Introduction to statistics

Academic Year: (2019 / 2020)   **Review date: 01-05-2020**

Department assigned to the subject: Statistics Department

Coordinating teacher: KAISER REMIRO, REGINA

Type: Basic Core ECTS Credits : 6.0

Year : 1 Semester : 2

Branch of knowledge: Social Sciences and Law

OBJECTIVES

SPECIFIC COMPETENCES: To acquire knowledge and understanding to
1. Analyze univariate and bivariate data
2. Analyze and interpretate relationships among two variables.
3. Knowledge and interpretation of the simple regression model.
4. Knowledge and interpretation of the multiple regression model.
5. Be able to solve problems using a statistical software.

TRANSVERSAL COMPETENCES:
1. Capacity for analysis and synthesis.
2. Knowledge of the use of statistical software.
3. Resolution of problems.
4. Teamwork.
5. Critical reasoning.
6. Oral and written communication.

DESCRIPTION OF CONTENTS: PROGRAMME
1.   Introduction to exploratory analysis.
1.1.   Importance on tourism.
1.2.   Statistical terms: populations, subpopulations, individuals and samples.
1.3.   Types of variables and search for sources of official tourism data.

2.   Analysis of univariate data.
2.1.   Representations and graphics of qualitative variables.
2.2.   Representations and graphics of quantitative variables.
2.3. Time series graphics.
2.4. Dependence among qualitative data.
2.5. Parameter comparison for different populations.
2.6. Dependence among quantitative data.

3.   Simple Linear Regression Model.
3.1. Model hypotheses.
3.2. Transformations.
3.3. Estimation and confidence intervals for the coefficients.
3.4. Individual significance and t-test.
3.5. R-square.
3.6. Prediction.
3.7. Diagnostics.

4.   Multiple Linear Regression Model.
4.1. Model hypotheses.
4.2. Transformations.
4.3. Estimation and confidence intervals for the coefficients.
4.4. Individual significance and t-test.
4.5. Adjusted R-square.
4.6. Prediction.
4.7. Diagnostics.

5. Time series and index numbers.
5.1. Time series plot.
5.2. Components.
5.3. Index number. definition.
5.4. Simple and complex index numbers.

LEARNING ACTIVITIES AND METHODOLOGY

14 Theoretical support materials available on the Web, and 14 sessions based on problem-solving sessions and practical computing. No group tutorials except during the last week.

ASSESSMENT SYSTEM

60% of the final grade will be achieved by a final examination for assessing the knowledge acquired. A minimum of 4 points (out of 10) is required in the final exam. The remaining 40% is obtained by two midterm exams (15%+15%) and the compulsory tasks assigned in the computational labs (10%). Theoretical questions as well as queries on computational laboratories can be asked in the exams.

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

BASIC BIBLIOGRAPHY

- Newbold, P. Statistics for business and economics, Prentice-Hall.