COURSE DATA

DATA SUBJECT

Code: 33009
Name: Nervous system diseases and therapeutic focus on the nervous system
Cycle: Undergraduate Studies
ECTS Credits: 6
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
1202 - Degree in Physiotherapy	Facultat de Fisioteràpia	2	Second quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
1202 - Degree in Physiotherapy	Medical conditions and surgical conditions and their treatments	BASIC

COORDINATION

ARNAL GOMEZ ANNA

CORTES AMADOR SARA ISABEL

SUMMARY

Physiopathology of the nervous system illnesses
Clinical manifestations of the different illnesses that affect the nervous system.
Medical and surgical treatments of the nervous systems illnesses.
Recognition and measurement of the symptoms of the different illnesses.
Recognition of the time course of the illness.

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

There are no specified enrollment restrictions with other subjects of the curriculum.

OTHER REQUIREMENTS

COMPETENCES / LEARNING OUTCOMES

1202 - Degree in Physiotherapy

Have the ability to organise and plan work.

Know and understand peoples morphology, physiology, pathology and behaviour under heath and sickness in the natural and social environments

Know how to recognise and assess the symptoms of the diseases.

Know the diverse medical and surgical treatments of the studied diseases.

Know the general aspects of the endogenous and exogenous aetiology pathology of the locomotor, respiratory, cardiovascular and nervous systems.

Know the structural, physiologic and functional changes that occur as a consequence of physiotherapy intervention.

Promote the participation of the users and their families in the recovering process.

Recognise diversity, multiculturality, democratic values and peace culture.

Recognise the evolution momentum of the learnt diseases.

Recognise vital risk situations and be able to execute basic and advanced life support manoeuvres.

Respect fundamental rights and equality between men and women.

Students must be able to apply their knowledge to their work or vocation in a professional manner and have acquired the competences required for the preparation and defence of arguments and for problem solving in their field of study.

Students must be able to communicate information, ideas, problems and solutions to both expert and lay audiences.

Students must have acquired knowledge and understanding in a specific field of study, on the basis of general secondary education and at a level that includes mainly knowledge drawn from advanced textbooks, but also some cutting-edge knowledge in their field of study.

Students must have developed the learning skills needed to undertake further study with a high degree of autonomy.

Students must have the ability to gather and interpret relevant data (usually in their field of study) to make judgements that take relevant social, scientific or ethical issues into consideration.

Work in teams.

DESCRIPTION OF CONTENTS

1. Unit 1. General concepts of the nervous system

Lesson 1. Fundamentals and generalities about the Nervous System and advances in Neuroscience.
Lesson 2. Multidisciplinary and Imaging Study of the Patient with neurological diseases: evaluation, neuro-radiological and electrophysiological assessments.
Lesson 3. Profile of psychomotor development in childhood.

2. Unit 2. Nervous system diseases during childhood

Lesson 4. Spina Bifida.
Lesson 5. Multiple Arthrogryposis.

Lesson 6. Obstetric Brachial Paralysis.
Lesson 7. Upper Motor Neuron Diseases: Cerebral Palsy and others.
Lesson 8. Lower Motor Neuron Diseases.
Lesson 9. Cerebellar syndromes.
Lesson 10. Muscular dystrophies and other muscle diseases.
Lesson 11. Developmental Coordination Disorder.
Lesson 12. Epilepsy and Epileptic Syndromes
Lesson 13. Meningitis, encephalitis, brain abscess, and empyema.

3. Unit 3 . Nervous system diseases during the young adult phase.

Lesson 14. Autonomic nervous system disorders.
Lesson 15. Amyotrophic Lateral Sclerosis.
Lesson 16. Multiple Sclerosis.
Lesson 17. Spinal cord injury.
Lesson 18. Traumatic brain injury.
Lesson 19. Primary and metastatic tumors of the nervous system.

Lesson 20. Peripheral neuropathy.
Lesson 21. Guillain-Barré syndrome.
Lesson 22. Trigeminal neuralgia, Bell's palsy and disorders of the cranial nerves.
Lesson 23. Central sensitization syndrome.

4. Unit 4. . Nervous system diseases during the older adult phase.

Lesson 24. Cerebrovascular Diseases.
Lesson 25. Parkinson's disease and other extrapyramidal movement disorders.
Lesson 26. Hyperkinetic movement disorders.
Lesson 27. Severe myasthenia gravis and other neuromuscular junction diseases.

Lesson 28. Alzheimer disease and dementia.

5. PRACTICAL PROGRAM

Practice 1. General concepts of the nervous system.
Practice 2. Assessment of Pyramidal and extrapyramidal motor pathways.
Practice 3. Assessment othe somatosensory pathway and autonomic nervous system.
Practice 4. Clinical cases of people with nervous system diseases during childhood.
Practice 5. Clinical cases of people with nervous system diseases during the young adult phase.
Practice 6. Clinical cases of people with nervous system diseases during the older adult phase.
Practice 7. Exhibition of practical works.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theory	45,00
Classroom practices	15,00
Total hours	**60,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	0,00
Independent study and work	11,00
Preparation of lessons	25,00
Preparation for assessment activities	34,00
Resolution of case studies	20,00
Total hours	**90,00**

TEACHING METHODOLOGY

The contents of the theory classes will be done by lectures, participative activities and cooperative learning.

The different activities of the practice classes have the object of making the student recognize and evaluate the symptoms of the nervous system illnesses, recognize their time course, and to get to know the medical and surgical treatments of practical cases which will enable the students to gain greater fluency in their critical ability.

The activities will be done in groups to promote teamwork, cooperation and understanding

"The teaching program may be modified during the development of the course if the teacher under teacher quality criteria and assimilation of knowledge by the student, it deems appropriate".

EVALUATION

Theory program (70%)

50 questions: 45 questions from the topics and 5 questions related to a clinical case. 4 options, 1 valid

SCORE= [successes-(failures/options - 1)] x (highest score/number of quesgtions)

Practice program (30%)

- Delivery of Practice Report with class activities (10%)

- Exhibition of group work poster type (20%)

The final result of the subject will be averaged if the student has at least obtained a minimum of 5 out of 10 in each one of the theory and practice programs.

In all written tests orthographic errors will be penalized

The note of the approved part will be kept from first to second call of that academic year.

REFERENCES

Basics

- Harrison . Principios de medicina interna. Vol. III. Ed. McGraw-Hill Interamericana de España. SAU. Madrid. 2012.
- Stokes M. Fisioterapia en la rehabilitación neurológica. Ed. Elsevier. Madrid. 2006.
- Macias L, Fagoaga J. Fisioterapia en Pediatría. Ed.Panamericana.Madrid.2019
- Seco,J: Sistema Nervioso:Métodos, fisioterapia clínica y afecciones para fisioterapeutas Ed. Panamericana.Madrid.2020
- Sermef: Rehabilitación InfantilEd Panamericana.Madrid.2012
- García-Alix A, Arnáez J. Los movimientos generales del neonato y del lactante. Fundación Nene, EDISIBEN, 2022.
- Hadders-Algra M, Heineman KR. Perfil del desarrollo motor del bebé. Editorial Médica Panamericana. Madrid, 2014.
- López J, Linazasoro G. Parkinson y Discinesias. Abordaje Diagnóstico y Terapéutico. Editorial Medica Panamericana S.A. Madrid, 2011

In addition, each subject will specify the books, scientific articles and readings of interest recommended for the preparation of the contents addressed.