Statistics applied to journalism

Academic Year: (2020 / 2021) **Review date: 05-07-2020**

Department assigned to the subject: Statistics Department

Coordinating teacher: ALONSO FERNANDEZ, ANDRES MODESTO

Type: Basic Core ECTS Credits : 6.0

Year : 1 Semester : 2

Branch of knowledge: Social Sciences and Law

OBJECTIVES

SPECIFICS COMPETENCES:
To gain knowledge and understanding in:
1. Learning to organize, synthesize and analyze univariate and bivariate data.
2. Understanding and interpretation of published statistical studies (samples, economic predictions, papers from INE, Eurostat, etc).
3. Carrying out simple statistical analyeses using software.

TRANSVERSE COMPETENCES:
1. Capacity of analysis and synthesis.
2. Knowing how to use statistical software.
3. Problem solving.
4. Teamwork.
5. Critical reasoning.
6. Verbal and written communication.

DESCRIPTION OF CONTENTS: PROGRAMME

1. Introduction.
   1.1. Concept and uses of statistics.
   1.2. Statistical terminology: populations, subpopulations, individuals and samples.
   1.3. Types of variable.

2. Analysis of univariate data.
   2.1. Representations and graphs of qualitative data.
   2.2. Representations and graphs of quantitative data.
   2.3. Numerical summary.

3. Analysis of bivariate data.
   3.1. Representations and graphs of qualitative and discrete data.
   3.2. Representations and graphs of continuous data: correlation and regression.

4. Probability and probability models.
   4.1. Random experiment, simple space, elementary and composite events.
   4.2. Properties of probability.
   4.3. Conditional probability and its properties.
   4.4. Random variables and their characteristics.
   4.5. Bernoulli trials and related distributions.
   4.6. The normal distribution.

5. Introduction to statistical inference.
   5.1. Ideas and objectives.
   5.2. Point estimation.
   5.3. Interval estimation.
   5.4. Fundamental concepts of hypothesis tests.
   5.5. Tests for the mean in normal populations.
   5.6. Tests for proportions.

LEARNING ACTIVITIES AND METHODOLOGY

Theory (3 ECTS). Theory clases will be taught in synchronous and interactive online through Blackboard collaborate with background materials available on the web. Practical (3 ECTS) Problem solving. Computer practicals using Excel. Verbal expositions and debates.

ASSESSMENT SYSTEM

40% of the final qualification is obtained in an exam. The remaining 60% is the result of continuous evaluation based on the acquired abilities of the student by two midterm exams (40%); carry out practical analyses and/or explain the results they have obtained (20%).

In the extraordinary examination, the final grade will be the maximum between the previous system and 100% of the final exam.

The command of the Spanish language (English in bilingual groups) is an essential requirement to pass the subject (linguistic correction: punctuation, stress, grammatical correction and lexical precision). Both in the course exercises and in the exams these errors may be penalized.

% end-of-term-examination:	40
% of continuous assessment (assigments, laboratory, practicals…):	60

BASIC BIBLIOGRAPHY

- Remenyi, D. An introduction to statistics using Microsoft Excel, Academic Publishing, 2010
- Ross, S.M. Introductory Statistics, Elsevier, 2005

ADDITIONAL BIBLIOGRAPHY

- Jauset. J.A. La investigación de audiencias en televisión - Fundamentos estadísticos, Editorial Paidós, 2000
- Takahishi, S. The Manga Guide to Statistics, Starch Press, 2009
- Wimmer. R. y Dominick, J. Mass media research: An introduction, International Thomson Editores, 2014