

Course Unit	Biostatistics II		Field of study	Statistics	
Bachelor in	Pharmacy		School	School of Health	
Academic Year	2021/2022	Year of study	1	Level	1-1
Type	Semestral	Semester	2	ECTS credits	5.0
Code	9549-644-1202-00-21				
Workload (hours)	135	Contact hours	T -	TP 60	PL -
			TC -	S -	E -
			OT 7,5	O -	

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s) António José Gonçalves Fernandes

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:

1. delineate and to analyze data through the main methods and statistical techniques in the field of the natural and social sciences
2. collect data in an appropriate way
3. recognize the importance of a correct experimental methodology
4. identify the sampling process
5. identify the appropriate statistical test, tends into attention the nature of data and the study's objectives
6. dominate the fundamental concepts of data analysis
7. interpret, correctly, the results

Prerequisites

Before the course unit the learner is expected to be able to:
Don't have

Course contents

I - Non Parametric Tests I. 1. Introduction I. 2. Localization tests for two or more samples I. 3. Association tests II - Parametric Tests II. 1. T-Student test II. 2. One Factor Variance Analysis

Course contents (extended version)

1. Non Parametric Tests
 - Introduction
 - Localization tests for two samples: Sign Wilcoxon McNemar Mann-Whitney-Wilcoxon
 - Localization tests for more than two samples: Kruskal-Wallis Friedman Q-Cochran
 - Association tests: Spearman Ordinal Correlation test Pearson Chi-square test
2. Parametric Tests
 - Introduction
 - T-Student test Two independent samples T- Student Two related samples
 - Fixed effects ANOVA Random effects ANOVA Random blocks ANOVA

Recommended reading

1. Guimarães, R. , & Cabral, J. (2010). Estatística. Lisboa: McGraw-Hill.
2. Zar, J. (2010). Biostatistical Analysis. International edition. New-Jersey: Prentice-Hall.
3. Maroco, J. (2018). Análise Estatística com o SPSS statistics. Pero Pinheiro: ReportNumber
4. Pestana, M. , & Gageiro, J. (2014). Análise de Dados para Ciências Sociais: A complementaridade do SPSS. Lisboa: Edições Sílabo.
5. Vieira, S. (2016). Introdução à Bioestatística. Editora Elsevier.

Teaching and learning methods

Expository methodology; Interactive methodology Demonstrative methodology.

Assessment methods

- Alternative 1 - (Regular, Student Worker) (Final, Supplementary, Special)
- Final Written Exam - 100%

Language of instruction

Portuguese

Electronic validation

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04-03-2022	08-03-2022	09-03-2022	09-03-2022