1. BASIC DATA

Subject	ORTHOPEDIC MANUAL THERAPY 3: DIAGNOSIS, EXAMINATION AND TREATMENT OF THE SPINE AND EXTREMITIES
Titration	BACHELOR'S DEGREE IN PHYSIOTHERAPY
School/ Faculty	PHYSICAL ACTIVITY SCIENCES, SPORTS AND PHYSIOTHERAPY
Course	2024-2025
ECTS	6 ETCS (150 HOURS)
Character	OPTIONAL
Language/s	SPANISH AND ENGLISH
Modality	FACE
Semester	THIRD TRIMESTER
Academic year	2024-2025
Coordinating Teacher	ALBERTO CARLOS MUÑOZ FERNÁNDEZ
Teacher	

2. PRESENTATION

The subject "Orthopaedic Manual Therapy III: exploration and treatment of regions from manual therapy", is part of the Manual Therapy itinerary, which offers students three optional subjects with a common thematic core.

It is the third of these three subjects, and is taken in the fourth year of the degree. The subject focuses on the exploration and treatment from Orthopaedic Manual Therapy that supports its application in neuromusculoskeletal problems.

3. COMPETENCIES AND LEARNING OUTCOMES

Core competencies:

- CB2: Students must know how to apply their knowledge to their work or vocation in a professional way and possess the competencies that are usually demonstrated through the elaboration and defense of arguments and problem solving within their area of study.
- CB3: Students must have the ability to gather and interpret relevant data (usually within their area of study) in order to make judgments that include reflection on relevant social, scientific or ethical issues.

- CB4: Students should be able to transmit information, ideas, problems and solutions to both a specialised and non-specialised audience.
- CB5: Students must have developed those learning skills necessary to undertake further studies with a high degree of autonomy

Transversal competences:

- TC 3: Organizational and Planning Capacity.
- TC 4: Ability to analyze and synthesize: Analysis is the method of reasoning that allows complex situations to be broken down into their constituent parts; it also allows other alternatives and perspectives to be evaluated with the aim of finding optimal solutions; Synthesis seeks to reduce complexity in the sense of improving understanding and/or solving problems.
- TC 6: Information Management Capacity
- TC 9: Ethical commitment
- TC 10: Work in a team.
- TC19: Autonomous Learning.

Specific competencies:

- CE 2: Ability to design interventions or pain treatment in Physiotherapy.
- CE 3: Ability to determine the physiotherapy diagnosis.
- CE 4: Ability to offer comprehensive and effective therapeutic care.
- CE 7: Ability to execute, direct and coordinate the physiotherapy intervention plan.
- CE 9: Ability to apply quality assurance mechanism in the practice of physiotherapy, in accordance with recognised validation criteria.
- CE 11: Ability to prepare the Physiotherapy discharge report.
- CE 20: Ability to maintain an attitude of learning and improvement.
- CE 27: Ability to work responsibly.

Learning outcomes:

- RA1: That the student is able to understand the fundamental contents related to the contents of the subject.
- RA2: That the student is able to make a specific diagnosis with manual therapy technique based on scientific evidence.
- RA3: Ability to assess the neurophysiological effects of manual therapy on the central and peripheral nervous system.
- RA4: That the student is able to carry out a specific treatment with manual therapy techniques based on scientific evidence.
- RA5: That the student is able to plan the specific objectives for the treatment.
- RA6: That the student is able to have knowledge of the functional implication that the injury has on the subject.

