1. OVERVIEW

Subject area	Statistics II
Degree	Bachelor's Degree in Business Administration and Management
School/Faculty	SOCIAL SCIENCE AND COMMUNICATION
Year	Third
ECTS	6 ECTS
Type	Compulsory
Language(s)	Spanish and English
Delivery mode	On campus and online
Semester	First semester
Year	2024/2025
Coordinating professor	Maicol Ochoa

2. INTRODUCTION

Statistics 2 is a compulsory subject area within the Bachelor's Degree in Business Administration and Management, worth 6 ECTS credits. This subject area, taught in the first semester of the third year of the degree, is part of the quantitative tools module and involves learning the necessary techniques for statistical reasoning, focusing specifically on solving problems of an economic, business and financial nature.

3. LEARNING OUTCOMES

Knowledge (CON, by the acronym in Spanish)
CON4. Identify concepts and tools from mathematics, statistics and econometrics that enable better analysis of economic and business variables and a better understanding of business decisions and problems.

- Identify discrete and continuous random variables for the modelling of economic and financial variables.

Abilities (HAB, by the acronym in Spanish)
HAB2. Solve problems and practical cases using mathematical and data analysis techniques and tools to solve economic issues. Use basic calculus, algebra and programming methods to gain a better understanding of the operational functioning of the company and its environment.

- Carry out reports on the economic/business situation through the use of statistical inference tools.

Skills (COMP, by the acronym in Spanish):

COMP04. Analyse, integrate and assess the legal, sociocultural and economic information needed in different decision-making processes.

4. CONTENTS

The subject area is organised into several learning units with theoretical and practical content, which are further divided into several topics.

1. Probability theory: Assessment of the degree of uncertainty.
2. Discrete random variables and their characteristics.
3. Distributions of discrete probabilities.
4. Continuous random variables and their characteristics.
5. Distributions of continuous probabilities.
6. Inference theory: Statistical distributions in sampling.
7. Confidence intervals.
8. Hypothesis testing.

5. TEACHING/LEARNING METHODS

The types of teaching-learning methods are as follows:

On campus mode:

- Collaborative learning
- Problem-based learning
- Project-based learning
- Lectures

Online mode:

- Collaborative learning
- Problem-based learning
- Project-based learning
- Lectures via online seminars

6. LEARNING ACTIVITIES

The types of learning activities, plus the amount of time spent on each activity, are as follows:

On campus mode:

Learning activity	Number of hours
Lectures	45h
Independent working	20h
Oral presentations	5h

Case studies and problem solving	35h
Group work	15h
Knowledge tests	10h
Tutorials	20h
TOTAL	**150h**

Online mode:

Learning activity	Number of hours
Online seminars	5h
Reading course material and consulting complementary resources	22,5h
Individual applied activities: problems, case studies, projects	35h
Collaborative applied activities	12.5
Tutorials	17,5h
Self-assessment questionnaires and knowledge tests	7,5h
Autonomous learning	50h
TOTAL	**150h**

7. ASSESSMENT

The assessment systems, plus their weighting in the final grade for the subject area, are as follows:

Assessment system	Weighting
Final knowledge test	50%
Individual activities	30%
Group work	20%

On the Virtual Campus, when you open the subject area, you'll find details of your assessment activities, including the submission dates and assessment procedures for each activity.

7.1. Ordinary exam period

To pass the subject area in the ordinary exam period, you must achieve a grade of at least 5.0 out of 10.0 as the final grade (weighted average) for the subject area.

In any case, you will need a grade of at least 4.0 in the final test for it to be included in the weighting with the other activities. If the grade achieved in the final exam is lower than 4, this grade will be used as the final mark.

7.2. Extraordinary exam period (resits)

To pass the subject area in the extraordinary exam period (resits), you must obtain a grade of 5.0 or more out of 10.0 in the final grade (weighted average) for the subject area.

In any case, you will need a grade of at least 4.0 in the final test for it to be included in the weighting with the other activities. If the grade achieved in the final exam is lower than 4, this grade will be used as the final mark.

Any activities not passed in the ordinary exam period must be submitted after receiving the relevant corrections and feedback from the teacher. Students must also submit any activities that were not submitted in the first place.

8. TIMELINE

This section details the timeline and submission dates for the assessment activities in this subject area.

