INSTITUTO POLITÉCNICO DE BRAGANÇA

Course Unit	-	Field of study	-
Master in	Long Term Care	School	School of Health

Academic Year	2016/2017	Year of study	1	Level	2-1	ECTS credits	4.0
Type	Semestral	Semester	2	Code	1350-478-1203-00-16		

Workload (hours)	108	Contact hours	T	-	TP	25	PL	-	TC	-	S	15	E	-	OT	10	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)	Teresa Isaltina Gomes Correia, Maria Cristina Martins Teixeira

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:
1. Use concepts and methodologies of epidemiological research.
2. Design studies, apply specific techniques to the planning of an investigation.
3. Reflect critically and apply the technical knowledge on epidemiological surveillance, planning, evaluation and decision making.
4. Understand basic concepts and procedures in planning and statistical analysis in the area of health sciences.
5. Collect and edit data, choosing appropriate scales.
6. Know how to choose the analytical strategy and the construction of the appropriate model.
7. Apply parametric and non-parametric methods using the SPSS.
8. Plan and / or participate in epidemiological studies

Prerequisites

Before the course unit the learner is expected to be able to:
Not applicable

Course contents

Measuring health and disease. Risk measure Causes and causal inference. Reliability and validity. Bias, confounding and interaction. Design of epidemiological studies. Epidemiological surveillance. Population and sample. Descriptive statistics inference and generalization. Comparison of measures of central tendency. Parametric and Non-parametric tests. Comparison of proportions Odds Ratio and Relative Risk. Linear regression correlation

Course contents (extended version)

1. Measuring health and disease risk.
2. Measure Causes and causal inference. Reliability and validity. Bias.
3. Studies: Sectional, cohort, case - control and ecologic. Strengths and limitations.
4. Planning of an epidemiological investigation.
5. Design of epidemiological studies.
6. Epidemiological surveillance.
7. Measures of central tendency and dispersion.
8. Measure - nominal, ordinal and scale (continuous and discrete).
9. Editing data in tables and graphs.
10. Population and sample - sampling techniques. Descriptive statistics inference and generalization.
11. Comparison of measures of central tendency using parametric tests.
12. Comparison of measures of central tendency using non-parametric tests.
13. Comparison of proportions Odds Ratio and Relative Risk.
14. Pearson and Spearman correlation.
15. Linear regression model.

Recommended reading

1. Hernández-Aguado,I., Miguel, A. G., Rodriguez, M. D., Montrull, F. B., Benavides, F. G., Serra, M. P et al. (2013). Manual de Epidemiología y Salud Pública (2ª. ed.). Madrid: panamerica.
2. Pestana, M. H. & Gageiro, J. N. (2005). Descobrindo a regressão com a complementariedade do SPSS. Lisboa: Edições Sílabo

Teaching and learning methods

Lectures (30h): Exposure of concepts using images and texts selected. Presentation, discussion and analysis of application examples. Resolution accompanied by exercises. Seminar (15 h): with contributions the research. Tutorials lectures (14 h).

Assessment methods

1. Alternative 1 - (Regular, Student Worker) (Final)
   - Intermediate Written Test - 60%
   - Practical Work - 40%
2. Alternative 2 - (Regular, Student Worker) (Supplementary, Special)
   - Final Written Exam - 100%

Language of instruction

Portuguese, with additional English support for foreign students.

Electronic validation

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28-10-2016	28-10-2016	02-11-2016