

Course	Marketing Graduation			Academic year	2021/2022		
Subject	Statistics			ECTS	7		
Type of course	Compulsory						
Year	2º	Semester	1st	Student Workload:			
Professor(s)				Total	196	Contact	75
Area Coordinator	PhD José Miguel Rodrigues Salgado						

### Planned SD

## 1. LEARNING OBJECTIVES

### Objectives:

Acquire knowledge and competence in statistics, using data treatment methods and techniques to prepare reports, analyses and evaluations for business sciences.

### Skills to be acquired by students:

- 1 - Acquisition of knowledge of descriptive statistics and data interpretation.
- 2 - Estimation and evaluation of regression.
- 3 - Ability to calculate probabilities.
- 4 - Ability to work with various probability distributions.
- 5 - Ability to undertake a study of sampling and statistical inference.

## 2. PROGRAMME

Data presentation.

Measures of central tendency.

Measures of dispersion, asymmetry, leveling and concentration.

Correlation and regression.

Basic probability theory.

Random variables and distributions.

Special distributions.

Sampling theory.

Interval estimation.

Hypothesis testing.

Nonparametric tests.

### **3. COHERENCE BETWEEN PROGRAMME AND OBJECTIVES**

Through theoretical and practical lectures, the students acquire theoretical knowledge of the syllabus topics and are able to apply these to practical situations related to Management. Tutorial accompaniment in person is relevant for application of the theoretical knowledge to practical cases as is solving practical exercises. The e-learning platform as a component of distance learning should help the student to accompany the material. Throughout the semester, problems are resolved and practical cases are studied. The theoretical and practical component and the resolution of practical cases should help the students acquire knowledge and competence for statistics to be able to carry out data treatment for reports, analyses, and evaluations in the business sciences.

### **4. MAIN BIBLIOGRAPHY**

- 1 Fonseca, Jaime (2001) "Estatística Matemática" vol 1 e vol 2 Ed. Sílabo.
- 2 Fonseca, Jaime e Torres, Daniel (2011) "Exercícios de Estatística-vol 1", 2ª edição, Ed. Sílabo.
- 3 Fonseca, Jaime e Torres, Daniel (2002) "Exercícios de Estatística-vol 2", Ed. Sílabo.
- 4 Guimarães,R (2010) "Estatística" McGraw-Hill.
- 5 Neves, Manuela Figueira (2021). "Caderno de Exercícios de Estatística", material didático para a UC de Estatística, ESTG/IPG.
- 6 Murteira, B.; Ribeiro, C.S.; Silva, J.A. e Pimenta, C. (2007) "Introdução à Estatística", 2ª edição, McGraw-Hill.
- 7 Reis, Elizabeth (2009) "Estatística Descritiva", 7ª edição, Ed. Sílabo.
- 8 Reis,E.;Melo,P.;Andrade,R.e Calapez,T.(2007) "Estatística Aplicada" vol.1, 5ª edição, Ed. Sílabo.
- 9 Reis,E.;Melo,P.;Andrade,R.e Calapez,T.(2001) "Estatística Aplicada" vol.2, 4ª edição, Ed. Sílabo.

## **5. TEACHING METHODOLOGIES (INCLUDING EVALUATION)**

### **Teaching methodology:**

Practical and theoretical lectures with practical examples and application related to the course of study. Tutorials. Blackboard e-learning platform for distance learning.

### **Evaluation:**

Students select their assessment from the following:

Ongoing assessment – two written tests (100%) with a minimum score each of 5/20 for an overall average greater than or equal to 9.5/20; or Exam – one written test (100%).

In each case, students with a final score greater than or equal to 16/20 will sit for an oral exam or accept the final score of 16.

## **6. COHERENCE BETWEEN TEACHING METHODOLOGIES AND OBJECTIVES**

Because students should acquire competence to carry out statistical data treatment, these topics are included in the syllabus for analysis and treatment of diverse types of data. Students should be able to prepare reports, analyses, and evaluations for business science.

## **7. ATTENDANCE**

*Not Applicable*