

SUBJECT TEACHING GUIDE

G970 - Multivariate Data Analysis

DOUBLE DEGREE IN ADMINISTRATION AND BUSINESS MANAGEMENT AND ECONOMICS

Degree in Economics
Academic year 2023-2024

| 1. IDENTIFYING DATA | | | | | | |
|----------------------------------|---|------------------|----|--------------------|---------------|--------------------------------------|
| Degree | DOUBLE DEGREE IN ADMINISTRATION AND BUSINESS MANAGEMENT AND ECONOMICS | | | | Type and Year | Optional. Year 5 Optional. Year 4 |
| Faculty | Faculty of Economics and Business Studies | | | | | |
| Discipline | Subject Area: Statistical Methods | | | | | |
| Course unit title and code | G970 - Multivariate Data Analysis | | | | | |
| Number of ECTS credits allocated | 6 | Term | | Semester based (2) | | |
| Web | | | | | | |
| Language of instruction | Spanish | English Friendly | No | Mode of delivery | | Face-to-face |

| | |
|------------------|--|
| Department | DPTO. ECONOMIA |
| Name of lecturer | FAUSTINO PRIETO MENDOZA |
| E-mail | faustino.prieto@unican.es |
| Office | Edificio de las Facultades de Derecho y Ciencias Económicas y Empresariales. Planta: + 1. DESPACHO FAUSTINO PRIETO MENDOZA (E114) |
| Other lecturers | SANTIAGO PEREDA FERNANDEZ |

| 3.1 LEARNING OUTCOMES |
|---|
| - To translate the reality into statistical language. |
| - To apply statistical procedures to solve economic problems. |

4. OBJECTIVES

To learn the theoretical concepts and the basic practices of multivariate analysis.

To use specific statistical software to solve problems of multivariate analysis.

To be able to economically interpret the results of the statistical analysis.

To gain self-autonomy.

To develop teamwork skills.

6. COURSE ORGANIZATION

CONTENTS

| | |
|---|---|
| 1 | Lecture 1. Introduction to multivariate analysis. Lecture 2. Exploratory multivariate data analysis. |
| 2 | Lecture 3. Principal components analysis. Lecture 4. Factorial analysis. |
| 3 | Lecture 5. Correspondence analysis. Lecture 6. Cluster analysis. |
| 4 | Lecture 7. Discriminant analysis. Lecture 8. Other tools for multivariate analysis. |

7. ASSESSMENT METHODS AND CRITERIA

| Description | Type | Final Eval. | Reassessn | % |
|---|------|-------------|-----------|--------|
| Work I | Work | No | Yes | 50,00 |
| Work II | Work | No | Yes | 50,00 |
| TOTAL | | | | 100,00 |
| Observations | | | | |
| If a student does not pass the course unit in the Ordinary examination session, he/she will be able to resit the exam in the Extraordinary examination session. This exam will include all the contents of the course unit. | | | | |
| Observations for part-time students | | | | |
| Part-time students take a final exam out of 10 points with all the contents of the course unit. If a student does not pass the course unit in the Ordinary examination session, he/she will be able to resit the exam in the Extraordinary examination session. | | | | |

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

Sarabia, J.M., Prieto, F., Jordá, V. (2018). Prácticas de Estadística con R. Ediciones Pirámide, Grupo Anaya, Madrid.

Peña, D. (2002). Análisis de Datos Multivariantes. McGraw Hill, Madrid.

Everitt, B., Hothorn, H. (2011). An Introduction to Applied Multivariate Analysis with R. Springer