Therapeutic Techniques in Physiotherapy of the Locomotor System

Code: 102979
ECTS Credits: 6

2025/2026

Degree	Type	Year
Physiotherapy	OB	2

Contact

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Teaching groups languages

You can view this information at the end of this document.

Prerequisites

There isn't any requirement to enrol in this subject.

The teaching team recommends that you have completed and achieved the following subjects: Human Anatomy I and II, Function of the Human Body, Biophysics and Biomechanics, Foundations of Physiotherapy, Scientific Methodology, Pathological Clinical Concepts and Clinical and Instrumental Evaluation in Physiotherapy of the Locomotor System

Objectives and Contextualisation

The subject of "Physiotherapy Therapeutics Techniques in Phyiotherapy of the Locomotor System" belongs to the group of subjects of Physiotherapy in Locomotor System Diseases. It starts in the second course of the Physiotherapy Degree.

The objectives of the subject:

- To learn the techniques of physiotherapy to apply to the patients.

- To acquire the necessary knowledge in physiotherapy in order to solve all types of clinic cases.

- To detect and to define which are the objectives of the treatment of physiotherapy.

- To learn how to plan the treatment of physiotherapy in the diseases of the locomotor system to succeed in the objectives of the treatment.

- To acquire the ethics and professionals values that are necessaries for the clinical practice.

Competences

- Act with ethical responsibility and respect for fundamental rights and duties, diversity and democratic values.
- Analyse and synthesise.
- Apply quality-assurance mechanisms in physiotherapy practice, in accordance with the recognised and validated criteria.
- Design the physiotherapy intervention plan in accordance with the criteria of appropriateness, validity and efficiency.
- Display critical reasoning skills.
- Display knowledge of the morphology, physiology, pathology and conduct of both healthy and sick people, in the natural and social environment.
- Display knowledge of the physiotherapy methods, procedures and interventions in clinical therapeutics.
- Evaluate the functional state of the patient, considering the physical, psychological and social aspects.
- Express ideas fluently, coherently and correctly, both orally and in writing.
- Integrate, through clinical experience, the ethical and professional values, knowledge, skills and attitudes of physiotherapy, in order to resolve specific clinical cases in the hospital and non-hospital environments, and primary and community care.
- Make a physiotherapy diagnosis applying internationally recognised norms and validation instruments.
- Make changes to methods and processes in the area of knowledge in order to provide innovative responses to society's needs and demands.
- Make the most correct decisions in given situations.
- Organise and plan.
- Participate in drawing up physiotherapy protocols on the basis of scientific evidence, and promote professional activities that facilitate physiotherapy research.
- Solve problems.
- Take account of social, economic and environmental impacts when operating within one's own area of knowledge.
- Take sex- or gender-based inequalities into consideration when operating within one's own area of knowledge.

Learning Outcomes

1. Analyse a situation and identify its points for improvement.
2. Analyse and synthesise.
3. Apply physiotherapy methods, procedures and interventions in the different clinical specialisations that treat conditions of the musculoskeletal system.
4. Apply specific physiotherapy methods to promote a healthy lifestyle, in relation to the musculoskeletal system, through health education.
5. Communicate using language that is not sexist.
6. Consider how gender stereotypes and roles impinge on the exercise of the profession.
7. Critically analyse the principles, values and procedures that govern the exercise of the profession.
8. Define general and specific objectives when using physiotherapy treatment for disorders of the musculoskeletal system.
9. Describe and analyse human movement.
10. Describe and analyse the evidence-based physiotherapy protocols for disorders of the musculoskeletal system.

11. Describe and apply advanced evaluation procedures in physiotherapy in order to determine the degree of damage to the musculoskeletal system and possible functional repercussions.
12. Describe clinical practice guidelines applied to disorders of the musculoskeletal system.
13. Describe the circumstances that can influence priorities when using physiotherapy to treat disorders of the musculoskeletal system.
14. Display critical reasoning skills.
15. Enumerate the different types of of material and apparatus for using physiotherapy to treat disorders of the musculoskeletal system.
16. Establish diagnostic physiotherapy hypotheses through clinical cases with disorders of the musculoskeletal system.
17. Express ideas fluently, coherently and correctly, both orally and in writing.
18. Identify situations in which a change or improvement is needed.
19. Identify the physiological and structural changes that may occur as a result of physiotherapy intervention in disorders of the musculoskeletal system.
20. Identify the principal forms of sex- or gender-based inequality present in society.
21. Identify the social, economic and environmental implications of academic and professional activities within one?s own area of knowledge.
22. Locate the different muscles through surface palpation.
23. Make the most correct decisions in given situations.
24. Organise and plan.
25. Propose new methods or well-founded alternative solutions.
26. Propose new ways to measure success or failure when implementing innovative proposals or ideas.
27. Solve problems.
28. Use physiotherapy to treat clinical cases involving musculoskeletal system conditions.
29. Weigh up the impact of any long- or short-term difficulty, harm or discrimination that could be caused to certain persons or groups by the actions or projects.
30. Weigh up the risks and opportunities of suggestions for improvement: one's own and those of others.

