VNIVERSITAT DE VALÈNCIA

Course Guide
35826 Methods for the analysis of corporate information and decision making

COURSE DATA

Data Subject	
Code	35826
Name	Methods for the analysis of corporate information and decision making
Cycle	Grade
ECTS Credits	6.0
Academic year	2024 - 2025

Study (s)

Degree	Center	Acad. year	Period
1313 - Degree in Business Management and Administration	Faculty of Economics	4	First term
1330 - Degree in Business Management and Administration (Ontinyent)	Faculty of Economics	4	First term
1926 - Double Degree Program Tourism and BMA	Faculty of Economics	5	First term

Subject-matter

Degree	Subject-matter	Character
1313 - Degree in Business Management and Administration	22 - Methods of analysis	Optional
1330 - Degree in Business Management and Administration (Ontinyent)	22 - Métodos de Análisis	Optional
1926 - Double Degree Program Tourism and BMA	8 - Asignatura optativa de quinto curso	Optional

Coordination

Name	Department
COLOM ANDRES, MARIA CONSUELO	110 - Applied Economics

SUMMARY

Methods for the Analysis of Business Information and Decision Making, assigned to the area of Quantitative Methods for Economics and Business, and is taught in the first semester of the fourth year of the degree in Business Administration and Management in the framework of the electivity of the curricular intensification of Creation and Direction of Companies.

Completing this subject will allow the student to enter, through the resolution of cases and the understanding of the foundations
theoretical, in the study and analysis of the economic and social reality in which the company is immersed as well as in the business reality itself. The business environment and reality are characterized, and increasingly, by a considerable and growing complexity. One of the dimensions of this complexity is the high number of variables, attributes and factors to consider as well the no less large number of agents, customers, suppliers, competitors and markets. In short, the reality of the company is multidimensional and multi-individual and therefore generates large volumes of information that require an adequate treatment, capable of highlighting the fundamental aspects of the consideration of all the information that is relevant to the decision making process. business decisions.

Knowing how to handle with large masses of data, order them, classify them, detect the most important factors that manifest their high number of variables or classify individuals in groups of homogeneous behavior are, among others, some of the purposes that are pursued with a set of techniques known as multivariate analysis that integrate part of the contents of the subject.

The statistical treatment of qualitative information, without a doubt transcendental in the world of the company, and the statistical analysis does not parametric in all those cases in which it is difficult to propose a parametric model to study some features of interest is another of the blocks of the subject.

PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

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

Other requirements

Formally, no previous knowledge is necessary required. However, a minimum knowledge of Mathematics, Statistics and Econometricsit is recommended , all these subjects are taught in previous courses. Likewise, you should have standard familiarity with the usual IT tools.

COMPETENCES (RD 1393/2007) // LEARNING OUTCOMES (RD 822/2021)

1313 - Degree in Business Management and Administration

- Demonstrate capacity for analysis and synthesis.
- Be able to use ICTs in the field of study.
- Be able to analyse and search for information from different sources.
- Be able to solve problems.
- Be able to make decisions.
- Be able to work in a team.

- Have critical and self-critical capacity.
- Manage time effectively.
- Be able to understand and use the different quantitative and qualitative methods to reason analytically, evaluate results and predict economic and financial parameters.
- Be able to make decisions under certainty and uncertainty environments.
- Be able to apply analytical and mathematical methods for the analysis of economic and business problems.
- Be able to define, solve and present complex problems systemically.
- Be able to express oneself in formal, graphic and symbolic languages.

LEARNING OUTCOMES (RD 1393/2007) // NO CONTENT (RD 822/2021)

The subject of Methods for the analysis of business information and decision making, aims for students to achieve the following learning outcomes:

Be able to perform an adequate analysis and assessment of problems.

Apply properly the analysis techniques for each case presented.

Know how to organize and outline the different phases by which it is necessary to pass at the time of making a
report.

Master the different methods and techniques of qualitative / quantitative analysis and know how to assess their possible limitations

Be able to apply different methods and techniques of analysis through computer programs, in order to determine the different scenarios through which decisions can be made.

Increased logical / strategic reasoning to address real business world situations

Ability to design decision rules in production planning and in business logistics

Ability to solve models with the help of computer applications

DESCRIPTION OF CONTENTS

1. Information Systems and statistical sources

2. Non-parametric data analysis

2.1.- Qualitative variables and contingency tables.
2.2.- Independence and association in the characteristics of the realities observed.
2.3.- Paired and unpaired data. Boards
2.4.- Non-parametric measures of association.
2.5.- Nonparametric tests with SPSS

3. Analysis of Variance.

3.1.- Introduction: approach of the Problem
3.2.- Analysis of one and two variation factors one and two ways ANOVA
3.3.- Analysis of more than two variation factors

4. Dimension reduction

4.1.- Introduction. The reduction as an instrument for the elaboration of constructs.
The factor analysis model.
4.2.- Methods of extracting factors. Principal components method.
4.3.- Interpretation of the factorial solution and factor rotation.
4.4.- Scores of the factors.
4.5.- Application with the SPSS.
4.6.- Dimension reduction with qualitative information. Introduction to correspondence analysis

5. Grouping by similarities

5.1.-Introduction. Measures of similarity and dissimilarity.
5.2.-Grouping methods: hierarchical and non-hierarchical clustering.
5.3.-Clustering criteria and algorithms
5.3.-Hierarchical tree diagram.
5.4.-Determination of the number of groups to obtain.
5.5.-Application with the SPSS.

