UNIVERSIDADE LUSÍADA
LISBOA

Course Unit Program
STATISTIC APPLIED METHODS

Academic Year 2024/2025

1. Organic Unit

Faculty of Law

2. Course

SECURITY AND JUSTICE

3. Cycle

4. Course Unit

STATISTIC APPLIED METHODS (X4010)

5. Scientific Area

6. Curricular Year

2nd

7. Type of Curricular Unit / Semester

1st Semester

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8. Class type and workload (work time)

Theoretical classes:	
Practical classes:	
Theoretical-Practical Classes	15,00
Tutorial Guidance:	20,00

9. ECTS Credits

7,50

10. Scientific Area Coordinator

11. Regent

Prof. Doutora SÓNIA MARIA ANICETO MORGADO

12. Assistants

13. Teaching Language

Portuguese

14. General Objectives

This curricular unit aims to provide students with a thorough understanding of the fundamentals of Statistics, which is essential for the application and interpretation of advanced statistical methods. The program covers both the theoretical and practical aspects of Statistics, enabling students to apply techniques rigorously and accurately. In addition, the development of practical skills in solving statistical problems using specialized software, which encourages and promotes the ability to cr

15. Specific Objectives

Introducing the main statistical methods used in security and justice research.
Enabling students to apply statistical techniques to analyze quantitative and qualitative data.
Developing skills for interpreting statistical results and making informed recommendations based on the data analyzed.
Training students in the use of statistical software for data analysis.
Summarizing information from data by applying statistical techniques.
Mastering the tools for modeling probabilistic situations

16. Skills to be acquired

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Students should demonstrate proficiency in applying descriptive and inferential statistical methods, synthesizing and interpreting relevant data, modeling probabilistic situations, integrating theories into practice and solving problems systematically. These skills will enable students to present the problem; define the concepts and theories useful for this purpose; apply and validate the assumptions of the models; obtain the answer to the problem and carry out rigorous and well-founded statisti

17. Teaching Methodology

In terms of teaching, a hybrid approach is proposed, combining elements of the expository-participatory method and the active method, with a focus on practical application and the active participation of the masters. Classes will be held in a computer laboratory, allowing for theoretical-practical classes and tutorials. In theoretical-practical classes, the lecturer will introduce the fundamental concepts through practical applications, with the aim of deducing the more abstract aspects. On the

18. Course Unit Program

I. Foundations of Applied Statistics: basic concepts (variables; population and sample); descriptive statistics (normal distribution; measures of location, dispersion and concentration); normal distribution and statistical tests.
II. Applications with statistical software
III. Probabilities and Probability Distributions: Normal, Bernouli, Binomial and Poison Distributions
IV. Statistical inference: methods for identifying and estimating relationships between variables; point and interval estimation.
V. Hypothesis testing: basic concepts; hypotheses (null and operational); parametric and non-parametric.
VI. Regression and Correlation: simple and multiple linear regression; correlation analysis.

19. Assessment Methods

Continuous assessment with the realization of an evaluation test at the end of the semester.

20. Didactic Resources

Statistical software in rooms equipped with computers connected to the Internet; support materials provided by the instructor.

21. Sustainability Objectives

3.Health and well-being
8.Quality education
11.Sustainable cities and communities
16.Justice and effective institutions

22. Keywords

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Descriptive statistics
Inferential statistcs
Hypothesis testing
Parameter estimation

23. Main Bibliography

Author(s):	João Marôco		
Title:	Análise Estatística com o SPSS Statistics		
Edition:	8ª	Year:	2021
Local:	Lisboa		
Publisher:	Report Number		

Author(s):	Bento José Ferreira Murteira; João Andrade e Silva; Carlos Pimenta; Carlos Silva Ribeiro		
Title:	Introdução à estatística		
Edition:	4ª	Year:	2023
Local:	Lisboa		
Publisher:	Escolar Editora		

Author(s):	Fernanda Figueiredo		
Title:	Estatística descritiva e probabilidades		
Edition:		Year:	2009
Local:	Lisboa		
Publisher:	Escolar Editora		

24. Complementary Bibliography

Author(s):	Badi H. Baltagi		
Title:	Econometrics		
Edition:		Year:	2022
Local:	London		
Publisher:	Springer International Publishing		

Author(s):			
Title:			
Edition:		Year:	
Local:			
Publisher:			

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Ficha técnica MIP / MIP Datasheet	
Título / Title	Course Unit Program 'MÉTODOS ESTATÍSTICOS APLICADOS': Academic Year 2024/2025
Autor / Author	Prof. Doutora SÓNIA MARIA ANICETO MORGADO
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Descritores / Descriptors	-
Colaborador(es) / Colaborator(s)	-
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