



IDENTIFYING DATA

Research methodology in health sciences

Subject	Research methodology in health sciences			
Code	P05G171V01415			
Study programme	Grado en Fisioterapia			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	9	Mandatory	4th	1st
Teaching language	Spanish Galician			
Department				
Coordinator	González Represas, Alicia García Soidan, María del Pilar Hortensia			
Lecturers	García Soidan, María del Pilar Hortensia			
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General description	This subject has a strong instrumental character, being closely linked to the end-of-degree project. Its location in the curriculum favors this objective. Research methods and models are relevant in the field of Physiotherapy for professional practice, regarding the quantitative and qualitative analysis of information. In addition, they provide basic tools to understand aspects of research in Physiotherapy. The lecturers of this subject belong to the Department of Functional Biology and Health Sciences and the Department of Statistics and OR			

Training and Learning Results

Code	
A2	Students are able to apply their knowledge to their work or vocation in a professional manner and possess the competences usually demonstrated through the development and defence of arguments and problem solving within their field of study.
A4	Que los estudiantes puedan transmitir información, ideas, problemas y soluciones a un público tanto especializado como no especializado
A5	Students are able to convey information, ideas, problems and solutions to both specialist and non-specialist audiences.
B4	Acquire basic scientific training in research.
C32	Incorporate scientific research and evidence-based practice as a professional culture.
D1	Ability to communicate orally and in writing in Galician.
D2	Computer skills related to the field of study

Expected results from this subject

Expected results from this subject	Training and Learning Results			
	A2	B4	C32	D1
Students are able to apply their knowledge to their work or vocation in a professional manner and possess the competences usually demonstrated through the development and defence of arguments and problem solving within their field of study.	A4			D2
That students have developed those learning skills necessary to undertake further studies with a high degree of autonomy.	A5			
Acquire basic scientific training in research.				
Incorporate scientific research and evidence-based practice as a professional culture.				
Ability to communicate orally and in writing in Galician.				
Computer skills related to the field of study				

Contents

Topic	
Unit 1. Scientific research method in health sciences.	Subtopic 1.1 Scientific research in health sciences. Subtopic 1.2 Types of studies. Subtopic 1.3 Methodological quality and documentation sources.

Unit 2. Elaboration of the research framework.	Subtopic 2.1 The research process: stages of the process. The theoretical framework. Elaboration of the report. Subtheme 2.2 Documentation sources: searches and retrieval of scientific information.
Unit 3. Quantitative research methods and models I: descriptive treatment of data.	Subtopic 3.1 One-dimensional exploratory analysis: tables, graphs and descriptive measures. Subtopic 3.2 Two-dimensional exploratory analysis: measures of association, covariance and linear correlation.
Unit 4. Methods and models of quantitative research II: inferential treatment of data.	Subtopic 4.1 Introduction to inference. The normal variable. Inference methods. Subtopic 4.2 Contrasts of hypotheses: parametric and non-parametric tests.
Unit 5. Methods and models of qualitative research.	Subtopic 5.1 Culitative methodology in health sciences. Subtopic 5.2. Design of qualitative studies.

Planning

	Class hours	Hours outside the classroom	Total hours
Introductory activities	2	0	2
Lecturing	43	30	73
Practices through ICT	17	34	51
Laboratory practical	15	30	45
Essay	1.5	15	16.5
Essay questions exam	1.5	18	19.5
Objective questions exam	0	18	18

*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies

	Description
Introductory activities	Activities aimed at making contact and gathering information about the students, as well as presenting the subject.
Lecturing	The teaching staff explains the theoretical foundations and application exercises in lectures.
Practices through ICT	O alumnado resolve exercicios prácticos nestas clases interactivas sobre a búsqueda de información científica, a calidade metodolóxica dos estudos, a elaboración do marco teórico, etc., coa axuda do profesorado.
Laboratory practical	In these interactive classes, the students face the solution of practical problems of obtaining data and analyzing information with quantitative methodology, using computer programs (Google Forms and RCommander) and with the help of the teachers.

