

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

<i>Course</i>	Accountability					
<i>Subject</i>	Statistics for the Social Sciences					
<i>Academic year</i>	2023.24	<i>Curricular year</i>	2nd	<i>Study period</i>	2nd semester	
<i>Type of subject</i>	Compulsory	<i>Student workload (H)</i>	Total: 196	Contact: 75	<i>ECTS</i>	7
<i>Professor</i>	Natália Rodrigues					
<input checked="" type="checkbox"/> <i>Area/Group Coordinator</i> <input type="checkbox"/> <i>Head of Department</i>		(select)	Miguel Salgado			

PLANNED SUBJECT DESCRIPTION

1. LEARNING OBJECTIVES

To understand the concepts and basic principles of statistics and probabilities; To understand the methods and technics of data analysis; To apply and resume the concepts and technics worked out in classes.

2. PROGRAMME

Chapter 1 – Introduction to Statistics Concepts and basic principles of statistics: population and samples. Descriptive and Inductive statistics. Data classification Formal methods of sampling. Frequency distribution: tables and graphical representations. Bidimensional distributions.

Chapter 2 – Central tendency measures Mean, Median and Mode .

Chapter 3 – Dispersion, assimetry, kurtosis and concentration measures.

Chapter 4 – Regression and Correlation Linear models.

Chapter 5 – Introduction to Probabilities. General concepts: random experiments, deterministic experiments, sample space and events. Law of large numbers Frequencist definition of probability. Classical definition of probability: Laplace law Probability axioms Properties of probabilities Conditional probabilities Independence of events Calculus of probabilities.

Chapter 6 – Random variables Types of Random variables.

Probability and Distribution function. Bidimensional Random variables. Expected value and Variance.

<p>POLI ESCOLA SUPERIOR TECNOLOGIA GESTÃO</p> <p>TÉCNICO GUARDA</p>	<p>SUBJECT DESCRIPTION</p>	<p>MODELO PED.013.03</p>
---	-----------------------------------	--------------------------------------

Properties.

Chapter 7- Special distributions Binomial, Poisson, normal, qui-square and t-student distributions.

Chapter 8 – Sampling theory.

Chapter 9 – Intervalar estimation.

Chapter 10 – Parametric tests.

Chapter.11 – Non Parametric tests

3. COHERENCE BETWEEN PROGRAMME AND OBJECTIVES

Objective- To understand the concepts and basic principles of statistics and probabilities;

Content- Chapter 1 (1 to 4) and Chapter 2 (1 to 9)

Objective- To understand the methods and technics of data analysis;

Content- Chapter 1 (5 to 7)

Objective- To apply and resume the concepts and technics worked out in classes;

Content- Chapter 1 (5 to 7) and Chapter 2 (10)

4. MAIN BIBLIOGRAPHY

Fonseca, Jaime (2001) “Estatística Matemática” vol. 1 e vol. 2 Ed. Sílabo.

Fonseca, Jaime e Torres, Daniel (2011) “Exercícios de Estatística-vol. 1”, 2ª edição, Ed. Sílabo.

Fonseca, Jaime e Torres, Daniel (2002) “Exercícios de Estatística-vol. 2”, Ed. Sílabo.

Guimarães,R (2010) “Estatística” McGraw-Hill.

Murteira, B.; Ribeiro, C.S.; Silva, J.A. e Pimenta, C. (2007) “Introdução à Estatística”, 2ª edição, McGrawHill.

	SUBJECT DESCRIPTION	MODELO PED.013.03
---	----------------------------	-----------------------------

Reis, Elizabeth (2009) “Estatística Descritiva”, 7ª edição, Ed. Sílabo.

Reis, E.; Melo, P.; Andrade, R. e Calapez, T.(2007) “Estatística Aplicada” vol.1, 5ª edição, Ed. Sílabo.

Reis, E.; Melo, P.; Andrade, R. e Calapez, T.(2001) “Estatística Aplicada” vol.2, 4ª edição, Ed. Sílabo.

Rodrigues, N. (2019.20) Caderno de Exercícios, material didático elaborado para a UC de MCS, ESTG/IPG.

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 10/20; 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

Objective- To understand the concepts and basic principles of statistics and probabilities;

Content- Evaluation preparation and execution

Objective- - To understand the methods and technics of data analysis;

Content- Evaluation preparation and execution

Objective- - To apply and resume the concepts and technics worked out in classes;

Content- Evaluation preparation and execution

7. ATTENDANCE

Not applicable

<p>POLI ESCOLA SUPERIOR TECNOLOGIA GESTÃO TÉCNICO GUARDA</p>	<p>SUBJECT DESCRIPTION</p>	<p>MODELO PED.013.03</p>
--	-----------------------------------	-------------------------------------

8. CONTACTS AND OFFICE HOURS

Professor: Natália Rodrigues; narod@ipg.pt; office 43

Office hours: Thursday, 14:00-17:45

Area coordinator: Graça Tomaz; miguelsal@ipg.pt;

9. OTHERS

Not applicable

DATE

19 de fevereiro de 2024

SIGNATURES

Assinatura na qualidade de (clicar)

(signature)

Assinatura na qualidade de (clicar)

(signature)