27419 - Statistics II

Información del Plan Docente

Academic Year	2016/17
Academic center	109 - Facultad de Economía y Empresa
Degree	417 - Degree in Economics
ECTS	6.0
Course	2
Period	Second semester
Subject Type	Compulsory
Module	---

1.Basic info

1.1.Recommendations to take this course

1.2.Activities and key dates for the course

2.Initiation

2.1.Learning outcomes that define the subject

2.2.Introduction

3.Context and competences

3.1.Goals

3.2.Context and meaning of the subject in the degree

3.3.Competences

3.4.Importance of learning outcomes

4.Evaluation

5.Activities and resources

5.1.General methodological presentation

5.2.Learning activities

5.3.Program

Lesson 1: Discrete probability distributions.
Random variables. Discrete and continuous random variable. Probability distribution or mass function. Binomial, Hypergeometric and Poisson distributions.
Lesson 2: Continuous probability distributions.

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Continuous random variable. Probability density function. Uniform and exponential distributions. Normal distribution and related to normal distributions. Independence of random variables.
Lesson 3: Basic notions of sampling theory.
Sampling from a population. Sampling methods. Sampling distribution of statistics: Monte Carlo method. Asymptotic behavior of sampling moments. Sample-size determination.
Lesson 4: Point estimators and interval estimation
Estimation. Building estimators: method of moments, maximum likelihood estimates, least squares method. Properties of estimators: unbiasedness, consistency and efficiency.
Confidence interval. Methods of finding interval estimators. Confidence intervals for parameters of normal distribution. Some applications.
Lesson 5: Parametric hypotheses.
Basic concepts: Simple, compound, null and alternative hypotheses, significance level, power of a test. Tests of the mean and variance of a normal distribution, tests of the population proportion.
Lesson 7: Two-sample hypothesis tests.
Independent and dependent samples. Comparing proportions, means and variances: confidence intervals and tests of statistical hypotheses.

5.4.Planning and scheduling

5.5.Bibliography and recomended resources