

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

Code	40111
Name	Advanced statistics
Cycle	Master's degree
ECTS Credits	5.0
Academic year	2023 - 2024

Study (s)

Degree	Center	Acad. year	Period
2114 - M.D. in Marketing and Market Research	Faculty of Economics	1	Second term

Subject-matter

Degree	Subject-matter	Character
2114 - M.D. in Marketing and Market Research	3 - Specialty in market research	Optional

Coordination

Name	Department
RUIZ PONCE, FELIX	110 - Applied Economics

SUMMARY

The subject Advanced Statistics will develop the statistical techniques related to the study of Markets, being taught first basic knowledge about sampling and going to make an introduction to the use of the statistical package SPSS. Thus, making use of said software will be solved, in a first contact with the aforementioned program, the contrasts of the most used hypotheses.

Secondly, the concepts, methodology, development and application of some Multivariate Analysis techniques will be deepened. Third, or simultaneously, these techniques will be applied to cases and examples, affecting the interpretation of their results, as well as the outputs that the SPSS provides, so that the applicability of the same is evident.

In any case, the fact that all the developed concepts can be useful in situations that involve decision-making based on certain information will be underlined.

The objective of the subject is to provide a set of statistical tools related to the study of Markets.



PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

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

Other requirements

No enrolment restrictions have been specified with other subjects of the curriculum.

In relation to other subjects of the same degree, no enrolment restrictions have been specified with other subjects of the curriculum. The previous knowledge is that of access to the Master. This subject together with those of "Causal Research Designs", "Advanced Statistics" and "Commercial Research Techniques" make up the specialty in Market Research.

OUTCOMES

2114 - M.D. in Marketing and Market Research

- Saber aplicar los conocimientos adquiridos y ser capaces de resolver problemas en entornos nuevos o poco conocidos dentro de contextos más amplios (o multidisciplinares) relacionados con su área de estudio.
- Poseer las habilidades de aprendizaje que les permitan continuar estudiando de un modo que habrá de ser en gran medida autodirigido o autónomo.
- Saber comunicar sus conclusiones y los conocimientos y razones últimas que las sustentan a públicos especializados y no especializados de un modo claro y sin ambigüedades.
- Students should possess and understand foundational knowledge that enables original thinking and research in the field.
- Ser capaces de buscar, ordenar, analizar y sintetizar la información, seleccionando aquella que resulta pertinente para la toma de decisiones.
- Ser capaces de tomar decisiones tanto individuales como colectivas en su labor profesional y/o investigadora.
- Be able to integrate new technologies in their professional and/or research work.
- Know how to write and prepare presentations to present and defend them later.
- Ser capaces de analizar de forma crítica tanto su trabajo como el de su compañeros.
- Ser capaces de seleccionar y desarrollar en su defecto herramientas de análisis del mercado.
- Escoger la técnica de investigación de mercados adecuada al problema planteado.
- Redactar documentos e informes en marketing e investigación comercial.
- Presentar documentos e informes en marketing e investigación comercial.



- Saber realizar las labores propias de su profesión, tanto en empresas privadas como en organismos públicos.

LEARNING OUTCOMES

- 1.- Select and correctly use different sources of information in both traditional and electronic formats.
- 2.- Handle and correctly interpret quantitative and qualitative data to convert them into useful information for decision making in communication.
- 3.- Prepare documents and reports presented in a written text in a comprehensible organized, documented and illustrated way.
- 4.- Argue and counter-argue.
- 5.- Select and use the quantitative techniques appropriately.
- 6.- Use the technical vocabulary of the subject

DESCRIPTION OF CONTENTS

1. Part I

Topic 1 Sampling and introduction to SPSS

The first part of the program is devoted to the development of the concepts of sampling and to deepen in the knowledge by the student of the SPSS statistical package

2. Part II

Topic 2: Principal Components Analysis

Topic 3: Cluster Analysis

Topic 4: Discriminant Analysis

In this second part, several multivariate analysis techniques and their application to Market Research will be explained. Among the techniques to be developed, the Principal Components Analysis, the Cluster Analysis and the Discriminant Analysis should be highlighted

**WORKLOAD**

ACTIVITY	Hours	% To be attended
Theoretical and practical classes	35,00	100
Theory classes	0,00	100
Attendance at events and external activities	5,00	0
Readings supplementary material	6,00	0
Preparation of evaluation activities	20,00	0
Preparing lectures	21,50	0
Preparation of practical classes and problem	37,50	0
TOTAL	125,00	

TEACHING METHODOLOGY

Theoretical classes participatory master class
Resolution of practical cases
Problems
Discussion or directed discussion

The proposed methodology can be developed both in person and remotely if the circumstances require it.

EVALUATION

Final exam (10%)
Assistance and participation (10%)
Delivery of practices (80%)

If necessary, the weight of academic assignments may be increased, to adjust to possible teaching situations until reaching 100% of the grade.

REFERENCES**Basic**

- Pérez López, C. (2013). IBM SPSS. Estadística Aplicada. Conceptos y ejercicios resueltos. Garceta grupo editorial. Masdrid.
- Pérez López, C. (2005). Métodos estadísticos avanzados con SPSS. Thompson. Madrid.



- Uriel Jiménez, E.; Aldás Manzano, J. (2005). Análisis multivariante aplicado: aplicaciones al marketing, investigación de mercados, economía, dirección de empresas y turismo. Thomson, D.L. Madrid.
- Mateos-Aparicio Morales, G.; Hernández Estrada, A. (2021). Análisis multivariante de datos. Cómo buscar patrones de comportamiento en BIG DATA. Ediciones Pirámide. Madrid

Additional

- Pérez López, C. (2013). Análisis Multivariante de Datos. Aplicaciones con IBM SPP, SAS y STATGRAPHICS. Garceta grupo editorial. Madrid.
- Casas Sánchez, J.M. (1996): Inferencia estadística para Economía y Administración de Empresas. Centro de Estudios Ramón Areces. Madrid.
- Ferrán Aranaz, Magdalena (1999). SPSS para Windows: programación y análisis estadístico. McGraw-Hill. Madrid.
- Hair, J.F.; Anderson, R.; Tatham, R.L.; Black, W.C. (1999) Análisis Multivariante. Prentice Hall. Madrid.
- Pérez López, C. (2005). Técnicas estadísticas con SPSS 12: aplicaciones al análisis de datos. Pearson Educación, Madrid.
- Visauta Vinacua, B. (2007). Análisis Estadístico con SPSS 14: estadística básica. McGraw-Hill. Madrid.
- Hair, Jr.J.; Ortinau, D.J.; Harrison, D.E. (2021). Principios de investigación de mercados. Mc.Graw Hill. Ciudad de México.