- RA7: That the student has the capacity to act based on compliance with the deontological obligations of the profession and criteria of norm praxis

The table below shows the relationship between the competencies developed in the subject and the learning outcomes that are pursued:

Competences	Learning Outcomes
CB2, CB3, CB4, CB5, CT3, CT4, CT6, CT9, CT12, CT19, CE2, CE3, CE4, CE5, CE7, CE9, CE11, CE20	RA1: That the student is able to understand the fundamental contents related to the contents of the subject.
CB2, CB3, CB4, CB5, CT3, CT4, CT6, CT19, CE2, CE3, CE4, CE5, CE7, CE9, CE11, CE20	• RA2: Understanding of the basic principles and methodology of the different clinical approaches from scientific evidence. • Basic principles of the methods of application of traction techniques. • Basic principles of the methods of application of manual techniques. • Basic principles of the methods of application of mobility techniques. • Basic principles of the methods of application of mobility techniques of physiological movements. • Basic principles of the methods of application of rhythmic oscillation techniques.
CB2, CB3, CB4, CB5, CT3, CT4, CT6, CT19, CE2, CE3, CE4, CE5, CE7, CE9, EC11, SG20	• RA3: That the student is able to perform a specific examination with manual therapy techniques based on scientific evidence.
CB2, CB3, CB4, CB5, CT3, CT4, CT6, CT19, CE2, CE3, CE4, CE5, CE7, CE9, CE11, CE20	• RA4: That the student is able to carry out a specific treatment with manual therapy techniques based on scientific evidence
CB2, CB3, CB4, CB5, CT3, CT4, CT6, CT19, CE2, CE3, CE4, CE5, CE7, CE9, EC11, SG20	• RA5: That the student is able to plan the specific objectives for the treatment.
CB2, CB3, CB4, CB5, CT3, CT4, CT6, CT19, CE2, CE3, CE4, CE5, CE7, CE9, EC11, SG20	• RA6: That the student has knowledge of the functional implication that the injury has on the subject
CB2, CB3, CB4, CB5, CT9, CE9, CE11,	• RA7: Ability to apply research methodology on musculoskeletal pain and motor control

4. CONTENTS

In this section, the contents of each of the Learning Units are indicated.

- UA1: Neurodinamia:
  - 1.- Neurodynamic test of the lower limb
  - 2.- Neurodynamic treatment.
- UA2: Scanning Procedure
  - 3.- Objective Hip Examination
  - 4.- Objective Knee Examination
  - 5.- Objective ankle/foot examination.
- UA3: Manual Therapy Treatment:
  - 6.- Manual Therapy in Hip.
  - 7. Manual Knee Therapy.
  - 8. Manual Therapy on Ankle/Foot.
- UA4: Orthopedic test
  - 09. Orthopedic Hip Test
  - 10 Orthopedic Knee Tests
  - 11 Ortopédicos Tobillo/pie test
- UA5: Clinical Reasoning and Decision Making in BMT
  - 12. The role of intuition.
  - 13. Advanced reasoning.
  - 14. Reflective Practice.
- UA6: Patient Management
  - 15. Patient Management

5. TEACHING-LEARNING METHODOLOGIES

The following are the types of teaching-learning methodologies that will be applied:

Learning Outcomes	Learning activity	Type of training activity	Contents
RA1, RA2, RA3, 4, RA6	Activity 1: Clinical Cases	Master Class Scientific Work Case Study Classroom Practice Self-Employment	UA1, UA2, UA3 y UA4
RA1, RA2, RA3, 4, RA6	Activity 2: Practical tests	Master Class Scientific Work Case Study Classroom Practice Self-Employment	UA1, UA2, UA3 y UA4
RA1, RA2, RA3, 4, RA6	Activity 3: Training in Clinical Reasoning	Master Class Scientific Work Case Study Classroom Practice Self-Employment	UA1, UA2, UA3 y UA4
RA1, RA2, RA3, 4, RA6	Activity 4: Clinical supervision	Master Class Scientific Work Case Study Classroom Practice Self-Employment	UA1, UA2, UA3 y UA4

Assessable Activity	Evaluation criteria	Weight (%)
Activity 1: Clinical case	Acquire and apply the theoretical skills necessary to guide the clinical case of a patient with musculoskeletal disorders from a theoretical and practical point of view.	10%
Activity 2: Practical tests	Acquire and apply the manual skills necessary to explore and treat patients with musculoskeletal disorders	40%
Activity 3: Training in Clinical Reasoning	Acquire and apply clinical reasoning skills to be able to make decisions correctly.	10%
Activity 4: Clinical Supervision	Apply clinical reasoning and decision-making skills with a patient and patient management through an encounter therapeutic	40%

