

ECTS Syllabus

Course title	Therapeutic Exercise				
Course code	MPTR-516				
Course type	Face to face				
Level	2 nd Cycle				
Year / Semester	1 st /2 nd				
Teacher's name	Dr Irene Themistocleous				
ECTS	5	Lectures / week	2hrs	Laboratories / week	
Course purpose and objectives	<p>The main objectives of the course are to:</p> <ul style="list-style-type: none"> • Identify the indications for therapeutic exercise based on the recognized biomechanical, physiological, and psychosocial drivers of the patient's presentations • Use motivational interviewing micro-skills to elicit change talk, align plans with patient values, and negotiate shared goals. • Understand the adaptations of the human body to therapeutic exercise for rehabilitation after an injury or maintenance of health in general • Analyze the needs of the patient for therapeutic exercise specific to their multidimensional presentation, establish therapeutic goals and targets, and create a progressive rehabilitation program to serve those needs • The assessment of barriers to therapeutic exercise and the development of strategies to increase compliance with the exercise program • Apply behavior change theory to identify behavioral and psychological barriers and select appropriate behavior change techniques to improve adherence. • Evaluate precautions, contraindications and unwanted actions of therapeutic exercise and modify the therapeutic program to address them • Design and apply the progression, regression and variation of the exercise program in specific clinical scenarios • Understand how biopsychosocial factors affect participation and compliance in the therapeutic program and utilize cognitive and behavioral strategies to increase compliance • Incorporate resilience-building and stress management strategies into exercise prescriptions for complex and multimorbid cases. • Provide students with the ability to organize and execute a complete 				

	<p>exercise rehabilitation program.</p> <ul style="list-style-type: none"> • Formulate and defend a biopsychosocial case plan that integrates evidence, patient preferences, risk management, and measurable outcomes. 		
<p>Learning outcomes</p>	<p>After completing the course, students will be able to know:</p> <ul style="list-style-type: none"> • The adaptations of the body to any form of therapeutic exercise • The evaluation of functional capacity and aerobic endurance • How to establish short-term and long-term goals for the recovery of the patient's health or injury • How to design of exercise programs according to the goals and the current functional capacity of the individual • How to modify the therapeutic exercise program according to the patient's progress# • How to implement strategies to improve compliance with the program, as well as to integrate it in a more general way of "healthy" living • How to use behavioral and cognitive methods to change the individual's behavior towards a healthier lifestyle • The important role of the physiotherapist as a promoter of a healthy lifestyle with the aim of not only rehabilitation but also prevention 		
<p>Prerequisites</p>	<p>None</p>	<p>Required</p>	<p>None</p>
<p>Course content</p>	<p>Introduction to therapeutic exercise (basic principles of TA, modification of exercise variables and theoretical adaptations to TE).</p> <p>Nervous system and motor control during therapeutic exercise.</p> <p>Production and transfer of energy for performing therapeutic exercise and evaluation of energy efficiency.</p> <p>The circulatory and respiratory system during therapeutic exercise and the improvement of cardiorespiratory capacity.</p> <p>Applied exercise therapy science, techniques and strategies for improving exercise therapy outcomes.</p> <p>Impairments to body functions (reduced cardiorespiratory endurance and muscle performance) and improvement through therapeutic exercise.</p> <p>Body composition and weight control.</p> <p>Therapeutic exercise and health maintenance. Proactive health management</p> <p>Behavior Change Foundations for Exercise Adherence</p> <p>Motivational Interviewing Micro-skills for health professionals</p> <p>Resilience and Stress Management in Rehabilitation</p> <p>Integrating the Biopsychosocial Model into Exercise Prescription</p> <p>Assessment of physical condition/capacity using modern equipment</p> <p>Designing programs in different chronic pain scenarios of upper, lower extremity</p>		

