

Course Unit: 956302 - Applied statistics

Year 1 Semester 1 ISCED Code: 542 ECTS: 5,0

Type of Course Unit: Compulsory **Delivery Mode:** Face-to-face **Language of Instruction:** Portuguese

COURSE COORDINATOR: Cesário Paulo Lameiras de Almeida

HOURS OF WORK

TOTAL HOURS	Contact Hours								Hours in autonomous work
	Theory	Theory and practice	Practical and laboratory work	Field work	Seminar	Internship	Tutorial guidance	Other	
125	15	45							65

Prerequisites (if applicable): <<Max 500 characters with spaces>>

LEARNING OUTCOMES (knowledge, skills and competence)

- Mastering the terminology and language specific to the covered topics;
- Know the models and statistical constructions that may contribute to the interpretation of organizational events and sports;
- Understanding of mathematical reasoning and organization (observation, analysis, construction and systemization);
- The ability to consciously use certain techniques of calculation;
- The tendency to relate and integrate the different concepts covered;
- Handle tools with statistical nature as a way of approach to problem solving (EXCEL, SPSS etc.).

CONTENTS

1 - Descriptive statistics

Measures of central tendency, measures of dispersion, measures of non central tendency; Measures of skewness and kurtosis. Graphical and tabular representation. The complementarity of SPSS.

2 - ESTIMATED PARAMETERS;

Point estimation and confidence interval estimation. 3 - Correlation and linear regression;

Line of least squares (interpretation of the coefficients a and b). Calculation and interpretation of the linear correlation coefficient of Pearson. The complementarity of SPSS.

4 - CONTINGENCY TABLES AND CHI-SQUARE TEST. The complementarity of SPSS.

5 - SOME PARAMETRIC TESTS. The complementarity of SPSS.

DEMONSTRATION OF THE CONTENTS COHERENCE WITH THE COURSE UNIT'S LEARNING OUTCOMES

The implementation of the degree in Sport Science at the School of Education of Beja aims, among others, to "... provide the community technicians in possession of a proper training that can perform the functions of planning, organizing, activating and management of facilities and sports facilities and leisure." Statistics as a science of collecting, presenting and analyzing data is an indispensable tool for developing in these professionals, among others, these skills.

Thus, under this discipline, it is intended that students will have knowledge about methods and techniques of descriptive and inferential statistics, favouring a more practical component, where possible, with the use of computer packages, and to serve as a support to decision-making.

TEACHING METHODOLOGIES

Exposure (using the most diverse media: oral, written and multimedia projection) of ideas essential to the teaching / learning of more theoretical knowledge and to serve as a platform for practical work procedures directly involved and where the degree of abstraction should appear connected to concrete applications, monitoring the resolution of practical cases which require the use of statistical tools with a strand (calculator, SPSS, EXCEL).

DEMONSTRATION OF THE COHERENCE BETWEEN THE TEACHING METHODOLOGIES AND THE LEARNING OUTCOMES

This curricular unit assumes an instrumental role in the curriculum of the degree of Sport Science. In this context the introduction of more theoretical nature will be summarized, privileging a more practical component to the intervention context of these students (sports) and with the use of specific software for data analysis and scientific calculating machine. Classes are, almost always, practical.

EVALUATION METHODS

In the evaluation of the course students have the option of continuous assessment (two written testes -50% each) and / or take an appeal examination.

MAIN BIBLIOGRAPHY

Afonso, A. & Nunes, C. (2011). Estatística e Probabilidade: Aplicações e Soluções em SPSS. Lisboa: Escolar Editora

HILL, M. & HILL, A. (2002). Investigação por questionário. Edições Sílabo: Lisboa.

MAROCO, J. (2018). Análise Estatística com o SPSS Statistics (7.ª Ed.). Lisboa: ReportNumber

PESTANA, M. & GAGEIRO, J. (2014). Análise de dados para Ciências Sociais – A complementaridade do SPSS (6.ª Edição). Lisboa: Edições Sílabo.

Reis, E., Melo, P., Andrade, R. & Calapez, T. (2006). Estatística Aplicada (Vol. 1 e 2). Lisboa Edições Sílabo

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