6. TRAINING ACTIVITIES

The types of training activities that will be carried out and the student's dedication in hours to each of them are identified below:

Face-to-face modality:

Training activity	Number of hours
Case Study Analysis	10
Laboratory Practices	40
Master-class	15
Self-instruction	50
Scientific papers	25
Tutorials	10
TOTAL	**150 hours**

7. EVALUATION

This subject will be continuously evaluated with theoretical tests, with the performance of clinical simulation practices and teaching methodologies that will be carried out in the classroom and in the traditional and advanced simulator room during the first semester.

The evaluation system will be continuous so that the various learning activities are grouped into two general types of tests:

- Objective Tests: 60%
- Learning portfolio: 40%

The final grade of the course will be obtained from the sum of the grades obtained in the two sections mentioned above, provided that a minimum of
5.0 in each of the subsections of the two groups of tests.

Face-to-face modality:

Evaluation system	Weight
Clinical Case + HS	10%+10%
Practice	20%+20%
Clinical Supervision	40%

Evaluation of objective tests: This will be extracted from multiple-choice questions, short questions, clinical cases, practical tests, OSCE or any other test that serves to evaluate the practical and theoretical knowledge of the student; The subject included in this test must be passed with a grade equal to or higher than 5.0. If the grade obtained is less than 5.0, the student must take another objective test again

in the July exam, and this extraordinary test must be passed with a grade equal to or greater than 5.0 to pass the course.

Evaluation of the activities of the learning portfolio: it can be a portfolio of clinical cases, clinical patterns, summaries of practical tests or OSCE, reflection notebooks, preparation of materials, critical reading of articles or any other activity that serves to evaluate theoretical and practical knowledge of the subject, the subject included in this test must be passed with a grade equal to or greater than 5.0. If the grade obtained is less than 5.0, the student will have to take another objective test again in the extraordinary call in July. This extraordinary test must also be passed with a 5.0.

When you access the course on the virtual campus, you will find a description of the activities that you will have to complete, along with the deadlines for each of them.

7.1. Ordinary call

To pass the subject in the ordinary call, it is necessary to obtain a final grade equal to or greater than 5.0, which will result from the sum of the grades obtained in the different assessable activities, as long as the grade is greater than or equal to 5.0 out of 10.0 in each of the assessable activities of the subject.

7.2. Extraordinary call

To pass the subject in the extraordinary call, it is necessary to obtain a grade greater than or equal to 5.0 out of 10.0 in the final grade of the subject. In the event that there are deliverable activities that have not been submitted or not passed in the ordinary call, they must be submitted after having received the corresponding corrections from the teacher.

8. SCHEDULE

This section indicates the schedule with delivery dates of assessable activities of the subject:

Assessable activities	Date
Activity 1: Clinical Cases and HS	Week 2 & 8
Activity 2: Practical tests	Weeks 5 and 8
Activity 3: Clinical Supervision	Weeks 11-16

This schedule may be modified for logistical reasons of the activities. Any modification will be notified to the student in a timely manner.

9. BIBLIOGRAPHY

Recommended bibliography is indicated below:

