

Course Title	Clinical Placement II				
Course Code	PHYS310				
Course Type	Compulsory				
Level	Bachelor (Level 1)				
Year / Semester	3d/Spring				
Instructor's Name	Giannis Sisou				
ECTS	6	Lectures / week	2	Laboratories/week	10
Course Purpose	The aim of the course is to familiarize students with the clinical approach of patients (adults and paediatric patients) with diseases of the neurological system and neurosurgical patients. It also aims at their clinical training in the evaluation of clinical findings, the setting of therapeutic goals and the planning of therapeutic evidence-based interventions both during the patients' stay in the hospital and after discharge.				
Learning Outcomes	<p>Upon completion of the course, students are expected to be able to:</p> <ul style="list-style-type: none"> • connect theory with evidence-based knowledge in clinical practice as indicated by the ICF model of neurological dysfunction • Identify the goal of the patient's individualized program • evaluate the outcome of therapeutic intervention on the basis of sound clinical reasoning • interpret the pathological mechanisms of posture, movement and balance disorders, as recorded in neurological patients • understand the clinical importance of the reassessment regarding the effectiveness – appropriateness of the selected therapeutic intervention • thoroughly study the patient's medical record and interpret the findings of clinical and laboratory tests. • Comprehend the role of digital physiotherapy and advanced technology in the assessment and treatment of a wide range of neurological disorders and dysfunctions (paralysis, gait disorders, balance disturbances, functional limitations) • record and interpret the findings of the physiotherapeutic evaluation taking into account other clinical and laboratory findings in a clinical environment • monitor and keep a patient record • set goals depending on the therapeutic course of the patient and to draw up the rehabilitation plan, recognizing the progress or not of the patient's condition and the predicted levels of improvement, setting short-term and long-term goals • determine the type and interpret the effect of physiotherapeutic intervention on neurological patients at different stages of 				

	<p>rehabilitation, in different clinical conditions (ICU, clinics, rehabilitation centers, physiotherapy, etc.)</p> <ul style="list-style-type: none"> • integrate modern clinical guidelines into the clinical practice of physiotherapeutic intervention in neurological patients • interact with the patient purposefully and effectively by establishing trusting relationships and providing a sense of security • understand and understand the special relationships between patient, therapists and family • co-operate effectively within the interdisciplinary team with other health care professionals. <ul style="list-style-type: none"> • Respect ethical rules and medical confidentiality. 		
Prerequisites	Neurological Physiotherapy I & II (PHYS209 & PHYS210) and Physiotherapy of Paediatric Diseases (PHYS303)	Co-requisites	None
Course Content	<ul style="list-style-type: none"> • Introduction to clinical physiotherapy of neurological diseases. • Assessment of patients and clinical reasoning according to the ICF model of neurological dysfunction and disability. • The role of physiotherapy in the rehabilitation of neurological diseases. Principles, object, objectives, rules of ethics and ethics - medical confidentiality. Interdisciplinary approach. • CanMeds role model of physiotherapy competency framework in neurological physiotherapy (Physiotherapy practitioner, communicator, collaborator, leader, health Advocate and professional: a multifactorial role) • Structure and organization of clinics and rehabilitation units of neurological patients. • The role of physiotherapy and its mission. • Responsibilities of the physiotherapist in the ICU, in the clinics, in the rehabilitation center (institutions of chronic diseases), in the physiotherapy center, etc. Relations with other specialties. • Organization and equipment of physiotherapy clinics. • Pediatric physiotherapy equipment (balls, wedges, rolls, uprights, etc.). • The evaluation of the neurological patient. • Digital physiotherapy and advanced technology in the assessment and treatment of a wide range of neurological disorders and dysfunctions (paralysis, gait disorders, balance disturbances, functional limitations) • The process of evaluating neurological patients. Assessment tests (categories). Subjective - objective assessment. Taking into account the findings. 		