	<p>and spine problems based on the BPS model of care</p> <p>Research Primer: Analyze a simple functional test (example sit to stand, single leg squat, Overhead squat, in line lunge, etc) using FMS-type qualitative scoring in five fellow students. Analyze the same test using any motion analysis equipment from the lab you want (e.g., motion sensors, force platforms, Vicon motion analysis system, Optojump, Delsys EMG). Comment on the strengths and weaknesses of the qualitative and quantitative assessment. Comment on the information gathered and how you can utilize those in the context of therapeutic intervention with exercise (e.g, program design, monitoring, feedback, patient education, etc)</p>																									
Teaching methodology	Face to face, Class lectures, class debates, practical sessions in physio labs, case studies																									
Bibliography	<p style="text-align: center;">Απαιτούμενα Διδακτικά Εγχειρίδια και Βιβλιογραφία:</p> <table border="1" data-bbox="498 814 1565 1751"> <thead> <tr> <th data-bbox="498 814 792 911">Τίτλος</th> <th data-bbox="792 814 1005 911">Συγγραφέας</th> <th data-bbox="1005 814 1192 911">Εκδοτικός Οίκος</th> <th data-bbox="1192 814 1346 911">Έτος</th> <th data-bbox="1346 814 1565 911">ISBN</th> </tr> </thead> <tbody> <tr> <td data-bbox="498 911 792 1115">Therapeutic Exercise Foundations and Techniques (8th ed)</td> <td data-bbox="792 911 1005 1115">Kisner C., Borstad J., & Colby L.</td> <td data-bbox="1005 911 1192 1115">Jaypee Brothers Medical Publishers Pvt.Ltd</td> <td data-bbox="1192 911 1346 1115">2023</td> <td data-bbox="1346 911 1565 1115">9789356961319</td> </tr> <tr> <td data-bbox="498 1115 792 1249">Therapeutic Exercise Prescription</td> <td data-bbox="792 1115 1005 1249">Kim Dunleavy & Amy Kubo Slowik</td> <td data-bbox="1005 1115 1192 1249">Elsevier</td> <td data-bbox="1192 1115 1346 1249">2020</td> <td data-bbox="1346 1115 1565 1249">9780323280532</td> </tr> <tr> <td data-bbox="498 1249 792 1583">Clinical Exercise Pathophysiology for Physical Therapy: Examination, Testing, and Exercise Prescription for Movement-Related Disorders</td> <td data-bbox="792 1249 1005 1583">Coglianes, D.</td> <td data-bbox="1005 1249 1192 1583">Slack Incorporated</td> <td data-bbox="1192 1249 1346 1583">2014</td> <td data-bbox="1346 1249 1565 1583">1617116459</td> </tr> <tr> <td data-bbox="498 1583 792 1751">Integrative and Lifestyle Medicine in Physical Therapy</td> <td data-bbox="792 1583 1005 1751">Ginger Garner & Joe Tatta</td> <td data-bbox="1005 1583 1192 1751">OPTP</td> <td data-bbox="1192 1583 1346 1751">2022</td> <td data-bbox="1346 1583 1565 1751">978-1-942798-30-9</td> </tr> </tbody> </table>	Τίτλος	Συγγραφέας	Εκδοτικός Οίκος	Έτος	ISBN	Therapeutic Exercise Foundations and Techniques (8th ed)	Kisner C., Borstad J., & Colby L.	Jaypee Brothers Medical Publishers Pvt.Ltd	2023	9789356961319	Therapeutic Exercise Prescription	Kim Dunleavy & Amy Kubo Slowik	Elsevier	2020	9780323280532	Clinical Exercise Pathophysiology for Physical Therapy: Examination, Testing, and Exercise Prescription for Movement-Related Disorders	Coglianes, D.	Slack Incorporated	2014	1617116459	Integrative and Lifestyle Medicine in Physical Therapy	Ginger Garner & Joe Tatta	OPTP	2022	978-1-942798-30-9
Τίτλος	Συγγραφέας	Εκδοτικός Οίκος	Έτος	ISBN																						
Therapeutic Exercise Foundations and Techniques (8th ed)	Kisner C., Borstad J., & Colby L.	Jaypee Brothers Medical Publishers Pvt.Ltd	2023	9789356961319																						
Therapeutic Exercise Prescription	Kim Dunleavy & Amy Kubo Slowik	Elsevier	2020	9780323280532																						
Clinical Exercise Pathophysiology for Physical Therapy: Examination, Testing, and Exercise Prescription for Movement-Related Disorders	Coglianes, D.	Slack Incorporated	2014	1617116459																						
Integrative and Lifestyle Medicine in Physical Therapy	Ginger Garner & Joe Tatta	OPTP	2022	978-1-942798-30-9																						

Προτεινόμενα Διδακτικά Εγχειρίδια και Συμπληρωματική Βιβλιογραφία:

Τίτλος	Συγγραφείς	Εκδοτικός Οίκος	Έτος	ISBN
Prescription of therapeutic exercise for chronic low back pain management: a narrative review.	Ganesh, G.S., Khan, A.R., Das, S. et al.	Bull Fac Phys Ther 28, 47	2023	https://doi.org/10.1186/s43161-023-00156-5
Contexts, behavioural mechanisms and outcomes to optimise therapeutic exercise prescription for persistent low back pain: a realist review	Wood L, Foster NE, Dean SG, et al	British Journal of Sports Medicine 58:222-230.	2024	https://doi.org/10.1136/bjsports-2023-107598
Exercise Physiology for Health Fitness and Performance	Smith D., Plowman S. & Ormsbee M.	LWW	2023	978-1975179557
Exercise Prescription: A Case Study Approach to the ACSM Guidelines.	Swain, D. P., & Leutholtz, B. C.	Human Kinetics	2010	9781492574781

Assessment

Class participation, mini projects, mid-term exams, final exams.

Language

English