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| Course Title | Physiotherapy of musculoskeletal disorders III | | | | |
| Course Code | PHYS411 | | | | |
| Course Type | Compulsory | | | | |
| Level | Bachelor (Level 1) | | | | |
| Year / Semester | 4 th / Fall | | | | |
| Instructor's Name | Dr Christos Savva | | | | |
| ECTS | 6 | Lectures / week | 2 | Laboratories/week | 2 |
| Course Purpose | <p>The aim of the course is to expand the knowledge and clinical skills of the student in the assessment and treatment of neuro-musculoskeletal dysfunctions and spinal deformities, facilitating the further development of analytical thinking and critical understanding of even the most complex disorders. Thus, this course aims to develop the student's skills for designing appropriate strategies for targeted and effective evaluation, categorization, prognosis and treatment of patients with neuro-musculoskeletal dysfunctions and deformities joints of the spine.</p> | | | | |
| Learning Outcomes | <p>Upon completion of the theoretical course, the student is expected to be able to:</p> <ul style="list-style-type: none"> • Demonstrate extensive knowledge in the anatomy, physiology and biomechanics of the musculoskeletal and neurological system of the spine. • Demonstrate extensive knowledge in pathology, pathophysiology, pathogenesis and diagnosis of mechanical dysfunction of the neuro-musculoskeletal system in the areas of spine • Demonstrate extensive knowledge in the evaluation of the physiological and pathological posture of the Spine due to antalgic or structural deviations and deformities (kyphosis, lordosis, scoliosis) • Demonstrate extensive knowledge in the differential diagnosis of visceral, cardiovascular, orthotic and lymphatic dysfunction with the dysfunction of the neuro-musculoskeletal system in the spinal regions • Demonstrate critical application of knowledge to apply an advanced clinical reasoning for the differential diagnosis of neuromusculoskeletal dysfunction from non-mechanical dysfunction of other systems as well as in making informed clinical decisions during the evaluation and rehabilitation of neuro-musculoskeletal disorders of the spine. • Demonstrate extensive knowledge and critical understanding of the psycho-social dimension of the patient's pain and how it relates to | | | | |

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| | <p>evaluation, prognosis and rehabilitation of neuro-musculoskeletal dysfunctions of the spine.</p> <p>Upon completion of the laboratory course, the student is expected to be able to:</p> <ul style="list-style-type: none"> • Demonstrate ability in assessing the physiological and pathological posture of the spine due to antalgic or structural deviations and deformities (kyphosis, lordosis, scoliosis) • Demonstrate critical application of knowledge regarding the specialized diagnostic characteristics of each assessment tool / special diagnostic test / imaging test (e.g. for neuro-musculoskeletal integrity check structure, vascular structure, etc.) where it can be applied to dysfunctions of the neuro-musculoskeletal system of the spine such as reliability, validity • Demonstrate extensive knowledge in prognosis and predictive factors as well as interpersonal skills to inform the patient about these issues • Demonstrate advanced clinical skills in the application of therapeutic approaches, applying effective and safe therapeutic approaches to patients with complex presentations of symptoms in the neck, chest and upper extremity areas • Demonstrate ability to critically review recent articles related to the sciences of physiotherapy in relation to neuro-musculoskeletal disorders of the areas of the spine | | |
| Prerequisites | None | Co-requisites | None |
| Course Content | <ul style="list-style-type: none"> • Correct posture disorder Antalgic posture • Spinal Deformities Kyphosis, Lordosis, Scoliosis, Kypho-scoliosis, evaluation, therapeutic techniques, orthotic treatment • Dysfunctions of Upper Cervical Spine Dysfunctions such as cervicogenic headache, cervicogenic dizziness, upper cervical spine instability of the cervical spine of SS • Dysfunctions of Lower Cervical Spine Dysfunctions such as cervical radiculopathy, Zygoapophyseal joint syndrome and cervical discopathy • Dysfunctions of Thoracic Spine and differential diagnosis with other dysfunctions of other organs, chest outlet syndrome • Dysfunctions of Lumbar Pain (epidemiology, etiology, categorization, evaluation and rehabilitation), common lumbar spine dysfunctions of with particular reference to lumbar radiculopathy, discopathy and zygoapophyseal joint syndrome • Dysfunctions of the Sacrococcygeal Spine of SS Sacroiliac Pain (epidemiology, etiology, categorization, evaluation and rehabilitation), common lumbar spine dysfunctions | | |
| Teaching Methodology | <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</p> | | |

