

Degree programme	Type	Course
Physiotherapy	OP	4

Contact lecturer

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Teaching staff (external to UAB)

Pedro Gaju Mozos

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Group languages

You can consult this information at the [end](#) of the document.

Prerequisites

It is recommended to have the acquired knowledge of Anatomy and Physiology of the locomotor device, Basics in physiotherapy, Biophysics and Biomechanics, Human Pathology, Physiotherapy of the Locomotive I-II and III apparatus, therapeutic Techniques in Physiotherapy of the Locomotive Apparatus and Clinical Evaluation in Apparatus Physiotherapy Locomotive.

Objectives

The objective is to give a vision of the neurodynamics, giving the student the ability to know when the use is appropriate of this, the correct progression in the treatment.

Provide the student with the manual skills to detect the abnormalities in the movement related to him nervous system.

Provide diagnostic skills and interpretation of neurodynamic tests and their relationships neuromusculoskeletal

Learning outcomes

1. Explain the physiopathological mechanisms of the disorders that affect the muscle chains, the movement of the nervous system in relation to itself and to its surroundings, and the joints as seen from an osteopathic perspective.
2. Describe and apply physiotherapy assessment procedures to the disorders that affect muscle chains, the movement of the nervous system in relation to itself and to its surroundings, and the joints as seen from an osteopathic perspective, with the aim of determining the degree of damage to the musculoskeletal system and its possible functional repercussions.

3. Solve problems.
4. Work in teams.
5. Display critical reasoning skills.
6. Enumerate the different types of material and apparatus used in physiotherapy treatment, according to the specific methods of muscle chains, neurodynamics and osteopathic manual therapy applied to the treatment of the musculoskeletal system.
7. Identify situations in which a change or improvement is needed.
8. Analyse a situation and identify its points for improvement.
9. Propose new methods or well-founded alternative solutions.
10. Weigh up the risks and opportunities of suggestions for improvement: one's own and those of others.
11. Propose new ways to measure success or failure when implementing innovative proposals or ideas.
12. Identify the social, economic and environmental implications of academic and professional activities within one's own area of knowledge.
13. Critically analyse the principles, values and procedures that govern the exercise of the profession.
14. Consider how gender stereotypes and roles impinge on the exercise of the profession.
15. Propose projects and actions that incorporate the gender perspective.
16. Communicate using language that is not sexist.
17. 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.

Contents

THEORETICAL CLASSES

1. Introduction to Neurodynamics (Marc Veneros and Pedro Gaju)
2. Neurodynamic considerations of anatomy, biomechanics and physiology (Marc Veneros)
3. Clinical Reasoning (Pedro Gaju and Marc Veneros)
4. Peripheral neuropathies (Marc Veneros)
5. Radiculopathy (Marc Veneros)
6. Neurodynamic treatment (Marc Veneros and Pedro Gaju)

PRACTICAL CLASSES

1. Neuroanatomy and palpation of upper limb nerves
2. Neuroanatomy and palpation of lower limb nerves
3. Neurodynamic tests of the transverse nervous system (ULNT1, ULNT2a, ULNT2b, ULNT3)
4. Neurodynamic tests of the longitudinal nervous system (slump test, straight leg raise, prone knee bending, saphenous nerve, lateral femorocutaneous nerve, obturator nerve, passive neck flexion)
5. Treatment

Learning activities and methodology

Title	Hours	ECTS	Learning outcomes
READING ARTICLES / REPORTS OF INTEREST	36.5	1.46	
LABORATORY PRACTICES (PLAB)	25	1	
THEORY (TE)	20	0.8	
PERSONAL STUDY	61.5	2.46	

This subject is based on a theoretical-practical lessons.

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

Continuous assessment activities

Title	Weight	Hours	ECTS	Learning outcomes
Written evaluation	50%	3	0.12	1, 2, 3, 5
Practical type evaluation	40%	4	0.16	1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17
Continuous assessment during the internship	10%	0	0	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17

Written Assessment:

- 50% of the final grade
- Format: Multiple-choice test (40 questions).
- Minimum passing grade: 5.
- Penalty: 0.25 points will be deducted for each incorrect answer.

