1. BASIC INFORMATION

Course	Specific Physiotherapy Techniques II
Degree program	Bachelor's Degree in Physiotherapy
School	Physical Activity and Sports Science & Physiotherapy
Year	2nd
ECTS	6 ECTS
Credit type	Compulsory
Language(s)	Spanish / French / English
Delivery mode	On campus
Semester	Second semester
Academic year	2024/2025
Coordinating professor	Guillermo García Pérez de Sevilla

2. PRESENTATION

Specific Physiotherapy Techniques II is a subject area taught in the second semester of the second year of the Bachelor's Degree in Physiotherapy. It is worth 6 ECTS credits and is a compulsory subject area within the degree.

It is a step forward in the student's learning of physiotherapy techniques. After having completed the subject area Specific Physiotherapy Techniques I, the student continues to build their skills by learning new concepts and advanced techniques.

This subject area provides students with specific tools that they will use every day in the professional world, and also introduces them to the latest scientific evidence in physiotherapy.

3. COMPETENCIES AND LEARNING OUTCOMES

Core competencies:

- CB1: Students have shown their knowledge and understanding of a study area that builds on general secondary school education, and are usually at the level where, with the support of more advanced textbooks, they may also demonstrate awareness of the latest developments in their field of study.
- CB2: Students know how to apply their knowledge to their work or vocation professionally and have the skills that are usually demonstrated by forming and defending opinions and solving problems within their study area.

- CB3: Students have the ability to gather and interpret relevant data (normally within their area of study) to form opinions which include reflecting on relevant social, scientific or ethical matters.
- CB4: Students can convey information, ideas, problems and solutions to both specialist and non-specialist audiences.
- CB5: Students have developed the necessary learning skills to undertake further studies with a high degree of independence.

Cross-curricular competencies:

- CT1: Decision making.
- CT2: Problem solving.
- CT3: Organisational and planning skills.
- CT4: Analysis and synthesis skills.
- CT5: Oral and written communication in native language.
- CT10: Teamwork.
- CT13: Critical reasoning.

Specific competencies:

- CE116: Acquire the knowledge needed to apply the physiotherapy techniques taught in the subject area.
- CE117: Acquire the ability to use the physiotherapy techniques taught in the subject area.
- CE118: Become familiar with the assessment tests designed to determine the patient's functional status.
- CE119: Acquire the ability to teach patients how to prevent injuries.

Learning outcomes:

- RA1: Understanding of the key concepts related to the subject matter.
- RA2: Progress with regard to students' professional skills in preparing a treatment protocol using the techniques acquired from the classes on this topic.
- RA3: Ability to carry out in-depth analysis and syntheses based on research using the fundamental bibliographical sources related to the subject matter.

The following table shows how the skills developed in the subject area relate to the intended learning outcomes:

The following table shows the relationship between the competencies developed during the course and the learning outcomes pursued:

Competencies	Learning outcomes
CB1, CB2, CB3, CB4, CB5, CT4, CT5, CT13, CE 116, CE117, CE118	RA1: Understanding of the key concepts related to the subject matter.
CB1, CB2, CB3, CB4, CB5, CT1, CT2, CT3, CT10, CT13, CE 116, CE117, CE118, CE119,	RA2: Progress with regard to students' professional skills in preparing a treatment protocol using the techniques acquired from the classes on this topic.
CB1, CB2, CB3, CB4, CB5, CT2, CT4, CT5, CT13, CE 116, CE118,	RA3: Ability to carry out in-depth analysis and syntheses based on research using the fundamental bibliographical sources related to the subject matter.

4. CONTENT

Learning Unit 1:

Topic I. Prescription of muscular strength exercises in physiotherapy

1. Muscle strength assessment
2. Positive effects of strength training on health
3. Prescription of strength training

Learning Unit 2:

Topic II. Introduction to Cardiac Rehabilitation

1. Prescription of aerobic exercise
2. Physiological adaptations
3. Indications and phases
4. Assessment of functional ability
5. Cardiovascular risk stratification

Learning Unit 3:

Topic III. Targeted muscle and tendon stretching techniques in physiotherapy and functional assessment.

1. Elasticity, extensibility and flexibility
2. Soft tissue anatomy, biomechanics and neurophysiology. Mechanoreceptors involved in targeted muscle and tendon stretching
3. Factors affecting flexibility: Effects of injury and immobility on muscles and muscle function
4. Muscle assessment
5. Scientific evidence, effects and objectives of the use of targeted muscle and tendon stretching
6. Applying scientific evidence to targeted muscle and tendon stretching
7. Types of targeted muscle and tendon stretching & princ. of application
8. Risks, indications and contraindications of targeted muscle and tendon stretching

Learning Unit 4:

Topic IV. Neurophysiological effects of motor control, PNF, and sensory & perceptual motor re-education

1. Sensory information
2. Motor control
3. Proprioceptive Neuromuscular Facilitation
4. Sensory and Perceptual Motor Re-education

5. TEACHING-LEARNING METHODOLOGIES

The types of teaching-learning methodologies used are indicated below:

- Lecture.
- Simulation environments.
- Collaborative learning.
- Independent learning.
- Dialogic learning.
- Problem-based learning through clinical case studies.

