COURSE DATA

DATA SUBJECT

Code: 36791
Name: Statistics II
Cycle: Undergraduate Studies
ECTS Credits: 6
Academic year: 2026-27

STUDY (S)

Degree	Center	Acad. year	Period
1933 - Double Degree in Law and Economics_2022	Facultat d'Economia	2	Second quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
1933 - Double Degree in Law and Economics_2022	Asignaturas de segundo curso	COMPULSORY

COORDINATION

MOLES MACHI MARIA CRUZ

SUMMARY

Statistics II is compulsory subject ascribed to the area of Quantitative Methods for Business and Economics. It is taught in the second term of the second year of the Double Degree in Law and Economics with a total study load of 6 ECTS.

It is a necessary subject for analysis and decision making in a degree that aims at academically training future business managers and entrepreneurs who will contribute to the economic and social development

The subject is markedly instrumental. The contents that are developed in it are basic for the own subjects of the matter of econometrics, as well as for other quantitative subjects that the student can take, which will allow him to analyze information and make decisions.

The subject starts with a short review of probability models in business and economics. Next the key concepts for Inferential Statistics are introduced, followed by basic notions of sampling. Then estimation of population parameters and hypothesis tests, both parametric and non-parametric, are introduced.

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

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

OTHER REQUIREMENTS

It is recommended to have completed and passed the following first year courses: Mathematics and Statistics I.

COMPETENCES / LEARNING OUTCOMES

DESCRIPTION OF CONTENTS

1. PROBABILITY MODELS AND STOCHASTIC CONVERGENCE

1. Random variables and probability models.
2. Stochastic convergence.
3. Central Limit Theorem.
4. Distributions associated with normally distributed samples.

2. INTRODUCTION TO STATISTICAL INFERENCE

1. Introduction: universe, population and sample. Objectives of inferential statistics.
2. Sampling methods. Simple random sampling.
3. Sampling distributions.

3. ESTIMATION

1. Point estimation. Properties of estimators.
2. Methods for obtaining estimators.
3. Interval estimation.
4. Sample size determination.

4. PARAMETRIC HYPOTHESIS TESTS

1. Introduction.
2. Two tails hypothesis tests.
3. One tail hypothesis tests.

5. NONPARAMETRIC HYPOTHESIS TESTS

1. Tests of goodness of fit.
2. Tests of independence and homogeneity.
3. Other nonparametric tests.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theoretical and practical classes	60,00
Total hours	**60,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	10,00
Independent study and work	20,00
Preparation of lessons	30,00
Preparation for assessment activities	20,00
Resolution of case studies	10,00
Total hours	**90,00**

TEACHING METHODOLOGY

The development of the subject is fundamentally structured around theoretical and practical sessions. Depending on the type of session content (theoretical or practical), one teaching method or another will be chosen.

Lectures cover the fundamentals of inferential statistics and all the related theory with special emphasis in developing the link to socioeconomic and business applications. While the teaching method of lectures is "chalk and talk", students' participation and in-class discussion is encouraged.

Practical sessions focus on presenting the students with practical examples and finding solutions to problems based on the application of (previously introduced) theoretical concepts.

These practical classes will be developed following different teaching strategies based on the content discussed in the corresponding theoretical session, although they will primarily focus on problem-solving. Their objective is to complement the concepts studied in the theoretical session by applying them to the resolution of practical cases. Furthermore, in the practical sessions, the professor may propose one or more activities for students to complete, covering the different topics of the course.

EVALUATION

Grades are a weighted average of the results from a final exam and all in-class projects and problems assignments.

1. The weight of the final exam is 70% of the course grade. It will include practical problems to assess students' proficiency in the application of the core tools and concepts of the subject.

2. The remainder 30% of the final grade is the assessment of in-class projects, problems and quizzes. These can-not be retaken

IMPORTANT:

No student will get a positive assessment of the course (5 points or more) without passing the final exam. Students who fail the final exam will get a maximum final grade of 4.5 points.

A student might opt out of in-class assignments assessment. In this case his/her final grade will be totally based on the final exam, with a maximum value of 7 points out of 10.

REFERENCES

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• CANAVOS, G.C. (1984). Probabilidad y Estadística: aplicaciones y métodos. McGraw-Hill, México.

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