

Physiotherapy in Neurology I

Code: 102988
ECTS Credits: 6

Degree	Type	Year	Semester
2500892 Physiotherapy	OB	2	1

Contact

Name: Esther Duarte Oller
Email: MariaEsther.Duarte@uab.cat

Use of Languages

Principal working language: catalan (cat)
Some groups entirely in English: No
Some groups entirely in Catalan: Yes
Some groups entirely in Spanish: No

Teachers

Anna Guillen Sola
Miguel Angel Rubio Perez

External teachers

Roser Boza Gómez

Prerequisites

To have acquired the necessary knowledge of physiology and anatomy to interpret the basic concepts of diseases of the nervous system.

Objectives and Contextualisation

To recognize and interpret the main signs and symptoms of diseases of the nervous system that may have implications in the evaluation, prognosis and management of the physiotherapist.

Competences

- 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.
- Develop independent learning strategies
- Display critical reasoning skills.
- 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.
- 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 the most correct decisions in given situations.
- Participate in drawing up physiotherapy protocols on the basis of scientific evidence, and promote professional activities that facilitate physiotherapy research.
- Work in teams.

Learning Outcomes

1. Apply advanced evaluation procedures in physiotherapy in order to determine the degree of damage to the nervous system and possible functional repercussions.
2. Apply the basic physiotherapy methods, procedures and interventions to nervous system conditions.
3. Describe and analyse the evidence-based physiotherapy protocols for nervous system disorders.
4. Describe and analyse the quality-assurance mechanisms of physiotherapy in treatments for the nervous system.
5. Describe the bases for assessing nervous system conditions.
6. Design therapeutic exercises and activities for neurological diseases.
7. Develop independent learning strategies
8. Display critical reasoning skills.
9. Establish diagnostic physiotherapy hypotheses through clinical cases with disorders of the nervous system.
10. Make the most correct decisions in given situations.
11. Use physiotherapy to treat clinical cases involving neurological conditions.
12. Work in teams.

Content

1. Anatomical and functional summary of the nervous system. (Dr. E. Duarte (ED))
2. Clinical history in neurology: anamnesis and main symptoms of the pathology of the nervous system. (ED)
3. Neurological exam: mental state, sensitivity, and reflexes. (ED)
4. Neurological exam: motor exploration, balance and gait. (ED)
5. Cranial nerves: visual impairments, facial paralysis and swallowing disorders. (Dra Anna Guillén)
6. Communication and speech disorders: aphasia and dysarthria. Logopedia (Dra Roser Boza)
7. Functional assessment scales in neurological rehabilitation. (ED)
8. Infantile Cerebral palsy. Spina bifida. Concept, clinical manifestations, evolution and management (ED)
9. Muscle tone disorders: spasticide (ED)
10. Neuropathic pain. Concept and global management. (ED)
11. Guillain-Barré syndrome. Concept, clinical manifestations, evolution and global management. (ED)
12. Acute meningitis and encephalitis. (ED)
13. Complementary exams in neurological diagnosis: neuroimaging. (Dr Migel Angel Rubio (MAR))
14. Traumatic brain injury. Concept, clinical manifestations, evolution and global management. (MAR)
15. Vascular cerebral ischemic diseases. Concept, clinical manifestations, evolution and global management. (MAR)
16. Hemorrhagic cerebral vascular diseases. Concept, clinical manifestations, evolution and global management. (MAR)
17. Parkinson's disease and other extrapyramidal disorders. Concept, clinical manifestations, evolution and global management. (MAR)
18. Ataxic disorders. (MAR)
19. Alzheimer's disease and other dementias. (MAR)
20. Seizures and epilepsy. (MAR)
21. Multiple sclerosis. Concept, clinical manifestations, evolution and global management. (MAR)
22. Amyotrophic lateral sclerosis and other motor neuron diseases. Concept, clinical manifestations, evolution and global management. (MAR)
23. Psychiatric disorders: depression, bipolar disorder, anxiety and others. (ED)

- 24. Pharmacology in neurology. (ED)
- 25. Traumatic spinal cord injury. Concept, clinical manifestations, evolution and global management. (MAR)
- 26. Diseases of the spinal cord. (MAR)
- 27. Nervous system tumors. (MAR)
- 28. Craniofacial headaches and headaches. (MAR)
- 29. Neurological rehabilitation: general principles. Multidisciplinary team. (ED)
- 30. Neurological rehabilitation: occupational therapy, cognitive therapy and social reintegration. (ED)

