1. CORE DATA

Subject	Health Research I
Graduate Degree	Bachelor's Degree in Physiotherapy
School/Faculty	Physical Activity and Sport Sciences and Physiotherapy
Year	First
ECTS	3 ECTS (75 hours)
Type	Compulsory
Language/s	English/French/Spanish/English
Modality	On-campus attendance
Semester	Second Term
Academic year	2024/2025
Coordinating teacher	Loles Sosa Reina

2. INTRODUCTION

Research in Health I is a subject in the First term of the Bachelor's Degree in Physiotherapy and is taught in the Second Term. It has a value of 3 ECTS and is a Compulsory subject within the Qualification. This Subject develops a first approach of the student to the vision of the world of Physiotherapy from a scientific clinical perspective. It has the further goal of building a bridge between scientific knowledge and professional practice that will lead students to a global professional and personal improvement. This goal will be achieved through the development of the Competencies that will be detailed later on.
In order to achieve its objectives, this course includes three fundamental topics in its Contents: A review of the fundamental principles of clinical research, an introduction to the different research designs and a presentation of the process of searching for scientific information in the databases constructed for this purpose.
The ECTS of this course includes lectures, Practical seminars, Oral presentations of assignments, research and projects, debates, tutorials and Self-study hours.

3. KNOWLEDGE, SKILLS AND COMPETENCIES

Knowledge:
CON4. Identify the scientific method as a basis of knowledge.

- Identify the Core concepts of the Scientific Method in Health Sciences.

Skills:
HAB4. Apply the scientific method as the basis of the therapeutic approach.

- Use the main bibliography databases to search for scientific documentation.
- Select items of interest from the available documentation

Competencies:

- COMP 10. Participate in the development of physiotherapy care protocols based on scientific evidence, promoting professional activities that stimulate research in physiotherapy.
- Incorporate research and lifelong learning into professional practice by using the best available evidence, formulating questions from practice, informing and designing research projects.

- COMP 14. Communicate effectively and clearly, both orally and in writing, with users of the health system as well as with other professionals.
- COMP 24. Transmit messages (ideas, concepts, feelings, arguments), both orally and in writing, strategically aligning the interests of the different agents involved in communication in the academic and professional environment.
- COMP 28. Integrate analysis with critical thinking in a process of assessment of different professional ideas or possibilities and their potential for error, based on objective evidence and data, leading to effective and valid decision-making.
- COMP 30. Show ethical behaviour and social commitment in the performance of the activities of a profession, as well as sensitivity to inequality and diversity.

4. CONTENTS

The subject of Research Methodology and Clinical Documentation is organised into three learning units. Each learning unit is further divided into topics:

Unit 1: Methodology of Health Sciences Research.
THEME 1: Research in Health Sciences

1.1. Historical development of science, the scientific method and general principles of research in health sciences.
1.2. Errors in research. Internal and external validity
1.3. Formulation of a research problem: Research question, hypotheses and objectives
1.4. Variables according to the Methodological perspective. collection techniques
1.5. Validity and reliability of methods
1.6. Ethical aspects of research

THEME 2: Study Strategies and Designs

2.1. Research strategies and characteristics: experimental and quasi-experimental observational studies
2.2. Cross-curricular study design
2.3. study design
2.4. Design of studies
2.5. Randomised controlled trial (RCT design
2.6. Qualitative research designs
2.7. The systematic review and design of other analyses

Unit 3: Physiotherapy practice
Evidence in Therapy

3.1. Scientific Communication
3.2. Bibliography databases in the field of Health Sciences
3.3. Search strategies in biomedical research
3.4. The scientific article: types and
3.5. Bibliography references. Reference management software. style
3.6. Assessment of the quality of scientific articles and journals
3.7. Scientific evidence in practice
3.8. Practice Guidelines

5. METHODOLOGICAL D OCENTS

The following are the types of Teaching-Learning methods to be applied:

- Masterclass.
- Project-based learning.