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| | <p>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> |
| Bibliography | <p><u>Textbooks:</u></p> <p>Gibbons, P and Tehan, P (2016). Manipulation of the Spine, Thorax and Pelvis, 4th Edition, Elsevier.</p> <p>Jull, G, Moore, A, Falla, D, Lewis, J, McCarthy, C, Sterling, M. (2015). Grieve's Modern Musculoskeletal Physiotherapy, 4th Edition, Elsevier.</p> <p>Fernandez de las Penas, C, Cleland, J, Dommerholt, J (2015). Manual Therapy for Musculoskeletal Pain Syndromes, 1st Edition, Elsevier.</p> <p>Hing, W, Hall, J, Mulligan, B (2015). The Mulligan Concept of Manual Therapy, 1st Edition, Elsevier.</p> <p>Magee, D. (2015). Orthopedic Physical Assessment, 6th Edition, Elsevier.</p> <p>Hengeveld E and Banks K (2014) ' Maitland's Peripheral Manipulation' 5th Edition, Churchill Livingstone (2014)</p> <p>Brotzman B & Manske R (2011)'Clinical Orthopaedic Rehabilitation' 3rd Edition, Elsevier (2011)</p> <p>Petty Nicola (2011) 'Neuromusculoskeletal Examination and Assessment' 4th Edition, Churchill Livingstone (2011)</p> |
| Assessment | <p><u>Continuous Assessment (50%):</u></p> <p>The assessment may include any combination of the following:</p> <ul style="list-style-type: none"> • Written and/or oral, and it consists of multiple – choice, short answer, open ended questions and/or essay questions, that align with the learning outcomes, in order to assess the theoretical knowledge gained. The questions ensure that students will demonstrate a deep understanding of the subject matter and apply their knowledge to solve problems or analyse scenarios. • Assignments and projects provide opportunities for students to apply their theoretical knowledge in practical ways. The assignments are designed in a way that require critical thinking, research, analysis, and synthesis of information. Projects can be individual, self directed learning or group-based and should align with the learning outcomes. Students are evaluated on the quality of their work, the depth of understanding displayed, and their ability to effectively communicate their ideas. Assignments and projects may be individual or group work. |

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| | <ul style="list-style-type: none"> • Use of case studies or problem-solving exercises to assess how students can apply theoretical knowledge to real-life situations. Students are presented with scenarios that require analysis, critical thinking, and the application of theoretical concepts and they are assessed based on their ability to perform verbal presentations, viva voce examinations, identify and evaluate relevant information, propose solutions, and provide justifications for their choices. • Online quizzes or interactive assessments: Online quizzes or interactive assessments, reflective writing can be used through the Moodle platform, to create quizzes with various question formats. These assessments can be self-paced or timed, and immediate feedback can be provided to students. • 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>Laboratory evaluation consists of assessment of the expected skills and competences, critical thinking, problem-solving and teamwork skills. During the laboratory sessions, students are closely observed as they engage in the assigned tasks and note is taken regarding the actions, approach and any relevant observations that demonstrate their understanding of the subject matter and application of skills. After assessing the laboratory work, constructive feedback is provided to students. Their strengths and areas for improvement are highlighted, linking them back to the learning outcomes to help students understand their progress and guide them towards further development. Depending on the nature of the laboratory work, peer assessment can be incorporated, where students evaluate each other's work based on the established criteria to promote self-reflection, collaboration, and a deeper understanding of the subject matter.</p> <p>Final Exam (50%): comprehensive final exam, to assess students' overall theoretical knowledge. These assessment covers a broader range of topics and learning outcomes from the entire program of study, to gauge the students' understanding and integration of knowledge across different areas.</p> |
| Language | Greek / English |