1. OVERVIEW

Subject Area	Statistical Analysis Tools
Degree	Bachelor's Degree in Business Analytics
School/Faculty	Social Sciences and Communication
Ac. Year	2nd
ECTS	3 ECTS
Type	Compulsory
Language(s)	Spanish/English
Delivery Mode	On campus
Semester	Second semester
Academic Year	2024-25
Coordinating professor	Álvaro Salazar

2. INTRODUCTION

A degree in Business Analytics would not be complete without knowledge of the appropriate tools for statistical information analysis. Statistical data analysis is the process that allows us to interpret the numerical data available to us, with the aim of making the most effective business decisions.

3. SKILLS AND LEARNING OUTCOMES

Basic skills (CB, by its acronym in Spanish):

- CB2 - Students can apply their knowledge to their work or vocation in a professional manner and possess the skills which are usually evident through the forming and defending of opinions and resolving problems within their study area.

Cross-curricular skills (CT, by the acronym in Spanish):

- No data available.

Specific skills (CE, by the acronym in Spanish):

- CE14 -Knowledge of the statistical and econometric tools used for the analysis of economic and business variables.
- CE16 - Ability to use the mathematical tools necessary for solving economic problems and using basic methods of calculation, algebra and programming.
- CE22 - Ability to select and apply the most appropriate analytical tools to each situation of the company.

- CE28 - Ability to understand and know the “data cycle”: data acquisition and creation, construction of information, analysis and visualisation.
- CE31 - Ability to manage uncertainty due to constantly changing information sources.
- CE33 - Ability to handle computer tools for statistical processing and other tools such as simulators with ease and technical solvency.

Learning outcomes (RA, by the acronym in Spanish):

- RA1: Use mathematical and statistical language to pose a problem.
- RA2: Use programming languages and computer packages to apply statistical and optimization techniques for data processing, decision support systems, variable matching and prediction making.
- RA3: Generate reports containing the results from the statistical study, including ethical and sustainability criteria.
- RA4: Adapt to new situations while carrying out individual and collaborative work, reconsidering the initial hypotheses and reformulating them to address the final objective in the most appropriate way.

The following table shows how the skills developed in the course match up with the intended learning outcomes:

Skills	Learning outcomes
CB2	**RA3:** Generate reports containing the results from the statistical study, including ethical and sustainability criteria. **RA4:** Adapt to new situations while carrying out individual and collaborative work, reconsidering the initial hypotheses and reformulating them to address the final objective in the most appropriate way.
CE14, CE16, CE22, CE28, CE31, CE33	**RA1:** Processing discrete and continuous random variables for the modelling of economic and financial variables. **RA2:** Use programming languages and computer packages to apply statistical and optimization techniques for data processing, decision support systems, variable matching and prediction making. **RA3:** Generate reports containing the results from the statistical study, including ethical and sustainability criteria. **RA4:** Adapt to new situations while carrying out individual and collaborative work, reconsidering the initial hypotheses and reformulating them to address the final objective in the most appropriate way.

4. CONTENTS

· The use of statistical software to adjust statistical models.

· Among the tools and languages that can be considered are the following: SAS, Excel, R, Python, and others similar.

5. TEACHING/LEARNING METHODS

The types of teaching-learning methods are as follows:

- Lecture.
- Case studies.
- Workshop-based learning

- Problem-based learning

6. LEARNING ACTIVITIES

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

Learning activity	Number of hours
Tutorials	25
Lectures	12.5
Asynchronous lectures	12.5
Case studies	5
Problem-solving	10
Writing reports and papers	15
Independent working	40
Workshops and/or laboratory work	35
TOTAL	**150**

7. ASSESSMENT

The assessment methods, plus their weighting in the final grade for the course, are as follows:

Assessment system	Weighting
Oral presentation	30%
Laboratory work Portfolio	70%

On the Virtual Campus, when you open the subject area, you can see all the details of your assessment activities, including the deadlines and assessment procedures for each activity.

tasks and the deadlines and assessment procedures for each task.

7.1. Ordinary exam period

To pass the subject area in the ordinary exam period you must obtain a grade higher than or equal to 5.0 out of 10.0 in the final grade (weighted average) for the subject area.

7.2. Extraordinary exam period (resits)

To pass the subject area in the ordinary exam period you must obtain a grade higher than or equal to 5.0 out of 10.0 in the final grade (weighted average) for the subject area.

Tasks not passed in the ordinary exam period, or those not delivered, must now be delivered after having received the relevant corrections to them by the teacher.

8. TIMELINE

The timeline with delivery dates of assessable tasks in the subject area is indicated in this section:

Actividades evaluables	Fecha
Activity 1. Analysis with Excel.	Week 3
Activity 2. R analysis	Week 10
Activity 3. SPSS analysis	Week 17
Activity 4. Submission of portfolio	Week 20

The timeline may be subject to modifications for logistical reasons. Students will be informed of any changes in due time and course.

9. BIBLIOGRAPHY

- Calberg, Conrad (2014). Statistical Analysis: Microsoft Excel 2013. United States of America: Que.
- Carrascal, Ursicino(2011). Estadística descriptiva con Microsoft Excel 2010. Madrid: RaMa.
- Cesar Perez (2014). TECNICAS ESTADISTICAS PREDICTIVAS CON IBM SPSS. Gaceta Grupo Editorial

10. EDUCATIONAL GUIDANCE, DIVERSITY AND INCLUSION UNIT

From the Educational Guidance and Diversity Unit we offer support to our students throughout their university life to help them reach their academic achievements. Other main actions are the students inclusions with specific educational needs, universal accessibility on the different campuses of the university and equal opportunities.

From this unit we offer to our students:

1. Accompaniment and follow-up by means of counselling and personalized plans for students who need to improve their academic performance.
2. In terms of attention to diversity, non-significant curricular adjustments are made in terms of methodology and assessment for those students with specific educational needs, pursuing an equal opportunities for all students.
3. We offer students different extracurricular resources to develop different competences that will encourage their personal and professional development.
4. Vocational guidance through the provision of tools and counselling to students with vocational doubts or who believe they have made a mistake in their choice of degree.

   Students in need of educational support can write to us at:
   orientacioneducativa@universidadeuropea.es

11. STUDENT SATISFACTION SURVEYS

Your opinion matters!

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

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

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

Many thanks for taking part.