

**COURSE DATA****Data Subject**

|                      |             |
|----------------------|-------------|
| <b>Code</b>          | 35887       |
| <b>Name</b>          | Statistics  |
| <b>Cycle</b>         | Grade       |
| <b>ECTS Credits</b>  | 4.5         |
| <b>Academic year</b> | 2023 - 2024 |

**Study (s)**

| <b>Degree</b>                           | <b>Center</b>        | <b>Acad. year</b> | <b>Period</b> |
|-----------------------------------------|----------------------|-------------------|---------------|
| 1314 - Degree in International Business | Faculty of Economics | 2                 | First term    |

**Subject-matter**

| <b>Degree</b>                           | <b>Subject-matter</b>                        | <b>Character</b> |
|-----------------------------------------|----------------------------------------------|------------------|
| 1314 - Degree in International Business | 9 - Quantitative methods applied to business | Obligatory       |

**Coordination**

| <b>Name</b>              | <b>Department</b>       |
|--------------------------|-------------------------|
| CABALLER TARAZONA, MARIA | 110 - Applied Economics |

**SUMMARY**

Statistics is a basic course within the module Quantitative Methods Applied to Business taught in the first semester of the second year of the International Business degree, with a total load of 4.5 ECTS.

The course provides the fundamentals of the quantitative analysis of information, being its ultimate goal to help in decision-making under uncertainty. The contents is organized in three parts: Descriptive Statistics, Probability Theory and Introduction to Inferential Statistics.

Part I, Descriptive Statistics, introduces basic concepts related to the statistical treatment of data and the summary of statistical variables. Part II, Probability Theory, aims at introducing basic theoretical concepts that allow to model uncertainty. Finally, part III, Introduction to Inferential Statistics, introduces some applications of mathematical statistics to decision processes.



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## PREVIOUS KNOWLEDGE

### Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

### Other requirements

It is recommended for students to have some basic mathematical knowledge.

## OUTCOMES

### 1314 - Degree in International Business

- Develop the capacity to evaluate and critically analyse international economic phenomena and agents.
- Be able to work in multidisciplinary and intercultural teams.
- Know how to use the statistical methods and software to manage the company's operations.
- Use the economic and financial information of the company to make decisions.
- Develop the capacity to prepare and defend reports that contribute to the decision-making of public and private agents.
- Adquirir conocimientos básicos de Estadística.
- Conocer el análisis de datos unidimensionales.
- Tener conocimientos de regresión.
- Conocer los aspectos básicos de las series temporales y de los modelos univariantes.
- Saber utilizar paquetes informáticos específicos que ayuden a resolver problemas de toma de decisiones en el ámbito empresarial.



## LEARNING OUTCOMES

- To acquire notions about decision-making under uncertainty.
- Knowledge of the main Statistics to summarize sample information.
- To seek for and determine relationship between variables.
- To characterize an uncertain event.
- To apply statistical/econometric software for analyzing business and business environment information.
- To know the basis of Probability Theory.

## DESCRIPTION OF CONTENTS

### 1. ANALYSIS AND SUMMARY OF INFORMATION

Unit 1. Graphic analysis.

Unit 2. Numerical analysis I: measures of central tendency.

Unit 3. Numerical analysis II: measures of variability.

### 2. PROBABILITY MODELS

Unit 4. Fundamentals of probability theory.

Unit 5. Discrete probability distributions.

Unit 6. Continuous probability distributions.

### 3. SAMPLING AND ESTIMATION

Unit 7. Distribution of sampling statistics.

Unit 8. Confidence intervals for the mean.

Unit 9. Confidence intervals for other parameters.



## WORKLOAD

| ACTIVITY                                     | Hours         | % To be attended |
|----------------------------------------------|---------------|------------------|
| Computer classroom practice                  | 30,00         | 100              |
| Theory classes                               | 15,00         | 100              |
| Study and independent work                   | 10,00         | 0                |
| Preparation of evaluation activities         | 11,00         | 0                |
| Preparing lectures                           | 10,00         | 0                |
| Preparation of practical classes and problem | 15,00         | 0                |
| Resolution of case studies                   | 20,00         | 0                |
| Resolution of online questionnaires          | 1,50          | 0                |
| <b>TOTAL</b>                                 | <b>112,50</b> |                  |

## TEACHING METHODOLOGY

Course time is split between lectures and computer lab work. Therefore, the teaching method will depend on the class session (lecture or computer lab).

Lectures, will take place on-line though the different tools available in aula virtual.

Computer labs, with a teaching load of 2 hours a week, focus on presenting the students with practical examples and finding solutions to problems based on the application of (previously introduced) theoretical concepts. These sessions are based on different active teaching methods, but will rely mostly on problem solving. The main goal is to apply theoretical concepts to case problems.

## EVALUATION

Grades are a weighted average of the results from a final exam and coursework.

1. The weight of the final exam is 70% of the course grade. It will include theoretical and/or practical problems to assess students' proficiency in the knowledge and application of the core tools and concepts of the subject.
2. The remainder 30% of the final grade is the assessment of in-class participation, coursework and problems-solving and quizzes.

### IMPORTANT:

No student will get a positive assessment of the course (5 points or more) without passing the final exam (5 points out of 10). Students failing the final exam will get a maximum final grade of 4.5 points.



A student might opt out of in-class assignments assessment. In this case his/her final grade will be exclusively based on the final exam, and will opt to a maximum grade of 7 points out of 10.

## REFERENCES

### Basic

- Newbold, Paul; Carlson, William L. y Thorne, Betty (2010). Statistics for business and economics. Upper Saddle River (NJ) : Pearson Education. También pueden consultarse las ediciones de 2007 y 2003.

En castellano: Newbold, Paul; Carlson, William L. y Thorne, Betty (2013). Estadística para Administración y Economía. Pearson-Prentice Hall, Madrid (8ª Edición).

ESTEBAN GARCÍA, et al (1): Estadística descriptiva y nociones de probabilidad. Ed. Internacional Thomson. Madrid, 2005.

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Levine, David M.; Stephan, David F.; Krehbiel, Timothy C. y Berenson, Mark L. (2008). Statistics for Managers: using Microsoft Excel. Upper Saddle River (NJ): Pearson Education.

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CEACES, Proyecto (Contenedor Hipermedia de Estadística Aplicada a las Ciencias Económicas y Sociales). Universitat de València. ON LINE:<http://www.uv.es/ceaces>

### Additional

- Berenson, Mark L.; Levine, David M. y Krehbiel, Timothy C. (2009). Basic business statistics : concepts and applications Upper Saddle River, N.J. : Pearson Prentice Hall.

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CANAVOS, G.C. (1984). Probabilidad y Estadística: aplicaciones y métodos. McGraw-Hill, México.

La-Roca, F. (2006) Estadística aplicada a les ciències socials Publicacions de la Universitat de València, València.

McClave, James T.; Benson, P. George y Sincich, Terry. (2008). Statistics for business and



economics. Upper Saddle, NJ : Pearson Prentice Hall.

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Murgui, J.S. y otros (2002). Ejercicios de Estadística. Economía y Ciencias Sociales. Valencia. Tirant lo Blanch.

Anderson, D.R.; Sweeney, D.J. y Williams, T.A. (2001). Estadística para Administración y Economía. International Thomson Editores, México.

RUÍZ-MAYA, L. y MARTÍN-PLIEGO, F.J. (2004). Fundamentos de Inferencia Estadística. Ed. Thomson, Madrid, (3ª Edición).

SHELDON M. ROSS (2007): Introducción a la Estadística. Barcelona Reverté.