Universitat de Lleida

DEGREE CURRICULUM

DATA ANALYSIS IN HEALTH RESEARCH 1

Coordination: GOMEZ ARBONES, XAVIER

Academic year 2017-18

Subject's general information

Subject name	DATA ANALYSIS IN HEALTH RESEARCH 1
Code	14064
Semester	1st Q(SEMESTER) CONTINUED EVALUATION
Typology	<table><tr><th>Degree</th><th>Course</th><th>Typology</th><th>Modality</th></tr><tr><td>Master's Degree in Health Research</td><td>2</td><td>COMPULSORY</td><td>Blended learning</td></tr></table>
ECTS credits	6
Groups	1GG
Theoretical credits	0
Practical credits	0
Coordination	GOMEZ ARBONES, XAVIER
Department	MEDICINA
Teaching load distribution between lectures and independent student work	Classroom lectures: 7,5 hours The rest of the hours are for autonomous and tutoriset students work
Important information on data processing	Consult this link for more information.
Language	Catalan, Spanish and some material in English

Professor/a (s/es)	Adreça electrònica professor/a (s/es)	Crèdits	Horari de tutoria/lloc
GOMEZ ARBONES, XAVIER	xga@medicina.udl.cat	6	

Learning objectives

Knowledge of the basics of the design, execution, analysis and interpretation of research studies.
Be able to design an appropriate database to a research study and fill it with the results. Validate the results and the database.
Deal with the concept of probability and biological variability. Recognize in biostatistics and epidemiology a tool for working with samples.
Know and differentiate the statistical the descriptive and analytical methods used in biomedicine
P and reflect on the concept of power.
Interpret the results of statistical tests and be able to evaluate the adequacy of the statistical methods.
Kwon the basics of using statistical software.
Develop a computerized database and be able to analyze data to obtain conclusions
Transform and operate with variables.
Apply statistical methods to describe and compare.

Competences

Specific skills:

Ability to use instruments of articles critical assessment of qualitative and quantitative research.

Knowledge to apply scientific writing language in communicating health outcomes

Ability to describe and apply the most common techniques for exploring and analyzing data, analyze relationships between variables and test hypothesis in quantitative and qualitative research.

Subject contents

Introduction to descriptive statistics.

Descriptive statistics. of centralization, dispersion and position.

Introduction to probabilidad, confidence intervals and inferential statistics.

Contrast of independence between two qualitative variables: Chi-Square.

Contrast of normality of a numerical variable.

Contrast of a numerical variable observed in two samples: t-test, Mann-Whitney.

Contrast of a numerical variable in three or more samples: ANOVA and Kruskal-Wallis.

Correlation and linear regression.

Methodology

The teaching methodology is based in lectures-seminars and guided activities with the participation of students.

The classes will be supported with iconography (slides and transparencies) and computer presentations.

We recommend to actively participate in all the sessions and work in advanced the contents of the lectures.

The learning activity is managed through the Virtual Campus (VC) of the University of Lleida.

Development plan

25/10/2016. 09:30-14:00. Lecture 1

14/12/2016. 09:30-14:00. Lecture 2

10/01/2017. 09:30-14:00. Lecture 3

Evaluation

Attendance and participation in lectures, practices, seminars and tutorials. Percentage: 30%
Individual activities of continuous evalutation and group work. Percentage: 35%
Groupal work. Percentage: 25%
Exam. Percentage: 10%

The first day we will deal about the conditions of the student evaluation.

Bibliography

Fundamental text books:

1. Abella F, Fajó M, Gómez X, March J, Sorribas A. Metodología estadística en ciencias de la salud. Del diseño del estudio al análisis de los resultados. Edicions de la UdL y F.V. Libros Eines 26, 2001.
2. Argimón Pallás JM, Jiménez Villa J. Métodos de investigación aplicados a la atención primaria. Mosby/Doyma. Barcelona, 1994.
3. Armitage P, Berry G. Estadística para la investigación biomédica. Ediciones Doyma. Barcelona, 1992.
4. Hulley SB, Cummings SR. Diseño de la investigación clínica. Un enfoque epidemiológico. Ediciones Doyma. Barcelona, 1993.
5. Woolson RF. Statistical methods for the analysis of biomedical data. John Wiley & Sons. Chichester, 1987.