6. LEARNING ACTIVITIES

Listed below are the types of learning activities and the number of hours the student will spend on each one:

Campus-based mode:

Learning activity	Number of hours
Lectures	15
Independent learning	50
Classroom practicals	30
Case studies	20
Tutorials	5
Practical exercises	10
Scientific projects	20
TOTAL	**150**

7. ASSESSMENT

Listed below are the assessment systems used and the weight each one carries towards the final course grade:

Campus-based mode:

Assessment system	Weight
Learning folder	15%
Theoretical knowledge tests	50%
Practical knowledge tests	35%

When you access the course on the *Campus Virtual*, you'll find a description of the assessment activities you have to complete, as well as the delivery deadline and assessment procedure for each one.

Ordinary exam period

The assessment includes different types of tests with various sections:

1. Practical (35%):
   - 1 practical assessment test for stretching (15%) minimum grade of 5 required
   - 1 practical assessment test for PNF and sensory & perceptual motor re-education (20%) minimum grade of 4 required to be averaged with the grade for exercises

2. Exercises (15%): grade averages with PNF and sensory & perceptual motor re-education practical exams
   - Strength exercise (5%)
   - Strength exercise (10%)

3. Theory (20%):
   - 1 test with multiple-choice questions (20%)

4. Clinical case study (30%)
   - Solve a clinical case study according to hypothesis categories

The student must pass each one of the following sections with a minimum grade of 5 out of 10, to be averaged out with the others:

- Practical stretching exam
- Block of practical exams for PNF, sensory & perceptual motor re-education and the two exercises.
- Clinical case studies block
- Theory exam

The final average grade will be calculated as the arithmetic average of the different sections according to the percentages indicated. If the final grade for any of the above sections does not reach at least 5 out of 10, the student's final grade will be a Fail and the arithmetic average grade cannot be calculated.

Once a section has been passed by means of continuous assessment, the student will not need to

resit that section again in the ordinary exam period.

Extraordinary exam period (resits)

To pass the subject area in the extraordinary exam period, students will only have to resit the tests for the relevant section in which they failed to achieve a grade of at least 5 out of 10 in the ordinary exam period.

8. SCHEDULE

This table shows the delivery deadline for each assessable activity in the course:

Assessable activities	Deadline
Task 1. Practical stretching exam	Week 9
Task 2. Strength exercise	Week 11
Task 3. Proprioception exercise	Week 16
Task 4. PNF and sensory & perceptual motor re-education practical exam	Week 16
Task 5. Clinical case study 2	Week 17
Task 6. Theory exam	Weeks 17-18

This schedule may be subject to changes for logistical reasons relating to the activities. The student will be notified of any change as and when appropriate.

9. BIBLIOGRAPHY

The main reference work for this subject is:

- PRENTICE WE, **Técnicas de rehabilitación en medicina deportiva**, Barcelona, Ed. Paidotribo; 2001

The recommended Bibliography is:

- MC ARDLE WD ET AL, **Fundamentos de Fisiología del ejercicio.** 2ª ed. Madrid: McGraw-Hill.Interamericana; 2004
- LOPEZ CHICHARRO J, FERNANDEZ VAQUERO A. **Fisiología del ejercicio.** 3ª ed. Madrid: Panamericana; 2006
- E. VOSS, **Facilitación Neuromuscular Propioceptiva**, Panamericana
- J. PEISSIER, V. BRUN, L. SIMON, La **Rééducation Propioceptive**, Masson.
- VOIGHT ML, HOOGENBOOM BJ, PRENTICE WE, **Musculoeskeletal Interventions. Thechniques for Therapeutc Exercise**, USA, Ed. Mc Graw Hill, 2007
- TREW M, EVERETT T. **Fundamentos del movimiento humano**. 5ª ed. Barcelona: Elsevier; 2006
- ESNAULT M, VIEL E, **Estiramientos Analíticos en Fisioterapia Activa**, Masson.

- ESNAULT M, VIEL E, **Streching (estiramientos miotendinosos)**, Masson.
- HOLT EL. **Flexibility: A Concise Guide**. New Jersey: Ed. Humana Press; 2008. JURADO A, MEDINA I, **Tendón. Valoración y tratamiento en fisioterapia.** 1a ed. Barcelona: Paidotribo; 2008.
- LIEBER RL. **Estructura del músculo esquelético, función y plasticidad**. Bases fisiológicas de la Fisioterapia. Madrid: Ed. McGraw-Hill-Interamericana; 2004.
- PRENTICE WE, **Técnicas de rehabilitación en medicina deportiva**, Barcelona, Ed. Paidotribo; 2001

- YLINEN J, **Estiramientos Terapéuticos en el deporte y en las terapias manuales**, Elsevier; 2009

10. EDUCATIONAL GUIDANCE, DIVERSITY AND INCLUSION UNIT

From the Educational Guidance, Diversity and Inclusion Unit we offer support to our students throughout their university life to help them reach their academic achievements. Other main actions are the students inclusions with specific educational needs, universal accessibility on the different campuses of the university and equal opportunities.

From this unit we offer to our students:

1. Accompaniment and follow-up by means of counselling and personalized plans for students who need to improve their academic performance.
2. In terms of attention to diversity, non-significant curricular adjustments are made in terms of methodology and assessment for those students with specific educational needs, pursuing an equal opportunities for all students.
3. We offer students different extracurricular resources to develop different competences that will encourage 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. ONLINE SURVEYS

Your opinion matters!

The Universidad Europea encourages you to participate in several surveys which help identify the strengths and areas we need to improve regarding professors, degree programs and the teaching-learning process.

The surveys will be made available in the “surveys” section in virtual campus or via e-mail.

Your assessment is necessary for us to improve.

Thank you very much for your participation.