

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

Code	36517
Name	Sampling and Surveys
Cycle	Grade
ECTS Credits	6.0
Academic year	2023 - 2024

Study (s)

Degree	Center	Acad. year	Period
1332 - Degree in Business Intelligence and Analytics	Faculty of Economics	3	Second term

Subject-matter

Degree	Subject-matter	Character
1332 - Degree in Business Intelligence and Analytics	24 - Herramientas y Técnicas de Análisis de Datos	Obligatory

Coordination

Name	Department
PALMI PERALES, FRANCISCO	110 - Applied Economics

SUMMARY

Survey design and analysis through sampling methodologies

PREVIOUS KNOWLEDGE**Relationship to other subjects of the same degree**

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



Other requirements

The course requires a basic knowledge about descriptive statistics and statistical inference. Furthermore, it is assumed that the student has some knowledge of the R statistical software.

OUTCOMES

1332 - Degree in Business Intelligence and Analytics

- Students must have the ability to gather and interpret relevant data (usually in their field of study) to make judgements that take relevant social, scientific or ethical issues into consideration.
- Be able to plan, organise, monitor and evaluate the implementation of business strategies.
- Be able to define, solve and present complex problems systemically.
- Manage and distinguish the concepts of universe, population, sample, parameters and estimators in real problems.
- Use software tools to solve problems under uncertainty.
- Plan and design a sample research.
- Apply probability and non-probability sampling.
- Use software to collect and analyse survey data.

LEARNING OUTCOMES

To know how to design a survey for both finite and infinite populations.

To properly distinguish how to obtain a sample of persons or a sample of objects (animals, orderade places in a theater and others examples).

To anknowledge the application of the different sampling methodologies.

To learn how to obtain estimation errors of datasets obtained from surveys and also learn how to estimate in a subset of the population.

To know the different causes of the appearance of bias in a study that uses surveys to collect data and learn techniques to prevent the appearance of this bias.



To learn the different benefits and drawbacks of the different methods of collecting data.

To learn how to properly design a questionnaire.

To learn the benefits and drawbacks of the samples obtained with a non-random sampling

To know different techniques of missing data and to learn how to properly handle missing data using an appropriate software.

WORKLOAD

ACTIVITY	Hours	% To be attended
Theory classes	30,00	100
Computer classroom practice	30,00	100
TOTAL	60,00	

TEACHING METHODOLOGY

Participative master class with the main objective of introducing the basic conceptual concepts

Practical lessons where there will be problem resolution, case studies, application, the use of an appropriate software, oral and/or groupal presentations and other activities.

Supervised work based on the read and analyse of reports and the realization of groupal and/or individual projects

The independent student's work and the realization of different oral and/or written exams



EVALUATION

The assesment will be divided in three different parts:

- 1.- A theoretical or practical exam where the student should argue and solve the proposed questions
- 2.- Practical activities among al the course developed by the students which will consist in reports/projects and its oral presentations.
- 3.- Student's continous assesment based on the participation and its own involvement in the teaching-learning process.

The specific percentages will be specified in the Syllabus.

REFERENCES

Basic

- MURGUI, S. (2014) Investigación por muestreo estadístico. Repro Exprés Valencia.
- FERNANDEZ, F. y MAYOR, J. (1994) Muestreo en poblaciones finitas: curso básico. PPU Barcelona
- SARNDAL, C. SWENSSON, B y WRETMAN, J. (1992) Model Assisted Survey Sampling. Springer-Verlag
- RUIZ, M. (2012) Exactitud de la inferencia en poblaciones finitas. Madrid.