
2.3. Interaction Effects
Topic 3: Panel data models.
3.1. Fixed effects and random effects models: differences between these models.
3.2. Estimation of random effects models: Generalised Least Squares (GLS).
3.3. Estimation of fixed effects models assuming strict exogeneity: the within groups estimator (WG).
3.4. Random effects versus fixed effects: a specification test "Hausman" type.

REQUIRED AND RECOMMENDED READING

REQUIRED READING:
Basic References (topic 1)
R. Davinson and J.G. MacKinnon. "Econometric Theory and Methods". Oxford University Press
W. Enders. "Applied Econometric Time Series". Wiley.
Basic References (topic 2-3)
Cameron, A. C., y Trivedi, P. K. (2005): Microeconometrics: Methods and applications. Cambridge University Press.
Greene, W. H. (2003): Econometric analysis. 5ª edición. Prentice-Hall.
Wooldridge, J. M. (2006): Introductory econometrics: a modern approach. South-Western.

USEFUL LINKS (OPTIONAL)

https://prado.ugr.es/prado2/

TEACHING METHODOLOGY

- Theory: the teacher will present the topics in class.
- Practical part: The teacher will propose a set of practices (exercises, questions, etc.) related to the program.
- Students will present some exercises on a specific topic from those proposed by the teacher.

- Class attending: Participation is measured by contributions of students and attitude during activities

ASSESSMENT (EVALUATION INSTRUMENTS, EVALUATION CRITERIA, PERCENTAGE OF FINAL MARK, ETC)

ORDINARY ASSESSMENT SESSION

This subject consists of two different parts, therefore the evaluation will be assessed by each of the parts. To pass this subject the student has to pass both parts. *Each part represents 50% of the final mark.*
It will be conducted an **ongoing evaluation** of the following aspects of student training (the weight of each item in the final assessment shown in parenthesis):
TOPIC 1
- Tests, exercises and problems solved in class or individually throughout the course (25%)
- Class attendance and contributions of students in discussion sessions and attitude of students in the different activities (25%)
- Report (solve some exercises including programs and analysis) (50%)

TOPIC 2-3
- Oral presentations of exercises (including programs and analysis) (35%)
- Report (solve some exercises including programs and analysis) (65%)

The evaluation of the subject requires a minimum of 80% presence in classes to pass the subject. It will be also compulsory to attend the seminars (if any) organized within the subject.

EXTRAORDINARY ASSESSMENT SESSION
The extraordinary assessment evaluation will be:
TOPIC 1
- Report (solve some exercises including programs and analysis)
TOPIC 2-3
- Report (solve some exercises including programs and analysis)

All the reports should be submitted by PRADO

DESCRIPTION OF THE EXAMS/TESTS THAT WILL FORM PART OF THE SINGLE FINAL ASSESSMENT "*EVALUACIÓN ÚNICA FINAL*" (AN ASSESSMENT METHOD THAT ONLY TAKES A FINAL EXAM INTO ACCOUNT) AS ESTABLISHED IN THE UGR ASSESSMENT POLICY AND REGULATIONS)

The student will officially ask the Master Coordinator for the unique-final evaluation during the first two weeks of the course through electronic procedure. Students authorized to this type of unique final evaluation would be evaluated using the following criteria:
TOPIC 1
- Report (solve some exercises including programs and analysis)
TOPIC 2-3
- Report (solve some exercises including programs and analysis)

SCENARIO A (ON-CAMPUS AND REMOTE TEACHING AND LEARNING COMBINED)

TUTORIALS	
TIMETABLE (According to Official Academic Organization Plan)	**TOOLS FOR TUTORIALS** (Indicate which digital tools will be used for tutorials)
Same schedule as in general	• Email (and in specific cases by Google Meet). Given the sanitary recommendations, it is not guaranteed the distance with student, then in any case office hours would be by email or in some specific cases by Google Meet.
MEASURES TAKEN TO ADAPT TEACHING METHODOLOGY	

- On campus: we will use the laboratory (given the rules allow this option)
- Remote teaching: we will provide the videos or streaming sessions.

NOTE: It is strictly forbidden to record streaming classes and any meeting on Google Meet.

MEASURES TAKEN TO ADAPT ASSESSMENT (Instruments, criteria and percentage of final overall mark)
Ordinary assessment session
Same as on-campus teaching
Extraordinary assessment session
Same as on-campus teaching
Single final assessment
Same as on-campus teaching

SCENARIO B (ONCAMPUS ACTIVITY SUSPENDED)

TIMETABLE (According to Official Academic Organization Plan)	**TOOLS FOR TUTORIALS** (Indicate which digital tools will be used for tutorials)
Same schedule as in general	• Email (and in specific cases by Google Meet).
MEASURES TAKEN TO ADAPT TEACHING METHODOLOGY	

The PRADO platform will be used to share the material for each topic: notes on the topics, explanatory videos for each part, list of solved exercises, list of exercises proposed for students and software explanatory video.

NOTE: It is strictly forbidden to record streaming classes and any meeting on Google Meet.

MEASURES TAKEN TO ADAPT ASSESSMENT (Instruments, criteria and percentage of final overall mark)
Ordinary assessment session

Topic 1: Students will be assessed through continuous assessment tests (30% of final overall mark) and reports (solve some exercises including programs and analysis) (70% of final overall mark). For this, the PRADO platform will be used
Topic 2-3 The oral presentation of exercises will be exchange with some extra report to be submitted by PRADO. The original report submitted by PRADO, as in the general case.

Extraordinary assessment session

Reports (solve some exercises including programs and analysis) (100% of final overall mark)

Single final assessment

The student will officially ask the Master Coordinator for the unique-final evaluation during the first two weeks of the course through electronic procedure. Students authorized to this type of unique final evaluation would be evaluated using the following criteria:

- Reports (solve some exercises including programs and analysis) (100% of final overall mark)