

**Physiotherapeutic Evaluation and Diagnosis in  
Neurology**

Code: 102997  
ECTS Credits: 6

Degree	Type	Year	Semester
2500892 Physiotherapy	OT	4	0

### Contact

Name: Beatriz Hernández Méndez  
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### Use of languages

Principal working language: spanish (spa)  
Some groups entirely in English: No  
Some groups entirely in Catalan: No  
Some groups entirely in Spanish: No

### Teachers

Laura Arevalo Barrios

### External teachers

Álvaro Pérez Muñoz  
Gemma Puigfel Dalmau  
Núria Ragner Sanz  
Roberta Ghedina

### Prerequisites

It is recommended having acquired the skills and aims given on the subjects: Physiotherapy in Neurology I and II.

### Objectives and Contextualisation

To deepen the knowledge and training of skills related to daily clinical assessment and diagnosis in neurology physiotherapy, being able to:

- Assess major sensory and motor impairments, activity limitations and participation restrictions of patients with neurological disorders.
- Make use of the more standardised scales utilised in neurology.
- Perform a medical records that allows:
  - Planning an individualised treatment for neurological patients according to their developmental stage

- Establishing short and long term objectives
- Assessing the evolution
- Get used to assessments that have been done by other specialists within the Neurorehabilitation team.

## **Skills**

- Develop critical thinking and reasoning and communicate ideas effectively, both in the mother tongue and in other languages.
- Develop independent learning strategies
- Display critical reasoning skills.
- Evaluate the functional state of the patient, considering the physical, psychological and social aspects.
- 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.
- Solve problems.
- Work in teams.

## **Learning outcomes**

1. Describe and apply advanced evaluation procedures in physiotherapy in order to determine the degree of damage to the nervous system and possible functional repercussions.
2. Develop critical thinking and reasoning and communicate ideas effectively, both in the mother tongue and in other languages.
3. Develop independent learning strategies
4. Display critical reasoning skills.
5. Establish a diagnostic physiotherapy hypothesis based on complex clinical cases in neurological pathologies.
6. Solve complex clinical cases in the field of neurology.
7. Solve problems.
8. Work in teams.

## **Content**

1. CIF Model and medical records in neurological physiotherapy.

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2. Exploration: general and health conditions.

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3. Core assessment, balance, gait, upper extremity, peripheral nervous system and pain.

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4. Standardised Scales.

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5. Transdisciplinary assessment in neurorehabilitation.

Álvaro Pérez Muñoz; Gemma Puigfel Dalmau; Núria Sanz Raguer

6. Clinical Case Studies.

## 7. Papers Review.

Beatriz Hernández Méndez; Laura Arévalo Barrios

## Methodology

The teaching is based on theoretical and practical classes.

## Activities

Title	Hours	ECTS	Learning outcomes
<b>Type: Directed</b>			
LABORATORY PRACTICES (PLAB)	20	0.8	6, 1, 2, 5, 4, 7
THEORY (TE)	21	0.84	6, 1, 3, 2, 5, 4, 7, 8
<b>Type: Supervised</b>			
PRESENTATION / ORAL PRESENTATION PAPERS	2	0.08	6, 1, 2, 5, 4, 7, 8
<b>Type: Autonomous</b>			
PERSONAL STUDY	60	2.4	6, 1, 3, 2, 5, 4, 7
READING ARTICLES / REPORTS OF INTEREST	25	1	6, 1, 3, 2, 5, 4, 7
WRITING PAPERS	18	0.72	6, 1, 2, 5, 4, 7, 8

## Evaluation

The evaluation system will be:

- Written evaluation through objective tests of selection of multiple-choice items:
  - 2 exams one hour each.
  - 30 questions test with four possible answers, only one will be correct.
  - Each correct answer add 1 point and each wrong subtracts 0.25 points
  - 40% of the overall mark
- Practical evaluation through objective structured assessment:
  - Practical application and reasoning of different rating scales.
  - Duration: 15 minutes.
  - 35% of the overall mark.
- Oral evaluation through structured tests:
  - Oral presentation with audiovisual material of an neurological article using assessment scales applied in a clinical trial.
  - Reasoning of the scales used and proposed other scales that could be used.
  - Duration: 15 minutes
  - 15% of the overall mark.
- Delivery reports / written work:
  - Drafting of a clinical records and planning treatment goals by observing a real clinical case.

10% of the overallmark.

To pass the course must meet the following conditions:

- Pass every single part of the contents with a score  $\geq 5$ , except the delivery report which there is no minimum score.
- In case of not passing a single part of the contents average won't be made, even though students who have not passed the subject/module through continuous assessment may take a final exam or a final test synthesis. Except the delivery report, which will do average whatever the note.
- It is compulsory to attend the practical classes. You may miss 30% of the classes though proof of reason for absence will be required.
- The following rules are considered the guidelines to obtain a "not evaluable" qualification:
  - Not attending any of the assessment tests
  - Missing more than 30% of practical classes

The same evaluation criteria are applied for exchange students.

## Evaluation activities

Title	Weighting	Hours	ECTS	Learning outcomes
Delivery reports / written work	10%	1.5	0.06	6, 1, 3, 2, 5, 4, 7, 8
Oral evaluation through structured tests	15%	0.25	0.01	6, 1, 2, 5, 4, 7, 8
Practical evaluation through objective structured assessment	35%	0.25	0.01	6, 1, 2, 5, 4, 7
Written evaluation through objective tests of selection of multiple-choice items	40%	2	0.08	6, 1, 3, 2, 5, 4, 7

## Bibliography

1. Bisbe, M; Santoyo, C; Segarra V. Fisioterapia en Neurología: Procedimientos para restablecer la capacidad funcional. Madrid: Panamericana, 2012.
2. Butler D. Movilización del sistema nervioso. Barcelona: Paidotribo, 2002.
3. Cano, R; Collado, S. Neurorrehabilitación: Métodos específicos de valoración y tratamiento. Madrid: Panamericana, 2012.
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5. Kandel, E; Schuwartz, J; Jessell, T. Principios de Neurociencia. Madrid: McGraw-Hill Interamericana, 2001.
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8. Perfetti, C. Ejercicio Terapéutico Cognoscitivo para la Reeducción Motora del Hemipléjico Adulto. Barcelona: Edikamed, 1998.
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13. Shacklock, M. Neurodinámica Clínica. España: Elsevier, 2007.
14. Stokes, M. Fisioterapia en la Rehabilitación Neurológica. 2ª ed. Madrid: Elsevier, 2006.
15. Tutusaus, R; Potau J.M. Sistema Fascial: Anatomía, valoración y tratamiento. Madrid: Panamericana, 2015.
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17. Vendrell JM. Las Afasias: semiología y tipos clínicos. Rev Neurol. 2001;32(10):980-6.
18. World Health Organization. Clasificación Internacional del Funcionamiento, de la Discapacidad y de la Salud: CIF. Ministerio de Trabajo y Asuntos Sociales, Secretaría General de Asuntos Sociales, Instituto de Migraciones y Servicios Sociales (IMSERSO), 2001.
19. Zamorano, E. Movilización Neuromeningea: tratamiento de los trastornos mecanosensitivos del sistema nervioso. Madrid: Panamericana, 2013.

More literature in class.