ECTS - Instituto Superior de Contabilidade e Administração do Porto

DEGREE Marketing

Designation

Statistics I

Annual	☐	**Semestral**	☒	**Optional**	☐	**Compulsory**	☒
Year	**2nd**	**Semester**	**1st**	**Hours/Year**			
				Hours/Week		**L** - Lectures	
						TP - Theory/Practice	3
Credits		5,0				**P** - Practice	

Objectives of the Discipline

To introduce the students to the study of Probability and Statistics providing an adequate balance between theory and applications for university business students. All statistical methods developed are illustrated with relevant examples. The prerequisites are a course in differential and integral calculus.

Programme of the discipline

1. Descriptive Statistics.
   1.1. Introduction.
   1.2. Collecting and organizing data.
   1.3. Numerical description of data.
   1.4. Use your computer to organize and display data.
   1.5. Position and variability measures.

2. Probability.
   2.1. Introduction.
   2.2. Counting sample points.
   2.3. Probability of an event.
   2.4. Additive rules.
   2.5. Conditional probability.
   2.6. Multiplicative rules.
   2.7. Bayes' rule.

3. Random variables.
   3.1. Concept of a random variable.
   3.2. Discrete and continuous random variables.
   3.3. Discrete probability distributions.
   3.4. Continuous probability distributions.
   3.5 Mathematical expectation.

4. Discrete probability distributions.
  4.1. Discrete uniform distribution.
  4.2. Binomial and Bernoulli distributions.
  4.3. Negative binomial and geometric distributions.
  4.4. Poisson process and Poisson distribution.
  4.5. Calculation of probability using Excel.

Methods

The course has two kind of classes: lectures where the theory is introduced and examples are provided and practice classes where exercises are suggested and solved.

Assessment

The evaluation of knowledge of the discipline of Statistics I is:
1. Continuous Assessment:
    (a) two theoretical and practical Worksheets.
    (b) written Test.
2. Evaluation by final examination: written Exam.

Bibliography

- António Pedrosa and Sílvio Gama. "Introdução Computacional à Probabilidade e Estatística". Porto Editora, 2004.
- Lind, Mason, Marchal. "Basic Statistics for Business and Economics". The McGraw - Hill Companies, Inc.
- Anderson, Sweeney , Williams, Freeman and Shoesmith. "Statistics for Business and Economics". Thomson.

Comments

The teacher: Doutora Vera Lúcia Oliveira

Date: 16/02/2011