Practical Assessment:

- 40% of the final grade
- Manual dexterity in applying basic techniques will be assessed through an individual practical exam.
- Evaluation criteria will include clinical reasoning, knowledge of palpatory anatomy, performance of neurodynamic tests, and the ability to propose the most appropriate treatment.

Continuous Assessment during Practical Sessions:

- 10% of the final grade
- Attitude, punctuality, and active participation.

Assessment Regulations

Resit/Remedial Examination

- Students who have failed any part of the assessment may sit for a resit exam, which will evaluate the knowledge, skills, and attitudes that should have been acquired throughout the course.

Attendance and "No Avaluable" (Non-Assessable) Criteria

- Attendance at practical sessions: Students who do not achieve 100% attendance at practical classes must complete a compensatory assignment covering the topics addressed in the missed session.
- Non-Assessable status: A student will be considered "No Avaluable" (Non-Assessable) if they fail to attend at least 80% of the practical sessions and/or do not sit for the formal final exam of the course.

Exchange Students

- The assessment criteria for exchange students will be exactly the same as for regular UAB students.

Irregularities in Assessment Acts (Plagiarism, Fraud, and AI)

- Any irregularity in an assessment act (academic fraud, plagiarism or improper use of AI, unless this use is expressly authorized in the teaching guide), which may lead to a significant variation in the grade, means that this act will be graded with a 0. In the event that the teaching guide provides that in order to pass the subject it is an essential requirement to have obtained a minimum grade in this assessment

act or that several irregularities occur in the assessment acts of the same subject, the final grade for this subject is 0. Apart from this, a disciplinary process may be initiated against the student who incurs any of these irregularities.

Single Assessment System

- This course does not offer the single assessment option.

Bibliography

Books:

- López C. *Neurodinámica en la práctica clínica*. Ed. Ovid Technologies. 2a ed. 2022.
- Butler DS. *Movilización del Sistema Nervioso*. Ed. Paidotribo. 2002
- Butler DS. *The Neurodynamic Techniques. A Definitive Guide from the Noigroup Team*. Noigroup Publications
- Butler DS. *The Sensitive Nervous System*. Noigroup Publications, 2011
- Butler DS, Moseley L. *Explicando el Dolor*. Noigroup Publications, 2010
- Russell S. *Examination of Peripheral Nerve Injuries: An Anatomical Approach*. Ed. Thieme. 2015
- López C. *Cuentos Analgésicos. Herramientas para una Saludable Percepción del Dolor*. ZERAPI 2011.
- Moseley G, Butler D, Beames T, Giles T. *The Graded Motor Imagery Handbook*. Noigroup Publications, 2012
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- Zamorano, E. *Movilización neuromeningea. Tratamiento de los trastornos mecanosensitivos del sistema nervioso*. Ed. Médica Panamericana, 2013
- Falla D. *Grieve's Modern Musculoskeletal Physiotherapy*. Ed. Elsevier LTD. 2024.
- Smart K. *Pattern Recognition of Clinical Syndromes related to Neuromusculoskeletal Pain Disorders*. Ed. Zérapí Fisioterapia Avanzada. 2020.
- De Laere J, Tixa S. *Le Syndrome Neurogène Douloureux. Du Diagnostica au traitement manuel. Tome 1 Membre Supérieur*. Elsevier Masson SAS, 2011
- De Laere J, Tixa S. *Le Syndrome Neurogène Douloureux. Du Diagnostica au traitement manuel. Tome 2 Membre Inférieur*. Elsevier Masson SAS, 2012

Digital References:

<https://www.youtube.com/user/noigroup99>

<https://carloslopezcubas.com/blog>

<https://www.neurodynamicsolutions.com/>

<https://lafisioterapia.net/>

<https://www.youtube.com/@yoamolamedicina7225>

Software

It does not require the use of any specific software.

Course groups and languages

The information provided is provisional until November 30. After this date, you will be able to consult the language of each group through this [link](#). To access the information, you will need to enter the course CODE

Type of teaching	Group	Language	Semester	Shift
(TE) Theory	301	Catalan	first semester	afternoon
(PLAB) Practical laboratories	301	Catalan	first semester	afternoon
(PLAB) Practical laboratories	302	Catalan	first semester	afternoon