

Academic Year: (2019 / 2020)

Review date: 24-04-2019

Department assigned to the subject: Statistics Department

Coordinating teacher: KAISER REMIRO, REGINA

Type: Compulsory ECTS Credits : 6.0

Year : 2 Semester : 1

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Estadística Aplicada a las Ciencias Sociales 1

OBJECTIVES

In today's world there is an enormous amount of available information. There are diverse sources and many of them are accessible through the Internet. To analyze this information and draw valid conclusions we need to use some specific techniques. Statistics is the most widely used and the most successful technique. In this course we will learn how to obtain information from the data with techniques that you will use both in your studies and in your professional career, because these techniques are commonly used by most companies and organizations.

Today a statistical analysis is inconceivable without computer resources. Therefore the teaching of Statistics will rely heavily on computer practices and a part of the final exam will be held in a computer classroom.

After completing this course, you should be able to extract information from the data and to express those conclusions in a written report. Also, you can establish relationships between variables using the regression model and to interpret the model properly

DESCRIPTION OF CONTENTS: PROGRAMME

1. Updating the regression model and multicollinearity
2. Multivariate methods. Introduction
3. Factor Analysis
 - a. Introduction
 - b. Principal components.
 - c. Varimax rotation
 - d. Choosing the number of factors
 - e. Creating new variables
4. Hypothesis testing
 - a. Population mean
 - b. Difference of means for two populations
 - c. One proportion
 - d. Difference of proportions
 - e. ANOVA
5. Cluster Analysis
 - a. Cluster of observations
 - b. Agglomerative methods. Dendrogram. Choosing the number of clusters
 - c. Furthest neighbor
 - d. Cluster of variables
6. Practical Statistical analysis of surveys. Download and analysis of CIS surveys. (With SPSS)

LEARNING ACTIVITIES AND METHODOLOGY

Theory (4ECTS). Lectures with support material available via web.

Practices (2ECTS) Classes in computer classroom. Debates.

ASSESSMENT SYSTEM

50% two midterms.
50% final exam.

% end-of-term-examination:	50
% of continuous assessment (assignments, laboratory, practicals...):	50

BASIC BIBLIOGRAPHY

- Downie, N.H. y Heath, R.W. (1983). Métodos Estadísticos Aplicados., Editorial Del Castillo..
- Mateo Rivas, M.J. (1985). Estadística en Investigación Social., Editorial Paraninfo..
- Peña, D. (1991). Estadística Modelos y Métodos. Tomo I, Fundamentos., Alianza Universidad Textos..
- Peña, D. y Romo, J. (1997). Introducción a la Estadística para las Ciencias Sociales., McGraw-Hill..
- Sierra Bravo, R. (1992). Técnicas de Investigación Social, Teoría y Ejercicios., Editorial Paraninfo..