Content

Basic concepts and necessary technical skills for the correct performance of physiotherapy treatment.

PART 1: Therapeutic Exercise and Manual Thecniques.

- Introduction to the subject.

- Kinesiotherapy.

- Mechanical Therapy.

- Muscular Training.

- Aerobic Capacity Training

- Muscular Stretching.

- Proprioception Training.

- Kabat

- Therapeutic Massage.

PART 2: Physical Agents.

- Electrotherapy: low, medium and high frequency

- Thermotherapy: Cold therapy and hot therapy

- Deep thermotherapy.

- Hydrotherapy.

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Clinical case seminars	5	0.2	7, 2, 1, 3, 4, 8, 10, 11, 13, 15, 16, 17, 19, 21, 24, 23, 25, 14, 28, 6, 29
Laboratory practices (PLAB)	16	0.64	2, 3, 4, 8, 9, 11, 13, 15, 16, 17, 19, 22, 24, 23, 14, 28, 27
Theory (TE)	24	0.96	2, 1, 3, 4, 5, 8, 9, 10, 11, 13, 12, 15, 17, 19, 24, 25, 14, 28, 29
Type: Supervised			
Oral Presentation / Exposition of written works	26	1.04	2, 1, 5, 8, 10, 11, 13, 12, 15, 16, 17, 21, 20, 18, 24, 30, 23, 25, 14, 28, 27, 6, 29
Type: Autonomous			
Self study / reading articles / preparation of written works / reports of interest	72	2.88	7, 2, 1, 3, 4, 8, 9, 10, 11, 13, 12, 15, 16, 17, 19, 21, 20, 18, 30, 23, 25, 14, 28, 6

The teaching is based on theoretical and practical classes.

The active participation of the students will be requested both in the theoretical classes and in the practical ones.

As for the documentation provided by the teachers, the notes of the classes will only be posted on the virtual campus if the theoretical classes reach a minimum of 50% attendance, without prejudice to providing students with basic bibliography and additional material to study the topics given in class.

It will be a requirement for the practice:

- The student have to wear comfortable clothes that facilitate the application of the techniques to work in the classes
- Each student have to carry a sheet for the stretcher and a towel.
- The student have to meet with the hygiene standards of the health professional who will be exposed on the first day of class.

It is recommended that the email @uab.cat be linked to the personal email (gmail, hotmail, yahoo,...). Regular consultation of the contents and notices of the virtual campus is also recommended (it will be the preferred means of communication with students).

Make pictures and audio recordings in the lesson classes (theoretical and practical classes) is forbidden without the teacher's authorization.

Use graphic material or notes provided by teachers outside of Moodle UAB is forbidden except to study the subject by the student. If an inadecuate use of this material is detected, we will be taken the appropriate measures.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Assessment

Continous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Attendance and active participation in class. Written theoretical and practical evaluation of clinical cases.	25%	5	0.2	7, 1, 3, 4, 5, 8, 10, 11, 13, 15, 16, 17, 21, 20, 18, 30, 23, 25, 26, 14, 28, 27, 6, 29
Practical evaluation through clinical and structured evaluation	30%	1	0.04	2, 3, 8, 9, 11, 13, 12, 15, 16, 17, 19, 22, 24, 23, 14, 28, 27
Theoretical written evaluation through objective test with selection items of multiple choice questions	45%	1	0.04	3, 4, 8, 9, 10, 11, 13, 15, 16, 19, 28

** This subject does not provide the single assessment system*

The evaluation of the subject includes the following sections:

45% of the final grade will be the theoretical written evaluation.