- Physiotherapeutic assessment in the ICU, in the clinics, in the rehabilitation center (institutions of chronic diseases), in the physiotherapy center, in the patient's home – peculiarities.
- Peculiarities of evaluation in special populations (newborns, infants, the elderly, mental retardation, neoplastic diseases, etc.). Physiotherapeutic assessment at the various stages of rehabilitation (initial stage - stage of relative recovery - chronic stage).
- The contribution of technology to the rehabilitation of neurological patients.
- Modern means of therapeutic intervention for the treatment of disorders of muscle tone, proprioception, assembly, balance and gait (treadmill, balance platform, FES, computational - robotic systems, virtual reality systems, etc.).
- Motor disability, quality of life, self-care and autonomy.
- Factors to improve the quality of life of people with motor disabilities.
- Accessibility and ergonomics in the action environment of the motor disabled (home, work).
- Aids (categories, types, utility), orthotic means, adaptation of the environment to the specific needs of the patient.
- Disorders of urination, defecation and their treatment. Sex life and disability.
- Physiotherapeutic approach to neurological diseases in different clinical conditions.
- Peculiarities of physiotherapeutic intervention in the intensive care unit (ICU), in the clinics, in the rehabilitation center (for chronic diseases), in the physiotherapy room, in the home of the patient.
- Principles - peculiarities of physiotherapeutic intervention at the various stages of rehabilitation.
- Basic principles of rehabilitation in different age groups and Special Populations - peculiarities.
- The child neurological patient and his peculiarities. Basic principles of physiotherapeutic approach during neonatal, infant, toddler, (pre)school age and adolescence.
- Elderly. Basic principles of physiotherapeutic approach. Disorders of higher fossal functions.
- Psychiatric diseases. Psychomotor disorders. The psychological factor in rehabilitation - psychosynthesis.
- Family relations - physiotherapist.
- Definition of a rehabilitation program for neurological patients (presentation of cases).
- Setting therapeutic goals (short-term - long-term), at the various stages of rehabilitation (treatment scenarios).
- Objectivity, adaptability of rehabilitation programs.
- Means and techniques of physiotherapeutic intervention (presentation of cases).
- The effect of different means and techniques on muscle weakness, muscle tone, coordination of movements, somatosensory, balance and gait.
- Selection criteria - feasibility.
- Patients with multiple disabilities (case presentation).

	<ul style="list-style-type: none"> • Treatment of patients with multiple disabilities - setting goals - prioritization. • Treatment of muscle tone disorders (presentation of cases). • Distinction and treatment of muscle tone disorders in different categories of patients - lesions in the individual stages of rehabilitation. • Selection of therapeutic means - techniques for managing muscle tone disorders (classical therapeutic methods - modern means). • Treatment of coordination, balance and gait disturbances (case studies). • Distinction and treatment of coordination, balance and gait disorders in different categories of patients - lesions in the individual stages of rehabilitation. • Choice of therapeutic means - techniques for dealing with coordination, balance and gait disorders (classical therapeutic methods - modern means). • Clinical reasoning and problem solving in the rehabilitation of neurological diseases. Link theory with practice and practice with theory. • The process of clinical association and decision-making in the rehabilitation of neurological diseases. Decision making models, reasoning and problem-solving strategy. Modern clinical guidelines. <p>LABORATORY /CLINIC</p> <ul style="list-style-type: none"> • During the clinical training, the student is exposed to the treatment in a clinical environment of conditions: • Disturbed muscle tone, disturbances in the coordination of movements, muscle weakness, inability to control balance, abnormal gait or a combination of the above. • Physiotherapeutic assessment, ICF evaluation and clinical reasoning skills at the various stages of rehabilitation. • Application of special therapeutic and digital physiotherapy techniques in neurological patients. • Treatment planning - setting a therapeutic framework. • Clinical reasoning - research evidence - justification. Modern and linen instructions.
<p>Teaching Methodology</p>	<p>Theory</p> <p>The course is delivered to the students through lectures, using computer-based presentations programmes. Case Studies, Discussion, Questions / Answers are also used depending on the content of the lecture. Lecture notes and presentations are available online for use by students in combination with textbooks. Relevant material published in international scientific journals is also used to follow the latest developments related to the subject of the course.</p> <p>Laboratory</p> <p>During the laboratory courses, students develop their clinical skills in skill trainers and patient simulators so that they can successfully and safely apply them in a real clinical environment.</p>

(For more information please refer to the 'Clinical Placement Guide')

Bibliography

Textbooks:

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Lennon S, Ramdharry G, Verheyden G. (2020) Physiotherapeutic Management for Patients with Neurological Disorders. Broken Hill Publishers Ltd.

Nichols-Larsen D. (2017). Neurological Rehabilitation, KONSTANTARAS,

Raine S., Meadows L., Lynch-Ellerington M. (2009). Bobath concept – Theory and clinical practice in neurological rehabilitation. Wiley-Blackwell

Sawner K., La Vigne J. (1998) Kinesitherapy in hemiplegia by Brunnstrom. Neurophysiological approach. Parisianos Publications.

Shumway-Cook A., Woollacott M. (2006) Motor Control: Translating Research into Clinical Practice. Εκδόσεις Lippincott Williams & Wilkins, third edition.