6. Discriminant analysis

6.1.- Discrimination as a decision.
6.2.- Discrimination as a description: discriminant factor analysis.
6.3.- MANOVA and determination of discriminant variables.
6.4.- Selection algorithms. Factoring and reclassification
6.5.- Application with SPSS

WORKLOAD

ACTIVITY	Hours	% To be attended
Theory classes	30,00	100
Classroom practices	30,00	100
Development of group work	15,00	0
Development of individual work	25,00	0
Study and independent work	20,00	0
Readings supplementary material	10,00	0
Preparation of evaluation activities	20,00	0
TOTAL	150,00	

TEACHING METHODOLOGY

The teaching methodology will be varied and will use different approaches:

a) Exhibition sessions on the part of the professor of each one of the subjects of the program. In these sessions the concepts, analytical interdependencies, theoretical notions and key practical questions that the students must learn to handle will be explained.

b) Exhibition-participative sessions in which the teacher will interact with the students developing and guiding them in the handling of the analysis techniques and the computer tools for their implementation.

c) Group discussion and analysis sessions from different materials that aim to raise new questions about the contents of the subject's program and deepen understanding of the contents of the subject.

d) Realization of team or individual works for the elaboration of reports or the resolution of cases that the teaching staff may raise. The concrete guidelines for the realization of the possible works will be specified by the teachers in class according to the concerns and interests of the students and explained in detail in class. The student's work will be the object of orientation, follow-up and supervision by the faculty.

e) Possible attendance and active participation in conferences and / or seminars that are organized as complementary activities or related to the subject throughout the semester.

EVALUATION

It will be expressed by numerical rating in accordance with the provisions of the regulations (RD1125 / 2003 of September 5) by the that the European system of credits and the system of qualifications in the university qualifications of official character and validity in all the national territory are established.

The individual and team work carried out by the students throughout the course will be evaluated, both in terms of refers to the acquisition of specific and generic skills as in relation to the knowledge of the module.

The teaching staff, depending on the academic circumstances of the subject, will select one or more of the following instruments:

- Written exams: including objective or brief tests, essay, case resolution or other similar options.

- Oral exams: including oral tests, interview, debates or oral presentations in the classroom or other similar options.

- Completion of tasks and presentation of reports on specific issues that may arise during the course.

- Observation: application of observation scales and registration of the students' attitudes in the development of the tasks and activities related to the competences.

The specific criteria and processes that will be used for the evaluation, as well as their specific numerical weighting, will be a function of the number of students finally enrolled and will be advertised properly at the beginning of the course.

REFERENCES

Basic

- BIBLIOGRAFÍA DE REFERENCIA BÁSICA:

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

PÉREZ LÓPEZ,CESAR (2009):Técnicas Estadísticas Multivariantes con SPSS. Ed. Garceta

PÉREZ LÓPEZ,CESAR (2013): Análisis Multivariante de datos. Ed. Garceta

RUIZ-MAYA, L. (1995): Análisis Estadístico de Encuestas: Datos Cualitativos. Madrid: A.C.

SANCHEZ CARRION, JUAN JAVIER (1999): Manual de Análisis Estadístico de los Datos. Madrid: Alianza.

SANTODOMINGO, ADOLFO (1997): Introducción a la informática en la empresa. Ed. Ariel

FERRAN, MAGDALENA. (2001): SPSS para Windows: Programación y Análisis Estadístico. Madrid: Mc Graw Hill.

Additional

- BIBLIOGRAFÍA DE REFERENCIA COMPLEMENTARIA:

ANDREU, R. ;RICART, J.E.; VALOR, J.(1996): La organización en la era de la información. Ed McGraw-Hill

CAMACHO ROSALES, J. (2002): Estadística con SPSS para Windows. Madrid. Ra-Ma.

CHATFIELD, C. (1988): Problem Solving: A Statisticians Guide. London: Chapman and Hall.

ESCUDER, R y MURGUI, S (1995): Estadística Aplicada. Economía y Ciencias Sociales. Valencia: Tirant lo Blanch.

ESTEBAN, J. et all. (1995): Curso de Inferencia Estadística. Introducción al Modelo Lineal. Valencia: S.P.F.C.E.E.

FILGUEIRA LOPEZ, ESTHER (2001): Análisis de Datos con SPSSWIN. Madrid Alianza Editorial

HANKE, JOHN E. Y REITSCH, ARTHUR. (1997): Estadística para Negocios. Madrid: Mc Graw Hill.

LUIS LIZASOAIN, LUIS JOARISTI. (2003).: Gestión y análisis de datos con SPSS : versión 11. Madrid. Thomson-Paraninfo.

NEWBOLD, P. (1997): Estadística para los Negocios y la Economía. Madrid: Prentice Hall.

PEREZ MARQUÉS,MARIA (2014): Minería de datos a través de ejemplos. Ed. Libros RC

SIEGEL, S. (1990): Estadística no Paramétrica. México: Trillas.

URIEL, E. (1995): Anál