



STUDY GUIDE

GERIATRIC PHYSIOTHERAPY

Organised by

University of the Peloponnese





1. IDENTIFYING DATA.

• Course Name.	<i>Geriatric Physiotherapy</i>
• Coordinating University.	<i>University of the Peloponnese</i>
• Partner Universities Involved.	-
• Course Field(s).	<i>Musculoskeletal and Neurological Rehabilitation Physiotherapy</i>
• Related Study Programme.	-
• ISCED Code.	<i>091 Health 0915 Therapy and Rehabilitation</i>
• SDG.	<i>SDG 3: Good Health and Well being SDG: 4 Quality Education</i>
• Study Level.	<i>Bachelor (B) study program</i>

• Number of ECTS credits allocated.	<i>3</i>
• Mode of Delivery.	<i>Synchronous and asynchronous mode</i>
• Language of Instruction.	<i>English language</i>
• Course Dates.	<i>Spring semester academic year 2024-2025 (Duration: 1 March 2025 to 1 May 2025/ 6 weeks)</i>
• Schedule of the course.	<i>3 weeks (2h/week) synchronous, 3 weeks asynchronous Thursday 15:00-17:00 CEST</i>
• Key Words.	<i>Rehabilitation, geriatric, elderly, physiotherapy methods, therapeutic exercise, falls prevention, osteoporosis, osteopenia, dementia, mind-body techniques</i>
• Catchy Phrase.	<i>Geriatric Physiotherapy, prevention and rehabilitation for better quality of life!</i>

• Prerequisites and co-requisites.	<i>- English language B2 level - Students should have successfully completed courses such as: (a) Musculoskeletal Physiotherapy (b) Neurological Physiotherapy</i>
• Number of EUNICE students that can attend the Course.	<i>30 students</i>
• Course inscription procedure(s).	<i>Moodle platform</i>

2. CONTACT DETAILS.



• Department.	<i>Physiotherapy, University of the Peloponnese</i>
• Name of Lecturer.	<i>Anna Christakou</i>
• E-mail.	<i>a.christakou@go.uop.gr</i>
• Other Lecturers.	<i>Antonia Marazioti, Epameinondas Lyros, Eleftherios Paraskevopoulos</i>

3. COURSE CONTENT.

The course prepares students for the treatment of older adults, for the prevention and rehabilitation treatment of conditions, injuries and illnesses associated with the aging process.

The course content aims to train students in specific adult issues:

- *epidemiological data on their associated health problems*
- *changes in their mental well-being*
- *using guidelines for the management and self-management of their perceptual, cognitive, mental, psychological, emotional and motor problems*
- *the particular effects of exercise on their physiological, functional and psychosocialemotional adaptations*
- *the role of physiotherapy in improving the quality of life of elderly people*
- *the effectiveness of mind body techniques i.e. mental imagery in motor and psychoemotional problems of elderly (or elderly with dementia)*
- *in the methodological design and development of research documented intervention programs for the treatment and safe participation in their everyday life*

4. LEARNING OUTCOMES.

Students after successfully completing the module they will be able to:

- *realize the impact of aging on the biological structures, motor and cognitive skills of the elderly*
- *have the ability to adapt specialized physiotherapeutic skills to the assessment and rehabilitation of elderly*
- *made intervention programs with exercise, skills training such as safe movement and counselling aimed at preventing falls, improving balance, increasing confidence, reducing fear of falling and promoting an active life of elderly*
- *organize physiotherapeutic interventions for prevention and rehabilitation of common pathologies and disorders of elderly*
- *working appropriately with other health professionals for the elderly, falls clinics, hospital and rehabilitation centers*
- *identify the short- and long-term physiotherapy goals for elderly*
- *be able to collect, interpret and synthesize evaluation results from an osteoporotic, sarcopenic, demented elderly with clinical reasoning*

5. OBJECTIVES.



The main objectives are:

Assessment of mobility, basic skills and balance using up-to-date valid and reliable instruments of elderly Fall risk assessment. Aging and preventing falls. Exercise as the only physiotherapeutic intervention in the risk of falls and in combination with other interventions, such as dietary supplements, ergonomic space modifications, group intervention programs.

