| | SUBJECT DESCRIPTION | **MODELO** |
|---|---|---|
| POLI ESCOLA SUPERIOR TECNOLOGIA GESTÃO TÉCNICO GUARDA | | PED.013.03 |

| *Course* | **Master in Management** | | | | | |
|---|---|---|---|---|---|---|
| *Subject* | **Data Analysis** | | | | | |
| *Academic year* | 2023/2024 | *Curricular year* | 1st | *Study period* | 1st semester | |
| *Type of subject* | Compulsory | *Student workload (H)* | Total: 168 | Contact: 60 | *ECTS* | 6 |
| *Professor(s)* | José Miguel Rodrigues Teixeira Salgado | | | | | |

| X *Area/Group Coordinator* ☐ *Head of Department* | *(select)* | José Miguel Rodrigues Teixeira Salgado |
|---|---|---|

**CLIQUE E SELECIONE A VERSÃO PRETENDIDA**

## 1. LEARNING OBJECTIVES

Students should gain knowledge and skills in key aspects relating to the theory and methods for quantitative and qualitative research techniques, as well as in major operations and tools used in the treatment of data collected during the development of a research process. It is also a goal that students develop their critical skills in basic concepts related to economics and the problem under study.

## 2. PROGRAMME

1 – Descriptive statistics
2 – Linear and Multiple Regression and Correlation
3 – Probability Distributions (binomial, poisson, normal)
4 – Sampling and Confidence Intervals
5 – Hypothesis Testing (parametric and non-parametric)
6 – Statistical Methods: Variance Analysis and Logistic regression
7 – Applications in SPSS/PSPP

## 3. COHERENCE BETWEEN PROGRAMME AND OBJECTIVES

Bearing in mind that students should acquire knowledge and skills in research methods and techniques that will enable them to perform statistical treatment of data, the syllabus includes methods and techniques of analysis and treatment of various types of data.

It is expected that students acquire skills that will enable them to develop a research process that includes, in addition to other aspects, the collection, processing and analysis of statistical data.

4.    **MAIN BIBLIOGRAPHY**

1.  Hill, M.M. e Hill, A (2008). *Investigação por Questionário* (2ª edição). Ed. Sílabo.
2.  Johnston, J. & Dinardo, J.(2000). *Métodos Econométricos* (4ª edição). MacGraw-Hill.
3.  Maroco, J. (2007). *Análise Estatística – com utilização do SPSS* (3ª edição). Ed. Sílabo.
4.  Pedrosa, A.C e Gama, S. M. A. (2004). Introdução Computacional à Probabilidade e Estatística. Porto Editora
5.  Pestana, M. & Gageiro, J. (2014). *Análise de Dados para as Ciências Sociais. A Complementaridade do SPSS* (6ª edição). Edições Sílabo.
6.  Reis, E.; Melo, P.; Andrade, R. & Calapez, T. (2015). *Estatística Aplicada* (vol. 1, 6ª edição). Ed. Sílabo.
7.  Reis, E. Vicente, P. & Ferrão, F. (2001). *Sondagens - A amostragem como factor decisivo de qualidade*" (2ª edição). Ed. Sílabo.
8.  Pestana, D. & Velosa, S. (2008). *Introdução à probabilidade e à estatística* (vol. 1, 3ª edição). Fundação Calouste Gulbenkian.
9.  Salgado, J. (2023). *Caderno de exercícios de Análise de Dados.* Notas do Professor

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

**Teaching methodologies:**

Expository method with theoretical and practical examples of application related with the area of the course.

In the practical component, in the classroom, the methodologies to be used include group work/pairs, debate, problem solving and exercises, simulation and argumentative or factual demonstration.

Use in class the SPSS (Statistical Package for Social Sciences) software for statistical data analysis or the free software PSPP.
Use the platform of e-learning (distance learning component).

**Evaluation:**

**Continuous Assessment**: 2 written short tests (weighted 30% each) and one practical work weighting 40%. The student obtains approval when the weighted average is equal to or higher than 9,5 values, being excused from the final exam.

**Final Assessment (Exams)**: Designed for students who did not have approval in Continuous Assessment or haven´t done it. In this case it is required a written test in scale 0-20 values or 0-12 values in the case of using practical work evaluation. The student obtains approval when his classification is equal to or higher than 9,5 values.

## 6. COHERENCE BETWEEN TEACHING METHODOLOGIES AND OBJECTIVES

With the theoretical and practical lecture method it is intended that the students acquire theoretical knowledge of the syllabus and can be applied in practical situations related to the course area.

Monitoring the practical work of statistical data using SPSS for the application of theoretical knowledge to practical situations with real data.

Using the platform of e-learning - distance learning component, allowing for better monitoring by students.

## 7. ATTENDANCE

Not applicable.

## 8. CONTACTS AND OFFICE HOURS

*Attendance: 1h30m/week from tuesday (11h30-12h30 ou 18h-19h), wednesday (17h-18h) e friday (11h30-12h30)*

**DATE**

31/10/2023

**SIGNATURES**

*Professor(s), Area/Group Coordinator or Head of Department signatures*

Assinatura na qualidade de Group Coordinator

(signature)