- “23 and 1/2 hours: What is the single best thing we can do for our health?”
- [video] Canada: Michael Evans and Mercury Films Inc.; 2011.
- Banks, K 2010, *Maitland's clinical companion: an essential guide for students*, Churchill Livingstone/Elsevier, Edinburgh.
- Banks, K & Henveld, E 2005, *Maitland's peripheral manipulation*, 4th ed. edn, Elsevier/Butterworth Heinemann, Edinburgh.
- Banks, K & Henveld, E 2005, *Maitland's vertebral manipulation*, 4th ed. edn, Elsevier/Butterworth Heinemann, Edinburgh.
- Boyling, J and Jull G, (2005). *Grieve's Modern Manual Therapy*. *The Vertebral Column* 1st ed. Churchil Livingstone
- Butler, D 2000, *The sensitive nervous system*, NOI Publications, Adelaide
- Butler, D 2009, *Explain Pain*, Practical notes from *NOI Courses,* Universidad de Valencia, Valencia
- Butler, D 2009, *The sensitive nervous system*, Practical notes from *NOI Curses,*
- FORTEMA, Pontevedra
- Cleland, J (2011), *Netter's orthopaedic clinical examination: an evidence-based approach*, 2nd ed. / edn, Saunders/Elsevier, Philadelphia, Pa.
- García Sánchez PC, “23 and 1/2 Hours: What a PT could do to improve our patients general health” http://ed.ted.com/on/MgPm8FnB [web page] Spain: 2013
- "Fundamentals of Kinesitherapy", Chapter 03 in "Kinesitherapy. Physiological bases and practical application" Melián A, Ed. Elsevier; 2013
- García Sánchez PC and Hernando Rosado A, "Fundamentals of kinesitherapy", Chapter 03 in "Kinesitherapy. Physiological bases and practical application" Melián A, Ed. Elsevier; 2013
- Jones, M (2011). “CR Theory & Practice." Practical notes from *MPTP,* ICPY, UniSA, Adelaide
- Jones, M and Magarey, M (2011). “Subjective Assessment."
- Jones, N & Magarey, M (2011). “Neurodynamic assessment." Practical notes from *MPTP,* ICPY, UniSA, Adelaide
- Jones, M. A. (1992). "Clinical reasoning in manual therapy." *Physical Therapy.* 72(12): 875.
- Magarey, M (2011). “CR Theory & Practice." Practical notes from *MPTP,* ICPY, UniSA, Adelaide
- Schifferergger, E (2009). “Mobilization of the NS." Practical notes from *NOI Courses,* FORTEMA, Pontevedra
- “Understanding Pain in less than five minutes” [video] Australia: GP Access and Hunter Integrated Pain Service, NSW Goverment.; 2011

10. DIVERSITY CARE UNIT

Students with specific educational support needs:

Curricular adaptations or adjustments for students with specific educational support needs, in order to guarantee equity of opportunities, will be guided by the Diversity Attention Unit (UAD).

It will be an essential requirement to issue a report on curricular adaptations/adjustments by this Unit, so students with specific educational support needs must contact us through: unidad.diversidad@universidadeuropea.es at the beginning of each semester.

11. SATISFACTION SURVEYS

Your opinion matters!

The European University encourages you to participate in satisfaction surveys to detect strengths and areas for improvement in the teaching staff, the degree and the teaching-learning process.

The surveys will be available in the survey space of your virtual campus or through your email.

Your assessment is necessary to improve the quality of the degree.
Thank you very much for your participation.

WORK PLAN OF THE SUBJECT

HOW TO COMMUNICATE WITH YOUR TEACHER

When you have a question about the content or activities, don't forget to write it in the forums of your subject so that all your classmates can read it.

It's possible that someone has the same doubt as you!

If you have any questions exclusively addressed to the teacher, you can send them a private message from the Virtual Campus. In addition, in case you need to delve into a topic, you can arrange a tutorial.

It is advisable that you regularly read the messages sent by students and teachers, as they constitute another way of learning.

SCHEDULE OF ACTIVITIES

This section indicates the schedule of training activities, as well as the delivery dates of the assessable activities of the subject:

Week	Contents	Training/assessable activities	Weight in the evaluation of the assessable activity
9	Neurodynamics of the lower limb Neurological examination of the lower limb Objective examination and treatment of the hip	Practical Exam 1	20
16	Objective examination and treatment of the knee Objective examination and treatment of the ankle-foot	Practical Exam 2	20
15	Neurodynamics and lower limb examination	Clinical case 1	10
17	Simulated Hospital / Clinical Reasoning Training	HS	10
18	Neurodynamics Oscillatory Mobilizations Mobilizations with Movement Objective Hip Examination Knee Objective Examination Objective ankle-foot examination	Clinical supervision	40

This schedule may undergo modifications that will be notified to the student in a timely manner.