- Written objective test of selection of multiple choice questions. This exam will evaluate all the topics taught in theory classes. If the student passes it, he will be exempt from taking the recovery exam in June. The test consists of 40 multiple answer questions with 4 possible answers for each question of which 1 is correct. Incorrect questions discount 0.25. Unanswered questions do not score. The minimum grade to pass is a 5.

- Final test of recovery (Theory). The test consists of 40 multiple answer questions with 4 possible answers each question of which 1 is correct. Incorrect questions discount 0.25. Unanswered questions do not score. The maximum grade (and which will be taken into account to calculate the grade) will be 7, regardless of whether the grade obtained in this exam is greater than 7.The minimum grade to pass is a 5.

These evaluations will be made in person.

30% of the final grade will be the practical evaluation

- Clinical and structured evaluation test. The student must correctly perform diffrents procedures of clinical skills worked on practical seminars. An oral reasoning that justifies the different steps of the executed procedures will be valued. The role of the student as a physiotherapist will be assessed during the test. The minimum grade to pass is 5.

- Final test of the Recovery of the Practices. Students who have not passed the exam practices in May, will be able do a final Practical Retrieval test. The minimum grade to pass is a 5.

The test will be done in person.

The call for exam and review of exam (day, time, classroom, etc.) will be announced through the Virtual Campus of the UAB. The procedure for reviewing the tests will be in accordance with the current regulations of the UAB and, in any case, will be individually with the student. Once the Final Evaluation has been completed, the student may request a review of all the tests taken during the course.

25% of the clinical case seminars (minimum grade for a 5).

- Oral and written evaluation of clinical cases (25%). Oral presentation of clinical cases with multimedia support and your defense in front of the classmates and professors.

The following criteria will be considered as to assign the rating of NOT EVALUABLE:

-Do not attend any of the assessment tests (continued, written theoretical (final and recovery) or practical (structured clinical evaluation and recovery). They will be required to complete the appropriate remedial work, whether partial or full, for the subject.

-Missing more than 30% of practical classes.

-Students who do not complete at least 66% of the theoretical and practical assessment activities will be considered "Not Assessable", thereby forfeiting their rights to the course enrollment, in accordance with UAB regulations.

Class atendance.

- Theoretical classes.The attendance is not obligatory but it is highly recommendable since it is during these classes when the continuous assessment exercises are worked.

- Tutorial clinical cases. Attendance is 100% mandatory. Justified absence will be accepted for medical reasons (with the corresponding medical certificate). Each unexcused absence will discount 0.5 points ofthe final grade of the subject (each of them)

- Practical classes. Attendance is 100% mandatory. Justified absence will be accepted for medical reasons (with the corresponding medical certificate). Each unexcused absence will discount 0.5 points of the final grade of the subject (each of them), aslong as these do not exceed 30% of the total.

Bibliography

Recommended bibliography:

PART 1: Therapeutic Exercise and Manual Thecniques.

- Fernández de las Peñas C, Melián A. Cinesiterapia. Bases Fisiológicas y Aplicación Práctica. 2ª ed. Elsevier España S.L.; 2019.

- Brody L, Hall C. Therapeutic Exercise. Wolters Kluwer. 2017

- Adler Beckers B. La Facilitación Neuromuscular Propioceptiva en la Práctica. Editorial Médica Panamericana S.A.; 2012.

- Tarantino F. Entrenamiento Propioceptivo. Principios en el diseño de ejercicios y guias prácticas (inclou versió digital). Editorial Panamericana; 2017

- Cano de la Cuerda R, Martinez Piedrola RM, Mangolarre Page JC. Control y Aprendiaje Motor (inclou versió digital). Panamericana; 2017

- Geoffroy C. Guía Práctica de los Estiramientos. Badalona: Ed. Paidotribo; 2011.

- Casanova E. et al. Manual d'activitat física en Atenció Primaria. BCN. Departament de Salut-ICS; 2009.

- Martínez J. Poleas y suspensiones en la actividad física y fisioterapia. Madrid: Aran; 2008.

- Pescatello L, American College of Sports Medicine. ACSM's guidelines for exercise testing and prescrition. 10th edition. Philadelphia: Wolters Kluwer/ Lippincott Williams & Wilkins Health. 2017

- Coburn J, Malek M. Manual NSCA. Fundamentos del Entrenamiento Personal. 2ª ed. Paidotribo; 2016

- Haff G, Triplett N. Principios del Entrenamiento de la Fuerza y del Acondicionamiento Físico. 4ªed. Paidotribo. 2017

- Torres M, Salvat I. Guía de Masoterapia para Fisioterapeutas. Ed. Panamericana, Madrid; 2006.