Assessment activities	Date
Activity 1	Weeks 1–2
Activity 2	Weeks 4–5
Activity 3	Weeks 5–6
Activity 4	Weeks 8–10
Activity 5	Weeks 12–14
Activity 6	Weeks 14–16
Final knowledge test	Week 18

The timeline may be subject to change for logistical reasons related to the activities. Students will be informed of any changes in due time via the appropriate channels.

9. BIBLIOGRAPHY

The reference work for the follow-up of this subject area is:

- Casas Sánchez, J.M (2000): Estadística I: Probabilidad y distribuciones. Editorial Universitaria Ramón Areces.

- Martín-Pliego, Javier (2006): FUNDAMENTOS DE PROBABILIDAD. Madrid: S.A. EDICIONES PARANINFO
- Peña, Daniel (2013): FUNDAMENTOS DE ESTADISTICA. Madrid: Alianza Editorial.
- Ruiz-Maya, Luis y Martín-Pliego, Javier (2005): FUNDAMENTOS DE INFERENCIA (3ª ed.) Madrid: S.A. EDICIONES PARANINFO
- Ruiz-Maya, Luis y Martín-Pliego, Javier (2004): ESTADISTICA I: PROBABILIDAD (2ª ED.). Madrid: S.A. EDICIONES PARANINFO.
- Ruiz-Maya, Luis y Martín-Pliego, Javier (2001): ESTADISTICA II. INFERENCIA. Alfa Centauro.

The following is a recommended bibliography for solving exercises:

- Casas Sánchez, J.M (1998): PROBLEMAS DE ESTADISTICA: DESCRIPTIVA, PROBABILIDAD E INFERENCIA.PIRAMIDE.
- CUADRAS, C. M (2000): PROBLEMAS DE PROBABILIDADES Y ESTADÍSTICA (vol.1). Barcelona. EUB
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- FERNÁNDEZ-ABASCAL, H. (1995): Ejercicios de Cálculo de Probabilidades y Estadística. Ariel Economía.
- LÓPEZ DE LA MANZANARA, J. (2005): Problemas de estadística (14ª ED.). PIRAMIDE. Guía de aprendizaje: Estadística II 8
- Montero Lorenzo, J.M. y Ruiz-Maya, L. (2005): PROBLEMAS DE INFERENCIA ESTADÍSTICA. EDICIONES PARANINFO, S.A.
- Parra Frutos, Isabel. (2003): PROBLEMAS DE INFERENCIA ESTADÍSTICA EMPRESARIAL CON MICROSOFT EXCEL. Alfa Centauro.
- Peralta, M.J., Rúa, A., y Redondo, R.(2000): Estadística. Problemas resueltos. Pirámide S.A., Ediciones.
- Pérez, Cesar (2012): ESTADISTICA APLICADA. CONCEPTOS Y EJERCICIOS A TRAVÉS DE EXCEL. GARCETA GRUPO EDITORIAL
- Vicente Quesada, Paloma y Martín, Isidoro (1992): CURSO Y EJERCICIOS DE ESTADISTICA (7ª ED.). Madrid: Pearson Educación

10. EDUCATIONAL GUIDANCE AND DIVERSITY UNIT

The Educational Guidance and Diversity Unit (ODI, by the acronym in Spanish) offers support to our students throughout their university experience to help them achieve their academic goals. Our work also centres around the inclusion of students with special educational needs, accessibility for all on the different university campuses and equal opportunities.
This Unit offers students:

1. Support and follow-up by means of personal counselling and plans for students who need to improve their academic performance.
2. With regard to support for diversity, non-significant curricular adjustments are made, i.e. in terms of methodology and assessment, for those students with special educational needs, thus pursuing equal opportunities for all students.
3. We offer students a variety of extracurricular learning resources for developing different skills to enrich their personal and professional development.
4. Career guidance through the provision of tools and counselling to students with career doubts or who believe they have made a mistake in their choice of qualification.

Students who need educational support can contact us at:
orientacioneducativa@universidadeuropea.es

11. SATISFACTION SURVEYS

Your opinion matters!

Universidad Europea encourages you to complete our satisfaction surveys to identify strengths and areas for improvement for staff, degree courses and the learning process.

These surveys will be available in the survey area of your virtual campus or by email.

Your opinion is essential to improve the quality of the course.

Many thanks for taking part.