Designing and applying n therapeutic exercise programs for prevention and rehabilitation of elderly for maintaining muscle mass, flexibility, strength, balance, neuromuscular coordination, proprioception, quality of life

Functional training at work, in the community, at recreation or integration activities

6. COURSE ORGANISATION.

UNITS

1.	<i>Physiology and pathophysiology of aging. Cardiovascular, respiratory, metabolic, musculoskeletal and neuromuscular characteristics of elderly</i>
2.	<i>Design of Physiotherapeutic Assessment Physiotherapeutic evaluation with the international system S.O.A.P. (Subjective, Objective Assessment, Progress), taking into account multiple physical, neurological ,mental/ psychiatric, functional, and / or social problems, clinical prognosis of elderly</i>
3.	<i>In detail assessment of mobility, basic skills, balance, vision, hearing, cognitive status, mood disorders behavioral and psychological symptoms of dementia using valid and reliable instruments.</i>
4.	<i>Fall risk assessment and aging and preventing falls.</i> <ul style="list-style-type: none"> <i>Exercise as the only physiotherapeutic intervention in the risk of falls and in combination with other interventions, such as dietary supplements, ergonomic space modifications, group intervention program</i>
5.	<i>Design physiotherapy programs (apply techniques / methods/interventions) for prevention and rehabilitation for elderly :</i> <ul style="list-style-type: none"> <i>Therapeutic exercise for</i> <ol style="list-style-type: none"> <i>aerobic fitness / endurance, ROM, flexibility, strength, fitness (eg walking / moving training, increased workload, treadmill, and energy saving guidelines)</i> <i>balance, coordination, proprioception (e.g., fall risk reduction, neuromuscular training or retraining, perceptual training, posture awareness training, sensory training or retraining, standardized, complementary training approaches, exercise-oriented training activity)</i> <ul style="list-style-type: none"> <i>Training of endurance and strength of head, limbs, pelvic floor, neck, muscles, and respiratory muscles (e.g., active, assisted, active and resistance exercise, complementary activity-based exercise approaches)</i> <i>Prevention and rehabilitation on particularly programs for elderly adults i.e. OTAGO etc.</i> <i>Hydrotherapy techniques</i> <i>Practicing self-care and home management</i> <i>Functional training at work, in the community, in recreation activities</i>
6.	<i>Mind- body techniques for elderly</i>



LEARNING RESOURCES AND TOOLS.

On- line MOODLE platform, Articles published PUBMED

PLANNED LEARNING ACTIVITIES AND TEACHING METHODS.

On - line lectures, discussion, problem solving, available study material

7. ASSESSMENT METHODS, CRITERIA AND PERIOD.

Middle period: Mini-quiz, Final Period: Multiple choice questions

OBSERVATIONS.

8. BIBLIOGRAPHY AND TEACHING MATERIALS.

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2. Yi M, Zhang W, Zhang X, Zhou J, Wang Z. *The effectiveness of Otago exercise program in older adults with frailty or pre-frailty: A systematic review and meta-analysis. Arch Gerontol Geriatr.* 2023 Nov;114:105083. doi: 10.1016/j.archger.2023.105083.
3. Kim HI, Kim MC. *Physical therapy assessment tool threshold values to identify sarcopenia and locomotive syndrome in the elderly. Int J Environ Res Public Health.* 2023 Jun 10;20(12):6098. doi: 10.3390/ijerph20126098.
4. Xu F, Soh KG, Chan YM, Bai XR, Qi F, Deng N. *Effects of tai chi on postural balance and quality of life among the elderly with gait disorders: A systematic review. PLoS One.* 2023 Sep 28;18(9):e0287035. doi: 10.1371/journal.pone.0287035.
5. Hernández-Lepe MA, Miranda-Gil MI, Valbuena-Gregorio E, Olivas-Aguirre FJ. *Exercise programs combined with diet supplementation improve body composition and physical function in older adults with sarcopenia: A Systematic Review. Nutrients.* 2023 Apr 21;15(8):1998. doi: 10.3390/nu15081998.
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7. Demirel A, Oz M, Ulger O. *The effect of minimal invasive techniques and physiotherapy on pain and disability in elderly: A retrospective study. J Back Musculoskelet Rehabil.* 2019;32(1):63-70. doi: 10.3233/BMR-171113.
8. Lima CA, Ricci NA, Nogueira EC, Perracini MR. *The Berg Balance Scale as a clinical screening tool to predict fall risk in older adults: a systematic review. Physiotherapy.* 2018 Dec;104(4):383-394. doi: 10.1016/j.physio.2018.02.002.



9. Zhang SK, Gu ML, Zhang T, Xu H, Mao SJ, Zhou WS. *Effects of exercise therapy on disability, mobility, and quality of life in the elderly with chronic low back pain: a systematic review and meta-analysis of randomized controlled trials.* *J Orthop Surg Res.* 2023 Jul 19;18(1):513. doi: 10.1186/s13018-023-03988-y.
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