- Fritz S, Fritz L. Mosby's Fundamentals of Therapeutic Massage. 7ª ed. Elsevier. 2020

- Fritz S, Fritz L. Mosby's Essential Sciences for Therapeutic Massage. Anatomy, Physiology, Biomechanics and Pathology. 6ª ed. Elsevier. 2020

- Clay J, Allen L, Pounds D. Basic Clinical Massage Therapy.Integrating Anatomy and Treatment. Wolters Kluwer. 2015

- Vazquez Gallego J. Manual del Profesional del Masaje. Paidotribo; 2009

- Gallego T. Bases teóricas y fundamentos de fisioterapia. Madrid: Panamericana; 2007

- Huter Becker A, Schewe H, Heipertz W. Terapia física, Termoterapia, Mecanoterapia, Electroterapia, Ultrasonidos, Fototerapia.Paidotribo; 2005

PART 2: Physical Agents.

- Albornoz Cabello M, Maya Martín J, Toledo Marhuenda JV. Electroterapia práctica. Avances en investigación clínica. 2ª ed.Barcelona: Elsevier; 2022.

- Cameron MC. Agentes físicos en rehabilitación. Práctica basada en la evidencia. 6ª edición. Barcelona: Elsevier;2023.

- Rodríguez Martín JM. Electroterapia en Fisioterapia (inclou versió digital). 3ª edición. Madrid: Panamericana SA; 2013.

- Watson T, Nussbaum E. Electrophysical Agents. Evidence-based Practice. 13 ed. Elsevier;2020

- Banacloy E, Barrios F. Diatermia capacitiva y resistiva. La excelencia en fisioterapia. AIDCR. 2018

- Plaja J. Analgesia por medios físicos. Madrid: Mc Graw-Hill-Interamericana; 2002.
ONLINE RESOURCES
- Physiotherapy Databases:
- PEDro: https://www.pedro.org.au/spanish/
- PubMed: https://pubmed.ncbi.nlm.nih.gov/
- Cochrane Library: https://www.cochranelibrary.com/
- Enfispo: http://alfama.sim.ucm.es/isishtm/enfispo/
- - Library Service:
https://www.uab.cat/web/guias-tematicas/fisioterapia/bases-de-datos-fisioterapia-1345805824420.html
https://ddd.uab.cat/pub/guibib/224929/bibrecdigitals.pdf (llibres digitals)
- Social Networks (facebook, blogs,...)
- Pain Decoded: https://www.facebook.com/PAINdecoded/

- Educando en movimiento. EA FisioRehab: https://www.facebook.com/eafisiorehab
- PhysioNetwork Español: https://www.facebook.com/PhysioNetworkEspanol/
SCIENTIFIC EVIDENCE:

- Guía práctica de lectura crítica de artículos científicos originales en Ciencias de la Salud. 2012. http://www.ingesa.msss i.gob.es/estadEstudios/documPublica/internet/pdf/Guia_practica_de_lectura.pdf
- Martinez Rodriguez, LJ: Como buscar y usar información científica. Guía para estudiantes universitarios. Biblioteca, Universidad de Cantabria.2016. http://eprints.rclis.org/29934/7/Como_buscar_usar_informacion_2016.pdf
- Normas de Vancouver. https://referenciasbibliograficas.com/citar-en-vancouver/

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Software

For the development of this subject, no specific software is required.

Groups and Languages

Please note that this information is provisional until 30 November 2025. You can check it through this link. To consult the language you will need to enter the CODE of the subject.

Name	Group	Language	Semester	Turn
(PAUL) Classroom practices	201	Catalan/Spanish	second semester	afternoon
(PAUL) Classroom practices	202	Catalan/Spanish	second semester	afternoon
(PLAB) Practical laboratories	201	Catalan/Spanish	second semester	afternoon
(PLAB) Practical laboratories	202	Catalan/Spanish	second semester	afternoon
(PLAB) Practical laboratories	203	Catalan/Spanish	second semester	afternoon
(TE) Theory	201	Catalan/Spanish	second semester	afternoon