Methodology

Teaching is based in theoretical and practical classes

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
CLASSROOM PRACTICES (PAUL)	15	0.6	2, 1, 5, 11, 12
THEORY	30	1.2	2, 3, 5, 9, 11
Type: Autonomous			
SELF- STUDY	64	2.56	3, 7, 8
WRITTEN EVALUATION (TOPICS)	38	1.52	5, 7, 11

Assessment

1-Written evaluation (tests with multiple choice questions)

-Duration: 1 h

Description of the evaluation test:

Multi answer test with 30 questions, 4 options per question, one correct

Evaluation criteria:

Correct answers: 1

Wrong answers: -0.30

Blank answers: 0

Minimum mark to pass: 5 over 10

Schedule: 01 2019

Percentage on the final grade: 50%

Students must obtain at least a grade of at least 5 in the written evaluation to pass

2-Written evaluation (topics)

-Duration: continuous

Evaluation criteria. Students must submit a written work of c.500 words. Written works will be assessed on:

- . The coherence of the topics order
- . The content closely matches the proposed topic
- . The pertinent balance between the different parts of the work (relationship between the importance of the point to be treated and the space it occupies in the totality of the work)
- . The ability to synthesize:

- o Presents the main points of the work
- o Perform correct clinical reasoning
- o Express thoughts in order (from the simplest to the most complex)

. The use of bibliographic sources:

- o Adaptation of the sources used with the subject matter
- o Use updated bibliographic sources
- o Bibliographic references are fully described (Vancouver norms or others)

Minimum mark to pass: 5 over 10

Schedule: Sept 2019 - January 2020

Percentage on the final grade: 25%

3-Practical evaluation

-Duration: 2 h

Evaluation criteria: to demonstrate the skills achieved in the neurological evaluation and the classroom practices.

Minimum mark to pass: 5 over 10

Schedule: Des 2019

Percentage on the final grade: 20%

4- Attendance and active participation in class and seminars

Evaluation criteria: active participation, behavior and interest of the student in the theoretical classes and classroom practices

Schedule: Sept 2019 - January 2020

Percentage on the final grade: 5%

When the final grade of the whole evaluation of the student is ≥ 4 and < 5 , the student may request to make a THEORETICAL AND PRACTICAL REASSESSMENT EVALUATION. In this case, if the student pass it, the final grade will be 5.

It will be considered that the student is NOT EVALUABLE when he has not submitted to the written test, whose realization is essential to be evaluated.

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Attendance and active participation in class and seminars	5%	0	0	1, 5, 7, 9, 10, 8, 12
PRACTICAL EVALUATION (skills achieved in neurological evaluation)	20%	2	0.08	2, 1, 5, 10, 8, 11

Written evaluation (test with multiple choice questions)	50%	1	0.04	2, 1, 4, 3, 5, 6, 9, 10, 8, 11, 12
Written evaluation (topics)	25%	0	0	1, 5, 7, 8, 11, 12

Bibliography

Bibliografía específica

- Neurología Zarranz Imirizaldu, J.J.Madrid [etc.] : Elsevier science, DL 2002Bradley: Neurologia

Bibliografía de consulta

- [Principles of neurologic rehabilitation](#) New York [etc.] : McGraw-Hill, 1997
- [Exploración neurológica fácil](#) Fuller, Geraint Barcelona [etc.] : Elsevier, cop. 2011
- [Neurología Clínica 4e 2v](#)Bradley. Editorial: Elsevier (Año: 2005)
- [Neurología para fisioterapeutas : Cash](#) Buenos Aires [etc.] : Médica panamericana, 1989
- De Jong's THE NEUROLOGIC EXAMINATION. William Campbell. Ed Wolters Kuwer / Lippincott Williams & Wilkins, 2013

Recursos d'Internet

- Guia de pràctica clínica de l'ictus. Catalunya 2007 (web site). Barcelona: Agència d'Avaluació de Tecnologia i Recerca Mèdiques; 2007 (cited June 18, 2008). Available from: <http://www.gencat.net/salut/depsan/units/sanitat/html/ca/dir491/index.html>.
- Guidelines for adult stroke rehabilitation and recovery: [A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association](#). Winstein, Stein et al. Stroke. [Stroke.2017;48\(2\):e78](#)