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Donath L, Rossler R, Faude O. (2016) Effects of virtual reality training (exergaming) compared to alternative exercise training and passive control on standing balance and functional mobility in healthy community-dwelling seniors: a meta-analytical review. Sports Med. 46(9):1293–1309.

Lohse KR, Pathania A, Wegman R, Boyd LA, Lang CE. (2018) On the reporting of experimental and control therapies in stroke rehabilitation trials: a systematic-review. Arch Phys Med Rehabil. 99(7):1424–1432.

Pereira, V.C., Silva, S.N., Carvalho, V.K.S. et al. Strategies for the implementation of clinical practice guidelines in public health: an overview of systematic reviews. Health Res Policy Sys 20, 13 (2022). <https://doi.org/10.1186/s12961-022-00815-4>

Reubenson A, Elkins MR. (2022) Clinical education of physiotherapy students. J Physiother. 68(3):153-155. doi: 10.1016/j.jphys. 05.012. Epub 2022 Jun 10. PMID: 35697597.

Rob A B Oostendorp, J W Hans Elvers, Emiel Trijffel van, Concept (2020) Analysis of Clinical Reasoning in Physical Therapist Practice, Physical Therapy, 100(8):1353–1356, <https://doi.org/10.1093/ptj/pzaa065>

	<p>Ricci, N.A., Aratani, M.C., Doná, F., Macedo, C., Caovilla, H.H., Ganança, F.F., (2010). A systematic review about the effects of the vestibular rehabilitation in middle-age and older adults. <i>Braz. J. Phys. Ther.</i> 14, 361–371.</p> <p>Veerbeek, J.M., van Wegen, E., van Peppen, R., van der Wees, P.J., Hendriks, E., Rietberg, M., et al., (2014). What is the evidence for physical therapy poststroke? A systematic review and meta-analysis. <i>PLoS One</i> 9 (2), e87987.</p> <p>Stoikov S., Shardlow K., Gooding M., Kuys S. (2018) Clinical activity profile of preregistration physiotherapy students during clinical placements. <i>Australian Health Review</i> 42, 661-666. https://doi.org/10.1071/AH16181</p>
<p>Assessment</p>	<p>The assessment of the course consists of the continuous assessment (Clinical placement assessment, class participation) and final exam.</p> <p>Clinical placement assessment: 70%.</p> <p>The student's evaluation is based on the student's daily performance in the clinical setting. The student's Clinical Instructor is responsible for evaluating the student's performance. Specifically, the Clinical Instructor evaluates the student's daily participation and ability to respond competently to the clinical case presented for treatment. Specifically, the student's evaluation is based on the ability to approach the patient, take a history, the order in which the physical therapy assessment is conducted, the ability to set short and long-term treatment goals, apply appropriate physical therapy techniques, etc. (see grading classification in the Appendix). The student must have successfully completed a set of specific physiotherapy interventions covering all physiotherapy techniques in each clinic in which they are employed.</p> <p>The student is assessed daily by the Clinical Instructor. In addition, in the middle of the semester (6th - 8th week of classes), for each group of students, a meeting of the Clinical Instructors is held and opinions and observations are exchanged in order to better guide the students and determine their level of performance. At the end of the quarter the marks are reconciled between the Clinical Instructors who were responsible for each student. The analysis of the student's grading method is done at the beginning of the Clinical Practicum by the respective Clinical Instructors.</p> <p>The assessment criteria for students relate to 3 main sections:</p> <ol style="list-style-type: none"> 1. Safety issues (providing & conducting physiotherapy safely, etc.) 2. Professionalism of the student (patient communication, behaviour, keeping of working hours, etc.) 3. Knowledge & clinical skills (theoretical clinical background, practical/clinical application of therapeutic procedures, etc.) <p>For each section, the criteria and the scoring are detailed in the Annex. It is recommended that the student read the assessment card carefully from the very beginning of the term so that the student is aware of how he/she is assessed on a daily basis. For each of these criteria, the student will receive a</p>

	<p>grade (with a perfect score of 10) based on his/her overall performance during the semester (see grading classification in the guide "Clinical Practice Guide"). The average of these grades will determine the final grade.</p> <p>Continuous Assessment: 10%.</p> <ul style="list-style-type: none"> • Classroom discussions and debates: Students engage in classroom discussions and debates to assess their theoretical knowledge. Active participation is encouraged to hone their critical thinking skills by posing open-ended questions and facilitating dialogue. • Peer and self-assessment: Students are assigned to review and provide feedback on each other's work, encouraging them to critically evaluate their peers' understanding and provide constructive suggestions. <p>Final exam: 20%. The written final exam includes multiple-choice, short-answer and open-ended questions as well as extended clinical descriptions</p>
Language	Greek / English