6. LEARNING ACTIVITIES

The following identifies the types of Learning activities to be carried out and the student's dedication in hours to each of them:

On-campus delivery:

Learning activity	Number of hours
Masterclasses	12
Practical seminars	3
Oral presentations of assignments	1
Research and projects	20
Self-study	28
Debates and panel discussions	4
Tutorials	6
On-campus Face-to face assessment tests	1
TOTAL	75

Activity 1a. Bibliography Review:

- Group elaboration of a bibliography review of the scientific literature on a specific topic within the field of physiotherapy.
- Exhaustive Bibliography search in relevant scientific databases, such as PubMed, Scopus, or Web of Science, among others. An effective search strategy should be developed and applied, including the use of appropriate keywords, filters and inclusion and exclusion criteria.
- Identification, selection and critical analysis of scientific articles relevant to your topic,
- Writing a detailed written paper including: introduction to the topic, objective, search methodology and selection of articles, qualitative synthesis of the results and Bibliography.

Activity 1b. Professional environments

- Oral defence of the content of Activity 1a with a poster presentation in the simulated environment of a physiotherapy scientific congress.

Activity 2. Designing different types of studies from a Core idea

- Design and planning of different types of studies from a given context by the teaching team.
- Answer the multiple choice questions that will be asked on the online campus.

Activity 3. Analysis of a scientific article:

- In-depth reading of different scientific articles
- Methodological analysis of these using the corresponding check-lists.

- Extraction of information to answer the questions posed in the activity posted on the Virtual Campus.

Activity 4. Assessment of the Methodological Quality of a Randomised Controlled Clinical Trial

- In-depth reading of an RCT
- Assess the Methodological quality of the study using standardised tools.

Activity 5. Objective knowledge test:

- It will consist of two separate subtests, one with 16 multiple-choice questions and the other with 3 practical application exercises.
- The student may use the course material during the practical application test. They will not be able to make use of artificial intelligence.
- The multiple-choice subtest shall be taken without the aid of the teaching material.

7. ASSESSMENT

The following is a list of the Assessment systems and their weighting in the total grade for the course:

On-campus delivery:

Assessment systems	Weight
On-campus Face-to face assessment tests	50%
Oral presentations	5%
Research and projects	45%

On the Virtual Campus, students can consult in detail the Assessment activities to be carried out, as well as the deadlines and assessment procedures for each of them.

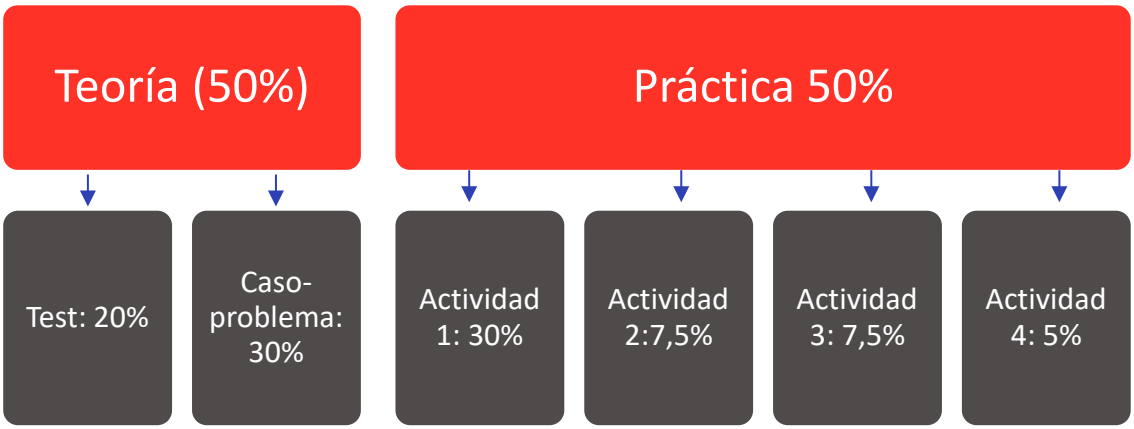
7.1. Ordinary Exam period

In order to be eligible for the Ordinary Exam period, students must attend at least 50% of the classes. Assessment of the course will be continuous and will combine three types of elements: On-campus Face-to face assessment tests, Oral presentations and research and projects.

Block I. Theoretical knowledge.
The assessment of theoretical knowledge will be carried out by means of a test made up of two sub-sections, which will represent 50% of the final mark for the course. A mark of 5.0 out of 10 or higher is required to pass this block.

Block II: Oral presentation, research and projects.
As for the rest of the activities, they will represent 50% of the final mark for the course, distributed as follows: Activity 1a: Written report 20%, Activity 1b: Oral presentation 10%, Activity 2: 7.5%, Activity 3: 7.5% , Activity 4: 5%. A mark of 5.0 out of 10 or higher is required to pass this block.