Personalized assistance

Methodologies	Description
Practices through ICT	Resolution of students' doubts about the content worked on in these interactive classes. Each student must request personalized attention through tutoring as indicated in the evaluation section.
Lecturing	Resolution of students' doubts about the content worked on in these interactive classes. Each student must request personalized attention through tutoring as indicated in the evaluation section.indicates in the section of evaluation.
Laboratory practical	Resolution of students' doubts about the content worked on in these interactive classes. Each student must request personalized attention through tutoring as indicated in the evaluation section.
Tests	Description
Essay	Resolution of doubts and follow-up of the work developed by the students autonomously, as a complement to the practical classes. Each student must request personalized attention through tutoring as indicated in the evaluation section.

Assessment

	Description	Qualification	Training and Learning Results
Practices through ICT	Each student will have to resolve of face-to-face form in the classroom the exercises that propose in these interactive classes and will have to do the delivery in the term that indicate him .	15	B4 C32 D2
Laboratory practical	Each student will have to resolve of face-to-face form in the classroom the exercises that propose in these interactive classes and will have to do the delivery of this practice before the end of the class.	25	B4 D2

Essay	The students will have to elaborate a work in group and will have to deliver it in the term that establish inside the period of face-to-face teaching. Besides, each group will have to do the defence of the work in the date established for this end inside the educational period.	10	A2 A4 A5	D1
Essay questions exam	Examination in which the students will show his command of the concepts and technical studied in the sessions corresponding to the subjects 1-3, through the resolution of the questions and exercises that are proposed.	30	A2 B4 A5	
Objective questions exam	Examination in which the students will show his command of the concepts and technical studied in the sessions corresponding to the subjects 4-5, through the resolution of the objective questions that are proposed.	20	A5 B4 C32	

Other comments on the Evaluation

The teaching guide for this subject will follow what is established in the "REGULATION ON THE EVALUATION, QUALIFICATION AND QUALITY OF TEACHING AND THE STUDENT LEARNING PROCESS" (approved in the cloister of April 18, 2023), as well as the specific adaptations for the Degree in Physiotherapy determined by the Center Board.

To request personalized attention through tutoring, the student must send a message by email to the teacher, with the subject "Tutoring". The teacher will also indicate the date and time assigned to the requested tutoring by means of an e-mail message.

The use of headphones or devices with internet access will not be allowed in the examinations of this subject. Programmable calculators, or calculators with graphic capability, may also not be used.

The Moovi platform will provide information on the tutorials, the exams/assessment tests and the content of this subject. It is the responsibility of each student to access the aforementioned information, as well as to collect all that specific and complementary information that is necessary to pass the subject.

Two assessment systems are established for the first opportunity: continuous assessment and global assessment. The default assessment for each student, at the first opportunity for this subject, is continuous assessment. In order for a student to be able to opt for the global assessment in this subject at the first opportunity, they must renounce the continuous assessment system in this subject and adhere to the global assessment system in this subject, in accordance with the procedure and deadlines established by the center.

The assessment for each student, in the second opportunity and in the end-of-career call for this subject, will be done through a global assessment.

A) First chance

A1) Continuous assessment (100%): If you do not waive the continuous assessment, the student must complete the activities and tests indicated below:

- Practices through ICT: They will have a total weight of 15% in the final mark of the subject. Each student must solve the exercises proposed in these interactive classes in person in the classroom and must hand them in within the deadline indicated. In the event that a student does not attend at least 50% of the hours allocated to this activity or does not achieve a rating of at least 5 points out of 10 in this activity, he/she must make up for it through an exam that will be held on the date that is established for this subject in the official examination calendar for this call.

- Laboratory practical: They will have a total weight of 25% in the final grade of the subject. Each student must solve the exercises proposed in these interactive classes in person in the classroom and must hand in this practice before the end of the class. In the event that a student does not attend at least 50% of the hours allocated to this activity or does not achieve a rating of at least 5 points out of 10 in this activity, he/she must make up for it through an exam that will be held on the date that is established for this subject in the official examination calendar for this call.

- Essay: It will have a total weight of 10% in the final grade of the subject. The students must prepare a group project and must submit it within the deadline established within the face-to-face teaching period. In addition, each group must defend the work on the date that the teaching staff establishes for this purpose within the teaching period.

- Essay questions exam: It will have a total weight of 30% in the final mark of the subject. In this exam, the student will demonstrate his mastery of the concepts and techniques studied in the lectures corresponding to subjects 1-3, through the resolution of the questions and exercises that are proposed. It will be held in a class session of this subject. In the event that a student does not achieve a minimum score of 5 points out of 10 in this exam, they must make up for it through the exam that will be held on the date established for this subject in the official exam calendar for this call.

