

Course Unit	Statistical methods		Field of study	Statistic	
	Graduate in nursing management		School	School of Health	
Academic Year	2019/2020	Year of study	1	Level	ECTS credits 3.0
Type	Semestral	Semester	1	Code	5042-678-1106-00-19
Workload (hours)	81	Contact hours	T -	TP 10	PL -
			TC -	S 5	E -
			OT -	O 5	

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) Maria Cristina Martins Teixeira

Learning outcomes and competences

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

1. To create a database by using the Excel and taking into account the type of the variables
2. To characterize groups of individuals according to the categorical and the quantitative variables
3. To compute the best estimate and the respective confidence interval for the population mean or the population proportion.
4. To compare proportions and means between groups by using hypothesis test.

Prerequisites

Before the course unit the learner is expected to be able to:
none

Course contents

1 - Databases by using the Excel. 2 - Characterization of groups according to the categorical variables. 3 - Characterization of groups according to the quantitative variables. 4 - Graphs for categorical variables. 5 - Histogram. 6 - Normal distribution. 7 - Inference of means and proportions by using confidence intervals. 8 - Hypothesis test to compare proportions and means between groups.

Course contents (extended version)

1. Databases
 - To construct a database by using Excel
2. Categorical variables
 - To compute absolute and relative frequencies by using dynamic table in Excel
3. Quantitative variables
 - To compute the measures of central tendency, mean, median and mode, by using the Excel.
 - To compute standard deviation, quartiles, minimum, maximum, by using the Excel
4. Graphs for categorical variables
5. Graphs for quantitative variables: histogram
6. Normal distribution
7. Statistical inference for the mean or a proportion
 - To read confidence intervals
 - To compute the best estimate and the respective confidence interval by using Excel and WinPepi
8. Hypothesis test
 - To compare proportions between groups: chi-square test and Fisher's exact test
 - Comparison of means between two independent groups: Student's t-test
 - Comparison of means between three or more groups: ANOVA test

Recommended reading

Cunha, G. , Eiras, M. , Teixeira, N. (2011) Bioestatística e Qualidade na Saúde. Lisboa. LIDEL

Teaching and learning methods

Practical lessons by using the computer

Assessment methods

- Final Assessment - (Regular, Student Worker) (Final, Supplementary, Special)
- Practical Work - 100% (Computer assisted statistical approach)

Language of instruction

Portuguese

Electronic validation

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07-12-2019	09-12-2019	13-12-2019	13-12-2019