



Academic year	2014-15
Subject	20612 - Introduction to Econometrics
Group	Group 30, 1S, GECO
Teaching guide	E
Language	English

## Subject identification

<b>Subject</b>	20612 - Introduction to Econometrics
<b>Credits</b>	1.6 de presencials (40 hours) 4.4 de no presencials (110 hours) 6 de totals (150 hours).
<b>Group</b>	Group 30, 1S, GECO (Campus Extens)
<b>Teaching period</b>	1st semester
<b>Teaching language</b>	English

## Professors

Lecturers	Horari d'atenció als alumnes					
	Starting time	Finishing time	Day	Start date	Finish date	Office
Lucia Mangiavacchi ----	10:00h	11:00h	Tuesday	15/09/2014	30/06/2015	DB220
<a href="mailto:lucia.mangiavacchi@uib.es">lucia.mangiavacchi@uib.es</a>	14:30h	15:30h	Monday	02/02/2015	15/05/2015	DB220

## Contextualisation

This subject is designed to give students an understanding of why econometrics is necessary, and to provide them with a working knowledge of basic econometric tools so that:

- They can apply these tools to modeling, estimation, inference and forecasting in the context of real world economic problems.
- They can evaluate critically the results and conclusions from others who use the basic econometric tools.
- They have a foundation and understanding for further study of econometrics.

## Requirements

### Essential requirements

It is mandatory to have a complete knowledge of the two first year subjects "Analysis of Economic Data" and "Mathematics".

## Skills

### Specific

- \* Bringing rationality to the analysis and description of any aspect of the economy.





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- \* Obtaining data from relevant information that is unable to be recognized by those who are not professionals of economics.
- \* Analyzing economic problems using formal models and being able to incorporate extensions and variations to the basic models, respecting the basic assumptions and being aware of their potentiality and limitations.

### Generic

- \* Applying professional criterions based on technical tools to the analysis of economic problems.
- \* Analyzing economic problems using critical reasoning, without prejudices, with precision and scientific rigor.

### Basic

- \* You may consult the basic competencies students will have to achieve by the end of the degree at the following address: <http://www.uib.eu/study/grau/Basic-Competences-In-Bachelors-Degree-Studies/>

## Content

### Theme content

1. Review of statistical inference
  - Basic concepts.
  - Parameter estimation.
  - Hypothesis testing.
2. The simple linear regression model
  - Specification.
  - Estimation.
  - Evaluation.
  - Inference.
  - Forecasting.
3. The multiple linear regression model
  - Specification.
  - Estimation.
  - Evaluation.
  - Inference.
  - Forecasting.
4. The linear regression model with qualitative explanatory variables
  - Dummy variables.
  - Interactions.
5. Problems with sample data. Multicollineality
  - Problems with sample data.
  - Definitions and consequences of multicollineality.





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- Detection measures.
- 6. Specification and measurement errors
  - Irrelevant variables.
  - Omitted variables.
  - Measurement errors.
- 7. Heteroskedasticity
  - The nature of heteroskedasticity.
  - Estimating a model with heteroskedasticity.
  - Detecting heteroskedasticity.
- 8. Autocorrelation
  - The nature of autocorrelation.
  - Estimating a model with autocorrelation.
  - Detecting autocorrelation.

## **Teaching methodology**

The student will acquire the knowledge regarding the contents of this subject by theoretical and practical classes, and by in-class and home work. Information regarding the subject will be given at the Campus Extens web page.

Dead line for delivering home work must be fulfilled strictly.

Revision of marks of home-work and partial exams must be requested before 15 days after the delivery of the mark.

To pass the subject the student must achieve the following two objectives simultaneously:

- To achieve a minimum mark of 4 over 10 in the final exam.
- To attain at least an average final mark of 5 over 10 on the whole learning assessment of the subject.

If the student does not reach the minimum mark for the final exam the whole mark will be equal to 4.5, although the final mark is equal or higher than 5.

A track B has been established exclusively for the following two student typologies. First students who are working and cannot combine their job with the continuous assessment. Second students that have been attended the subject the previous year and in the current semester are enrolled in an exchange program (ERASMUS or similar).

The conditions of this track B are:

- There is only one evaluation criterion, the final exam, which accounts for 100% of the final grade.
- By default, all students will follow the track A. Students who wish to follow track B must inform the teacher by e-mail during the first two weeks of the course. After this time, the assessment option cannot be changed.
- Students who wish to follow this track must formally justify the incompatibility of their working hours with the class schedule (job contract, working life) or their status of exchange students.



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### In-class work activities

Modality	Name	Typ. Grp.	Description	Hours
Theory classes	Lectures	Large group (G)	The teacher will explain the theoretical contents of the subject.	17.5
Practical classes	Computer practices	Medium group (M)	Practices using econometric software	7
Practical classes	Exercises	Medium group (M)	In-class exercises.	10
Assessment	Final exam	Large group (G)	Exam with exercises and theoretical questions.	2.5
Assessment	Partial exam	Medium group (M)	Exam at the computer room in which students have to apply contents and techniques previously studied during practical classes.	1.5
Assessment	Partial exam	Large group (G)	Exam with exercises and theoretical questions.	1.5

At the beginning of the semester a schedule of the subject will be made available to students through the UIBdigital platform. The schedule shall at least include the dates when the continuing assessment tests will be conducted and the hand-in dates for the assignments. In addition, the lecturer shall inform students as to whether the subject work plan will be carried out through the schedule or through another way included in the Campus Extens platform.

### Distance education work activities

Modality	Name	Description	Hours
Individual self-study		Study of the contents of the subject.	80
Group or individual self-study	Activities	Activities related to the computer classes.	30

### Specific risks and protective measures

The learning activities of this course do not entail specific health or safety risks for the students and therefore no special protective measures are needed.

### Student learning assessment





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### Final exam

Modality	Assessment
Technique	Extended-response, discursive examinations ( <b>retrievable</b> )
Description	Exam with exercises and theoretical questions.

#### Assessment criteria

Final grade percentage: 50% for the training plan A with minimum grade 4

Final grade percentage: 100% for the training plan B with minimum grade 5

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### Partial exam

Modality	Assessment
Technique	Real or simulated task performance tests ( <b>non-retrievable</b> )
Description	Exam at the computer room in which students have to apply contents and techniques previously studied during practical classes.

#### Assessment criteria

Final grade percentage: 25% for the training plan A

Final grade percentage: 0% for the training plan B

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### Partial exam

Modality	Assessment
Technique	Extended-response, discursive examinations ( <b>non-retrievable</b> )
Description	Exam with exercises and theoretical questions.

#### Assessment criteria

Final grade percentage: 25% for the training plan A

Final grade percentage: 0% for the training plan B

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## Resources, bibliography and additional documentation

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### Basic bibliography

Hill, R. C., Griffiths, W.E. and Lim, G. C. (2008). *Principles of Econometrics*. Wiley. USA.  
Green. W. (2008). *Econometric Analysis*. Prentice Hall. USA.

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### Other resources

Additional materials in the web of the subject.

