VNIVERSITAT DE VALÈNCIA

Course Guide
44634 Statistics, methodology and advanced clinical reasoning

COURSE DATA

Data Subject	
Code	44634
Name	Statistics, methodology and advanced clinical reasoning
Cycle	Master's degree
ECTS Credits	6.0
Academic year	2023 - 2024

Study (s)

Degree	Center	Acad. year	Period
2220 - Master's Degree in Functional Recovery in Physiotherapy	Faculty of Physiotherapy	1	First term

Subject-matter

Degree	Subject-matter	Character
2220 - Master's Degree in Functional Recovery in Physiotherapy	3 - Statistics, methodology and advanced clinical reasoning	Obligatory

Coordination

Name	Department
INGLES DE LA TORRE, MARTA	191 - Physiotherapy

SUMMARY

This subject related to research and scientific field but with a marked clinical application, in order to enhance self-learning ability and proper integration between scientific evidence and clinical evidence contents are addressed.
The course is divided into three sections:

1- Methodology and scientific documentation. critical reading.

2 Statistics applied to the clinical setting.

3- Clinical reasoning quality.

PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

Other requirements

At the end of the matter, the program will be able to meet their information needs by conducting literature searches, and to identify design and methodology used in the various types of published works and to design new experimental work. In a second phase, they will be able to develop quality scientific papers in various written and oral formats.

They will also be able to develop bibliometric maps of their respective areas of research that will enable them to know their characteristics of scientific productivity, collaboration and impact as well as major groups and research fronts.

They must also be able to apply in a clinical setting descriptive and inferential statistics, as well as having knowledge of multifactorial statistics for later use in research projects.

With all the training, the student must also be able to perform quality clinical reasoning, based on clinical and scientific evidence.With all this, you could plan a research design, learning to analyze different situations susceptible to study and synthesize all information concerning any casuistry related to functional recovery in physiotherapy.

DESCRIPTION OF CONTENTS

1. Scientific methodology and documentation. Critical Reading

This block addresses the following aspects: methodology for bibliographic and documentary research, design and structure of scientific work, the process of publication and participation in scientific meetings, evaluation of scientific activity through bibliometric studies.
In addition, the student is assisted in the planning of a research work design (i.e. his master's degree job), under the prism of evidence-based physiotherapy.

2. Statistics in the clinical setting

a. Descriptive statistics: media, deviated est-ndard i freq-ncies per descriure mostres. Errors de dades freq-tilesss (standard error, interval de confianca and valors atípics). Grefics de representació de dades.
b. Statistics inferential: the rteació between qualitatius (quadrat Chi) and variables quantitatives (individual and multiple linear correlations). Difference in mitjans and anlisi of varies. Import of les covariates in the multifactorial studis (ANCOVA) per la seva contributed to the final resultts.
c. Multifactorial statistics.
Construction of q'estionaris i reducció de dades (Chronbach Alpha).
Fiabilitat, repetibilitat i validesa.

3. Clinical intervention methodology and clinical reasoning.

Clinical reasoning theory
Models of clinical reasoning
Existence of bias in clinical reasoning
biomedical aspects involved in clinical reasoning.
Causal relationships in complex systems
Establishing the relevance of clinical findings.

WORKLOAD

ACTIVITY	Hours	% To be attended
Computer classroom practice	16,00	100
Theory classes	10,00	100
Classroom practices	10,00	100
Study and independent work	70,00	0
Readings supplementary material	20,00	0
Preparation of evaluation activities	24,00	0
TOTAL	**150,00**	

TEACHING METHODOLOGY

1. Theoretical and practical contact sessions in which the subject content will work, will discuss and perform activities using various teaching resources.
2. Individual and group tutorials should serve as a means to coordinate the / as students in individual and group tasks.
3. Study, performing tasks and individual work and other cooperative nature, aimed at preparing the theoretical and practical classes, individual and group work and oral and written tests that can be performed to evaluate the acquisition of learning individual.

EVALUATION

Evaluation system	Percentage of qualifying
Individual work	**50%**
Theoretical and practical final test	**50%**

The final grade of the subject will be the weighted sum of the marks obtained in each evaluation test, as long as the student has obtained at least 50% of the maximum mark in each of the tests.

REFERENCES

Additional

- Aleixandre-Benavent, R. Fuentes de información en ciencias de la salud en Internet. Panace@ 2011; 12 (33): 112-120
- González de Dios J; González-Muñoz M; Alonso-Arroyo A; Aleixandre-Benavent R. I Comunicación científica (I). La comunicación científica en la práctica clínica, docencia e investigación. Acta Pediatr Esp. 2013; 71(5): 129-132.
- Aleixandre Benavent, R. Bibliometría e indicadores de actividad científica. En: Jiménez Villa J, Argimó llas JM, Martín Zuro A, Vilardell Tarrés M. (Ed.) Publicación Científica Biomédia. Cómo escribir y publicar un artículo de investigación. Barcelona: Elsevier España; 2010. p. 363-384. ISBN: 978-84-8086-461-9.