

## SUBJECT TEACHING GUIDE

G369 - Biostatistics

Degree in Nursing

Academic year 2019-2020

1. IDENTIFYING DATA					
Degree	Degree in Nursing			Type and Year	Core. Year 1
Faculty	Faculty of Nursing				
Discipline	Subject Area: Statistics Module: Common Basic Training				
Course unit title and code	G369 - Biostatistics				
Number of ECTS credits allocated	6	Term	Semester based (1)		
Web					
Language of instruction	Spanish	English Friendly	Yes	Mode of delivery	Face-to-face

Department	DPTO. ENFERMERIA				
Name of lecturer	MIGUEL SANTIBAÑEZ MARGÜELLO				
E-mail	miguel.santibanez@unican.es				
Office	Facultad de Enfermería. Planta: + 0. DESPACHO PROFESORES (002)				
Other lecturers	JOSE MARIA CASTILLO OTI				

3.1 LEARNING OUTCOMES
- To identify health problems in a community by using statistical inference
- To interpretate the different possible factors that influence on the health of individuals and / or groups, by using statistical analysis approaches
- To understand descriptive statistics as a tool to identify health related problems , when data related to population studies are used
- To use statistical software as a tool in health related nursing care

#### 4. OBJECTIVES

Being able to perform and interpret properly an analysis of data related to the care and health related problems
Being able to calculate the relationship between variables concerning health, and interpreting it properly
Interpretate and perform simple clinical epidemiological studies
To known the basic concepts of epidemiology

#### 6. COURSE ORGANIZATION

CONTENTS	
1	<p>PART I. BASICS ON EPIDEMIOLOGY AND STATISTICS.</p> <p>UD1. General principles of research.</p> <p>UD2. Measures of frequency, association and impact in epidemiology. Types of epidemiological studies.</p> <p>PA 1. Reading a scientific paper.</p> <p>PA 2. Interpretation of the Odds Ratio (independent dichotomous variable).</p> <p>PA 3. Interpretation of an Odds Ratio (ordinal independent variable).</p>
2	<p>PART II AND III. DESCRIPTIVE AND INFERENCE STATISTICS.</p> <p>UD3. Definition of variables and analysis strategy.</p> <p>UD4. Introduction to Inferential Statistics. Concept of statistical significance and confidence interval. Description of quantitative variables. Difference between standard error and standard deviation.</p> <p>UD5. Inference on measures of association.</p> <p>PA 4. Inference on parameters (one population).</p> <p>PL 5. Descriptive statistics.</p> <p>PA 6. Inference on parameters (two populations).</p> <p>PL 7. Comparison of means. Difference between statistically significant and clinically relevant.</p>
3	<p>PART IV . REPRODUCIBILITY , RELIABILITY , PRECISION AND VALIDITY, AND CAUSAL INFERENCE.</p> <p>UD6. Critical interpretation of diagnostic tests and screening.</p> <p>UD7. Validity of epidemiological studies. Bias. The randomized controlled trial. Causality Criteria.</p> <p>UD8. Reliability and Validity applied to Questionnaires.</p> <p>PL 8. Meta-analysis.</p> <p>PL 9. Correct interpretation of association measures in epidemiology.</p> <p>PL 10 and 11. Stratified analysis and logistic regression. Study of confounding.</p>

## 7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Knodledge Examination	Written exam	Yes	Yes	60,00
Team (group work) and/or individual work	Others	No	No	25,00
Activities of classroom (practical hours)	Others	No	No	15,00
<b>TOTAL</b>				<b>100,00</b>
<b>Observations</b>				
<p>The student will be considered as 'not presented' only in case that He /She does not present to both 'Knodledge Examination', 'Activities of classroom (practical hours)' and 'Team work (small group work)'. Otherwise, the mark corresponding to 'Activities of classroom (practical hours)' and 'Team work (small group work)' will be considered as the final mark. This is, if the student dos not present to 'Knodledge Examination', his/her final mark will be the sum of his/her 'Activities of classroom (practical hours)' and 'Team work (group work)' instead of 'not presented'.</p>				
<b>Observations for part-time students</b>				
<p>Part-time students will be given the choice to participate in the following assesment system:            - Carry out a unique examination, this is, the 'Knowledge Examination' with will denote the 100% of the final mark.            To choose this modality, the student will have to make the corresponding request to the teacher responsible for the subject at the beginning of the academic year</p>				

## 8. BIBLIOGRAPHY AND TEACHING MATERIALS

### BASIC

Argimón Pallàs, JM. Jiménez Villa, J. Métodos de investigación clínica y epidemiológica. 3ª ed. Madrid, Elsevier; 2006.

Martínez, M.A.; Faulín, F.J. y Sánchez, A. Bioestadística Amigable, 2ª Ed. Madrid: Díaz de Santos; 2006. (Primera reimpresión revisada, 2009)

Fisterra.com. Atención Primaria en la red. Metodología de la Investigación. Disponible en:  
<http://www.fisterra.com/mbe/investiga/index.asp>.