1. LEARNING OBJECTIVES

Provide the students with knowledge and skills in the field of statistics and probabilities, in terms of concepts, terminology, calculation and their application, namely: present the fundamental concepts of descriptive statistics and inductive statistics; present and analyze data; identify and interpret statistical measures of location, variability, asymmetry and Kurtosis and concentration; identify the suitability of linear regression applied to concrete problems; Identify and interpret some special distributions; calculate and analyze confidence intervals, parametric significance and hypothesis tests; Beside will be important to promote the use of specific software such as MS-Excel.

2. PROGRAMME

1-Introduction

2-Data presentation:
  Tables and charts;
  Graphical representation of data;
  Two dimensional distributions;
3-Measures of descriptive statistic:
  Measures of location;
  Central Tendency Measures;
  Non Central Tendency Measures;
  Measures of Dispersion;
  Asymmetry and Kurtosis measures;
4-Simple Regression and Correlation
5-Introduction to Probabilities:
  Concepts, axioms and proprieties;
  Conditional Probabilities and proprieties;
  Random variables and their distributions;
  Special distributions;
6-Confidence intervals
7-Parametric significance and hypothesis tests

3. COHERENCE BETWEEN PROGRAMME AND OBJECTIVES

The entire syllabus is designed to offer students the knowledge and skills of statistics and probabilities at a concept, terminology, calculus and application level. Thus the syllabus contents are used as tools for other curricular units in the course, as well as base learning for other concepts. Coordinating the teaching active methodologies and the use of technology (Excel), the syllabus allows the stimulation of an analytical and critical student attitude facing a more assiduous and visible presence of different kinds of statistics in the daily and in professional life, as readers, statistic information analysts and professionals prepared for a collection of adequate information and for the production of strict and contextualized analysis, as well as its communication using suitable statistic and informatics instruments.

4. MAIN BIBLIOGRAPHY

Agresti, Alan; Franklin, Christine, "Statistics – The Art and Science of Learning from Data", 2006

Aliaga, Martha, Gunderson, Brenda, "Interactive Statistics", Prentice Hall, 2003

Bennett, Jeffrey O., Briggs, William L., Triola, Mario F., "Statistical Reasoning", Addison-Wesley, 2002

Freund, John E., "Modern Elementary Statistics", Prentice Hall, 2001

Lewis, John Parry, Traill, Alastair, "Satistics Explained", Addison-Wesley, 1998

Sullivan, Michael, "Statistics – Informed Decisions Using Data", 2ª edição, Prentice Hall, 2006

5. TEACHING METHODOLOGIES (INCLUDING EVALUATION)

The teaching methodology comprises both lectures and practical work using, examples related to the degree and its curricular units and technological instruments that simplify the learning process and application (Excel). In the practical component methodologies such as debating, problems and exercises solving, are used.

The assessment is carried out according to the rules of the respective regulation.

6. COHERENCE BETWEEN TEACHING METHODOLOGIES AND OBJECTIVES

The previously mentioned teaching methodologies allow the students a sequential and consolidated acquisition of knowledge and skills in the statistical and probabilities environment at a concept, terminology, calculation and application level, giving them various conditions of reflection during the learning process, so they can enhance their interpretation and communication skills (oral and written) using statistical instruments and, simultaneously, new technologies. Using examples related to hotel management areas also induces the creation of bases for the usage of the syllabus of the Curricular Unit in order to apply them and to comprehend the concepts of the other curricular units in the course. The methodology is centered on a reflective and active participation of the students to guarantee motivation for an analytical and critical attitude in the presence of statistics more and more frequent and visible in everyday life.