- Objective questions exam: It will have a total weight of 20% in the final mark of the subject. In this exam, the student will show his/her mastery of the concepts and techniques studied in the lectures corresponding to subjects 4-5, through the

resolution of the objective questions that are proposed. This exam will be held on the date established for this subject in the official exam calendar for this call.

Observations on continuous assessment: In order for a student to pass this subject through continuous assessment in this call, he/she must obtain at least 5 points out of 10 in the final grade of this subject in this call, applying the weights indicated. In addition, you must achieve a minimum grade of 5 points out of 10 in the exam corresponding to the content of subjects 1-3 and also a minimum grade of 5 points out of 10 in the exam corresponding to the content that of topics 4-5. If the grade of any of these exams is lower than 5 points out of 10, the student's final grade in this call will be the minimum value of the grades of these exams.

A2) Global assessment (100%): The student must take the tests and exams indicated below:

- Test of solving exercises related to practices through ICT: They will have a total weight of 20% in the final mark of the subject. The student will take a test in which he must solve the exercises that are proposed on the content worked on in the interactive classes dedicated to practices through ICT. This test will be held on the date established for this subject in the official examination calendar for this call.

- Test of resolution of exercises related to laboratory practical: They will have a total weight of 30% in the final grade of the subject. The student will take a test in which he must solve the exercises that are proposed on the content worked on in the interactive classes dedicated to laboratory practical. This test will be held on the date established for this subject in the official examination calendar for this call.

- Objective questions exam 1: It will have a weight of 30% in the final mark of the subject. The student must solve the objective questions that are proposed in this exam, related to the theory content and exercises of subjects 1-3. This exam will be held on the date established in the official exam calendar for this call.

- Objective questions exam 2: It will have a weight of 20% in the final mark of the subject. The student must solve the objective questions that are proposed in this exam, related to the theory content and exercises of subjects 4-5. This exam will be held on the date established in the official exam calendar for this call.

Observations on the overall assessment: In order for a student to pass this subject through the overall assessment in this call, he/she must obtain at least 5 points out of 10 in the final grade of this subject in this call, applying the weights indicated. In addition, you must achieve a minimum grade of 5 points out of 10 in the exam corresponding to the content of topics 1-3 and also a minimum grade of 5 points out of 10 in the exam corresponding to the content of topics 4-5. If the grade of one of these two exams is lower than 5 points out of 10, the student's final grade in this call will be the minimum value of the grades of these exams.

B) Second chance and end of career: The same criteria will be used as in the overall evaluation of the first chance.

Sources of information

Basic Bibliography

Bayarre Vea H. Hosford Saing R., **Métodos y técnicas aplicadas a la investigación en atención primaria de salud.**, La Habana: Infomed, 2019

Berenguera A, Fernández de Sanmamed MJ, Pons M, Pujol E, Rodríguez D., **Escuchar, observar y comprender. Recuperando la narrativa en las ciencias de la Salud. Aportaciones de la investigación cualitativa**, Institut Universitari d'Investigació en Atenció Pr, 2014

Moriña D., **Introducción a la estadística para ciencias de la salud con R-Commander**, Barcelona: Universitat Autònoma de Barcelona, 2016

Pardo Fernández J.C., **Bioestadística para a enxeñaría biomédica**, Vigo: Universidade de Vigo, 2023

Complementary Bibliography

Argimón Pallás J.M., Jiménez Villa J., **Métodos de investigación clínica y epidemiológica**, 2nd, Barcelona: Ed. Harcourt S.A., 2013

Bowling A., **Research methods in health**, 4th, Open University Press, 2014

Hulley S.B., Cummings, S.R. et al., **Design clinical research**, 4th, Ed. Harcourt S.A., 2013

Tejero González J., **Técnicas de investigación cualitativa en los ámbitos sanitario y sociosanitario**, Cuenca: Universidad de Castilla-La Mancha, 2021

Vitale R., Hermenegildo Caudevilla M., Ferrer Riquelme A.J., **Estadística aplicada al ámbito sanitario**, Valencia: Universitat Politècnica de València, 2022

Recommendations

Subjects that continue the syllabus

Final Year Dissertation/P05G171V01991