DESCRIPTION OF EVALUATION ACTIVITIES

Practical 1 and 2: In this test, the practical knowledge that has been acquired during the development of the practical classes will be evaluated. A clinical case will be presented, and the student will have to carry out a complete objective examination, arguing their decisions based on the clinical case presented. In the case of Practical 1, they will also ask about neurodynamic techniques that have been seen in class.

STUDENT PRACTICE (100 PTS)	**FEEDBACK**
Communication: (10 pts) • Presentation • Request for consent • Clarify doubts at the beginning and during execution • Explain what is going to be done before each event.	
Patient position: (10 pts) • General • Technique-specific	
Physiotherapist position: (10 pts) • Close to the patient • Use a chair, fulcrum, or towel if necessary. • Hand position to ensure patient safety at all times.	

Subjective + Objective: (35 + 35 marks) / Treatment: (70 pts)
Subjective:
• Ask questions about symptoms:
  ○ Rest, EVA
  ○ Ask where the symptoms go after each action.
• Add exam components
  ○ Order
  ○ Once per movement.
  ○ Is aware of previous findings and values new ones
• Evaluated Features
  ○ Interpretation
  ○ Questions to the student
Objective:
• Ask about symptoms:
  ○ Rest during, after, and between sets
• Treatment components (movements)
  ○ Order
  ○ Precision
  ○ Dosage
  ○ Using Plugins
  ○ Progression
  ○ Safety	

Security: (pass/fail) • Clothes, hands • Communication and orders. • General or patient-specific position • Management	

Clinical case 1: A clinical case will be presented in which the clinical situation of a patient with a certain symptomatic picture is presented. There will be 10 questions (1 point each) about symptoms, red flags, hypotheses and clinical reasoning.
Clinical Supervision: The student will have to carry out an internet search about a certain pathology and will have to describe the specific clinical pattern characteristic of that pathology.

	FROM 0 TO 5	5 TO 7.5	FROM 7.5 TO 10	Assessment
Teamwork	Your presence and contributions in the team are irrelevant	He is active at times, and tends to intervene at the request of others.	He is active in group meetings and his contributions are fundamental, improving the results of the group.	
Oral Presentation	The student does not communicate correctly. He does not demonstrate knowledge of the subject he is dealing with.	The student communicates well, but does not show knowledge of what is exposed and needs to read the presentation	The student communicates well and demonstrates in-depth knowledge of the subject of presentation	
Bibliographic references	The student does not refer to any source of scientific quality	The student only refers to half of the sources of scientific quality	The student refers only to sources of scientific quality	

Practice: This assessment is aimed at continuously evaluating the development of the student's attitude during the practical classes, the interest shown in learning, repetition of the techniques taught, etc.

	FROM 0 TO 5	5 TO 7.5	FROM 7.5 TO 10	Assessment
Technical and manual skills in the application of therapies	Is not able to carry out a large part of the techniques indicated in the process, due to lack of knowledge and/or skill	Perform most of the techniques proposed with skill and ergonomics.	Carry out all the techniques proposed with great skill, autonomy and ergonomics. Show interest in those they don't know.	
Class participation	He has no interest in applying and training the techniques shown in class.	He shows interest in the teacher's presentations, but does not make an effort to repeat the techniques correctly.	Shows interest in the teacher's presentations and strives to repeat the techniques correctly.	
Attendance	The student attends only the minimum required for the subject.	The student attends only 75% of the practical classes.	The student attends 100% of the practical classes.	

Simulated Hospital: The assessment of this activity will count as pass/fail depending on whether or not the student has attended the activity.

REGLAMENTO PLAGIO

In accordance with the Disciplinary Regulations for students of the European University:

- Plagiarism, in whole or in part, of intellectual works of any kind is considered a very serious offence.
- Very serious faults related to plagiarism and the use of fraudulent means to pass the assessment tests will result in the loss of the corresponding call, as well as the reflection of the fault and its reason, in the academic record.