UNIVERSIDADE LUSÍADA
LISBOA

Course Unit Program
STATISTIC APPLIED METHODS

Academic Year 2025/2026

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

FUNDAÇÃO MINERVA CULTURA - ENSINO E INVESTIGAÇÃO CIENTÍFICA

Rua da Junqueira, 188 a 198 - 1349-001 LISBOA - Telefone 213 611 500 - Fax 213 638 307 - e-mail: info@lis.ulusiada.pt - https://www.lis.ulusiada.pt

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. Doutor FERNANDO MANUEL MONTEIRO MARTINS

12. Assistants

13. Teaching Language

Portuguese

14. General Objectives

In this curricular unit it is intended to transmit to the students the fundamentals of Statistics necessary for the understanding and use of statistical methods. It is intended that the contents addressed and the work methodology adopted will allow them to know how to correctly apply these methods and interpret the resulting data that they may obtain. It is also intended that students acquire practice in solving problems using appropriate software.

15. Specific Objectives

In this curricular unit, students should know how to use Descriptive Statistics tools properly in order to be able to produce a statistical study, validate and interpret the results; summarize the information contained in a set of data and, through various statistical measures, highlight the most relevant and pertinent aspects of that data; It is also intended that students come to master the basic tools necessary to be able to model probabilistic situations

16. Skills to be acquired

Teaching is centered on solving applications, that is, on developing problem-solving skills with a particular focus on social sciences, security and justice through a systematic resolution methodology: How to present the problem in quantitative terms? What are useful concepts? Are the validity conditions checked? How to manipulate the concepts? What is the answer to the problem? The course is based on a good understanding of the methods and training in the application conditions.

FUNDAÇÃO MINERVA CULTURA - ENSINO E INVESTIGAÇÃO CIENTÍFICA

Rua da Junqueira, 188 a 198 - 1349-001 LISBOA - Telefone 213 611 500 - Fax 213 638 307 - e-mail: info@lis.ulusiada.pt - https://www.lis.ulusiada.pt

17. Teaching Methodology

Theoretical-practical classes (the professor introduces the concepts through an application and deduces the abstract aspects); tutorial classes (the teacher presents the applications to the students and with their active participation a solution is sought). Classes will be taught in a computer lab.

18. Course Unit Program

1. Introduction to Descriptive Statistics: basic concepts; frequencies; scales; Measures of central tendency, dispersion and concentration; Correlation between variables and linear regression analysis.
2. Applications with software.
3. Probabilistic models: Main theoretical Bernoulli, Poisson and normal distributions.
4. Introduction to Statistical Inference: comparing observations with hypotheses made about the parameters of a population, using samples and estimators.
5. Confidence intervals for the population mean value and for the proportion using a sample.
6. Hypothesis tests: Hypothesis test concept. Null and alternative hypotheses. Statistics of a test; tests for mean value and proportion.

19. Assessment Methods

Assessment continues with an end-of-semester assessment test.

20. Didactic Resources

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

21. Sustainability Objectives

4. Quality Education
5. Gender Equality
9. Industry, Innovation and Infrastructure

22. Keywords

Descriptive statistics
parameter estimation
inferential statistics

FUNDAÇÃO MINERVA CULTURA - ENSINO E INVESTIGAÇÃO CIENTÍFICA

Rua da Junqueira, 188 a 198 - 1349-001 LISBOA - Telefone 213 611 500 - Fax 213 638 307 - e-mail: info@lis.ulusiada.pt - https://www.lis.ulusiada.pt

23. Main Bibliography

Author(s): Knapp, H.
Title: Introductory statistics using SPSS
Edition: 2nd Year: 2022
Local:
Publisher: SAGE Publications
ISBN Code:

Author(s): Fernanda Figueiredo Adelaide Figueiredo, Alexandre Ramos, Paulo Torres
Title: Estatística Descritiva e Probabilidades
Edition: 1ª Year: 2007
Local: Lisboa
Publisher: Escolar Editora
ISBN Code:

Author(s): Guimarães, R. C. e Cabral, J. A. S.
Title: Estatística
Edition: 2ª Year: 2010
Local: Lisboa
Publisher: Verlag Dashöfer
ISBN Code:

24. Complementary Bibliography

Author(s): Cronk, B. C., e Zaidi, A. U.
Title: A guide for statistical tests and interpretations with SPSS
Edition: 1st Year: 2024
Local:
Publisher: Routledge
ISBN Code:

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

FUNDAÇÃO MINERVA CULTURA - ENSINO E INVESTIGAÇÃO CIENTÍFICA

Rua da Junqueira, 188 a 198 - 1349-001 LISBOA - Telefone 213 611 500 - Fax 213 638 307 - e-mail: info@lis.ulusiada.pt - https://www.lis.ulusiada.pt

UNIVERSIDADE LUSÍADA
LISBOA

Ficha técnica MIP / MIP Datasheet	
Título / Title	Course Unit Program 'MÉTODOS ESTATÍSTICOS APLICADOS': Academic Year 2025/2026
Autor / Author	Prof. Doutor FERNANDO MANUEL MONTEIRO MARTINS
Classificação / Classification	-
Descritores / Descriptors	-
Colaborador(es) / Colaborator(s)	-
Data Hora / Date Time	
Formato de dados / Data Format	Texto / Text, PDF
Estatuto de utilização / Usage	Acesso público / Public Access
Relação / Relation	Version 1,0

(c) Universidade Lusíada, 2025

FUNDAÇÃO MINERVA CULTURA - ENSINO E INVESTIGAÇÃO CIENTÍFICA

Rua da Junqueira, 188 a 198 - 1349-001 LISBOA - Telefone 213 611 500 - Fax 213 638 307 - e-mail: info@lis.ulusiada.pt - https://www.lis.ulusiada.pt