The Subject is passed in the Ordinary Exam period as long as there is a minimum mark in each of the blocks (I and II) equal to or higher than 5.0 out of 10, not being able to compensate the mark of each of the parts with that of the other. Students who have at least a 5.0 in one of the parts (theoretical or practical) and do not pass the other, must take only the part not passed in the Extraordinary exam period.



Given that one of the objectives of this course is to familiarise the student with the discipline that governs the scientific method, failure to comply with the deadlines and/or forms of delivery of the activities will result in the non-assessment of these, being graded with a 0 or with an NP (not presented).

Students are also reminded that, according to the disciplinary regulations of the Universidad Europea, it is considered a very serious offence to "plagiarise, in whole or in part, intellectual works of any kind" (Article 5, h), with the following sanctions: "Very serious offences relating to plagiarism and the use of fraudulent means to pass assessment tests will result in the loss of the corresponding call for entries, as well as the reflection of the offence and the reason for it in the academic transcript" (Article 8, 3).

7.2. Extraordinary exam period

The course is passed in the Extraordinary exam period as long as there is a minimum grade in each of the Blocks (I and II) of 5.0 out of 10, not being able to compensate the grade of each of the blocks with that of the other. In order to pass the Subject in the Extraordinary exam period it is necessary to obtain a grade higher or equal to 5.0 out of 10 in the final grade of the course.

Students who have obtained at least a 5.0 in one of the blocks (I and II) in the Ordinary Exam period, will only have to take the part not passed in the Extraordinary Exam period.

If you have not passed the practical part in the Ordinary Exam period, you must submit the Activity proposed by the teaching team in the Extraordinary Exam period. You will find information about it on the online Virtual Campus in the section Extraordinary exam period.

In the Extraordinary exam period each of the parts will have the same weight (theoretical/practical: 50%/50%) but the activities will be individual.

8. TIMELINE

This section shows the Timeline with dates for the delivery of Assessable activities of the course:

Assessable activities	Date
Activity 1a. Literature Review	Week 2-18
Activity 1b. Professional environments	Week 18
Activity 2. Study design	Week 10
Activity 3. Analysis of a scientific article	Week 11
Activity 4: Assessment of the Methodological Quality of an RCT	Week 15
Objective knowledge test	Week 19

This Timeline may be subject to modifications due to logistical reasons for the activities. Any modification will be notified to the student in due time and form.

9. BIBLIOGRAPHY

Recommended Bibliography is given below:

- Argimon, J. and Jimenez, J. (2010): Clinical and epidemiological research methods. Barcelona:
- Littlewood, C., & May, S. (2014). Understanding physiotherapy research. Cambridge Scholars Publishing.evier.
- Ramalingam, T. A., & Kumar, S. N. (2018). Essentials of research methodology for all physiotherapy and Allied Health Sciences Students. Jaypee Brothers Medical Publishers.
- Caceres, R. (2007): Estadística aplicada a las ciencias de la salud. Madrid: Díaz de Santos.
- Hulley, S. B. et all (2007): Designing Clinical Research (Third Edition). Philadelphia: Lippincott Williams & Wilkins.

10. EDUCATIONAL GUIDANCE, DIVERSITY AND INCLUSION UNIT

From the Educational Guidance, Diversity and Inclusion Unit (ODI) we offer support to our students throughout their university life to help them achieve their academic achievements.Other pillars of our action are the inclusion of students with specific educational support needs, universal accessibility in the different campuses of the university and equal opportunities.
This unit offers students:

1. Accompaniment and follow-up through counselling and personalised plans for students who need to improve their academic performance.

2. In the subject of attention to diversity, non-significant curricular adjustments are made, i.e. in terms of Methodological and Assessment, for those students with specific educational support needs, thus pursuing equal opportunities for all students.
3. We offer students different extracurricular training resources to develop various Competencies that will enrich their personal and professional development.
4. Vocational guidance through the provision of tools and counselling to students with vocational doubts or who believe they have made a mistake in their choice of Degree.

Students in need of educational support can write to us at:
orientacioneducativa@universidadeuropea.es

11. SATISFACTION SURVEYS

Your opinion matters!

Universidad Europea encourages you to participate in the Satisfaction Surveys to detect strengths and areas for improvement in the teaching staff, the Qualification and the teaching-learning process.

Surveys will be available in the survey area of your online campus or through your email.

Your feedback is needed to improve the quality of the Degree.

Thank you very much for your participation.