

**Información del Plan Docente**

<b>Academic Year</b>	2018/19
<b>Subject</b>	27609 - Statistics I
<b>Faculty / School</b>	109 - Facultad de Economía y Empresa
<b>Degree</b>	450 - Degree in Marketing and Market Research
<b>ECTS</b>	6.0
<b>Year</b>	1
<b>Semester</b>	Second semester
<b>Subject Type</b>	Basic Education

**Module****1.General information****1.1.Aims of the course****1.2.Context and importance of this course in the degree****1.3.Recommendations to take this course****2.Learning goals****2.1.Competences****2.2.Learning goals****2.3.Importance of learning goals****3.Assessment (1st and 2nd call)****3.1.Assessment tasks (description of tasks, marking system and assessment criteria)****4.Methodology, learning tasks, syllabus and resources****4.1.Methodological overview****4.2.Learning tasks****4.3.Syllabus**

The course will address the following topics:

- Topic 1. Statistical Methods in Business and Economics. Introduction. Historical Evolution. Concept of Statistics. The statistical method. Statistics in Business and Economics.
- Topic 2. Scales of Measurement and Information Sources. Introduction. Information Sources. Basic Concepts. Data and variables. Scales of Measurement.

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- Topic 3. Describing Univariate Data: Frequency Tables and Graphic Presentation. Frequency Tables. Graphical Presentations.
- Topic 4. Describing Univariate Data: Numerical Measures. Introduction. Location measures. Variability measures. Skewness and Curtosis. Boxplot diagrammes. Other measures.
- Topic 5. Describing Bivariate Data: Frequency Tables and Graphic Presentation. Introduction. Joint, marginal and conditional frequencies distributions. Independence. Graphical Presentations.
- Topic 6. Correlation and Simple Linear Regression. Introduction. Scatter Diagrames. Covariance and correlation. Linear regression simple: least squares criterion. Goodness of fit and correlation. Prediction. Non-linear regression.
- Topic 7. Indices Numbers. Introduction. Simple and complex indices. Deflation economic series. Link and change of base. Repercussion. Some notable economic indices.
- Topic 8. Probability. Introduction. Concept of Probability: Kolmogorov axiom's. Laplace rule. Combinatorics. Conditional Probability. Theorem of total probability. Theorem of Bayes.
- Topic 9. Statistical Decision Theory. Introduction. Setting-up a decision problem. Decision Making under total and partial uncertainty. Bayes rule. Value and efficiency of the information.

### 4.4.Course planning and calendar

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course, will be provided on the first day of class or please refer to the Faculty of Economics and Business website (<https://econz.unizar.es/>)

### 4.5.Bibliography and recommended resources