INSTITUTO POLITÉCNICO DE BRAGANÇA

Course Unit	Pathophysiology of Neurological Conditions			Field of study	Health Sciences		
Bachelor in	Physiotherapy			School	School of Health		
Academic Year	2023/2024	Year of study	2	Level	1-2	ECTS credits	4.0
Type	Semestral	Semester	2	Code	9504-770-2203-00-23		

Workload (hours)	108	Contact hours	T	TP	PL	TC	S	E	OT	O
			30	-	-	-	-	-	20	-

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s): Mariana de Sousa Certal Gomes

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:
1. To understand neurological system anatomy and physiology.
2. To identify the etiology, epidemiology, and risk factors of neurological conditions.
3. To understand the physiopathology of the main neurological conditions, considering the life cycle.
4. To interpret signs, symptoms, and other clinical parameters.
5. To identify pharmacological and non-pharmacological treatments, and prognoses for the main neurological conditions.
6. To understand the evolution of degenerative or progressive neurological conditions throughout life and their relationship with functional changes.
7. Relating the physiopathological process of the main neurological conditions to the impact of physiotherapy intervention.
8. Understanding the auxiliary diagnostic tools used in neurological conditions.

Prerequisites

Before the course unit the learner is expected to be able to:
Prior neurological anatomy, histology and physiology knowledge.

Course contents

General concepts about the physiopathology, clinical presentation, and treatment of the most common neurological conditions.

Course contents (extended version)

1. Review of the neurological system and neurodevelopment
   - Anatomy and physiology of the neurological system
   - Motor, sensory, autonomic pathways
   - Relationship between the sensorimotor system and the external environment
   - Neuroplasticity and basic mechanisms of neurological injury
2. Clinical cases of neurological diseases in childhood and adulthood
   - Etiology, epidemiology, preventive factors, and risk factors
   - Signs and symptoms of different neurological conditions depending on the life stage.
   - Economic, social, and personal impact of different neurological conditions
   - Pharmacological and non-pharmacological treatment
3. Complementary diagnostic and evaluation methods in neurological conditions
   - The relevance, potential, mechanisms, and results of the main complementary diagnostic methods

Recommended reading

1. Ferro, J., Pimentel, J. (2013) Neurologia Fundamental: princípios, diagnóstico e tratamento. 2ª Edição. Lidel
2. Haines SE, Mihailoff GA. (2017) Fundamental neuroscience for basic and clinical applications. 5th Edition. Elsevier
3. Lennon S. (2018) Physical Management for Neurological Conditions. 4th Edition. Elsevier

Teaching and learning methods

Theoretical Learning: Expositive method.

Assessment methods

1. Continuous evaluation - (Regular, Student Worker) (Final)
   - Intermediate Written Test - 50% (Class time. Minimum score 8,5 out of 20)
   - Intermediate Written Test - 50% (Class time. Minimum score 8,5 out of 20)
2. Final exam - (Regular, Student Worker) (Supplementary)
   - Final Written Exam - 100% (Non-approved students or wishing to improve previous grade. Minimum score 9.5 out of 20 values)
3. Final exam - special - (Regular, Student Worker) (Special)
   - Final Written Exam - 100% (Special scheme students. Minimum score 9.5 out of 20)

Language of instruction

Portuguese

Electronic validation

Mariana de Sousa Certal Gomes	Adília Maria Pires da Silva Fernandes	Luis Migue Fernandes Nascimento	Olívia Rodrigues Pereira
05-04-2024	07-04-2024	09-04-2024	09-04-2024