



IDENTIFYING DATA

(*)Exercicio terapéutico en persoas maiores

Subject	(*)Exercicio terapéutico en persoas maiores			
Code	P05M191V01108			
Study programme	Máster Universitario en Ejercicio terapéutico en fisioterapia			
Descriptors	ECTS Credits 3	Choose Mandatory	Year 1st	Quadmester 1st
Teaching language	#EnglishFriendly Spanish Galician			
Department				
Coordinator	Machado de Oliveira, Iris			
Lecturers	Machado de Oliveira, Iris Rodríguez Fuentes, Gustavo			
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General description	In this matter, it will be deepened in the process physiological process of aging as well as in its prevalent pathological processes. In base on this and in current scientific evidence we will tackle the main functional capacity evaluating tools for the elderly people, well like the design and application of a protocol of prevention/treatment based on the therapeutic exercise.			

Skills

Code	
A2	That the students know how to apply the knowledge acquired and their ability to solve problems in new or little-known environments within broader (or multidisciplinary) contexts related to their area of study.
A3	That the students are able to integrate knowledge and face the complexity of formulating judgments based on information that, being incomplete or limited, includes reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments.
B1	Know how to work in teams that are structured in a uni or multidisciplinary and interdisciplinary way as a professional specialized in Therapeutic Exercise in Physiotherapy.
B2	Incorporate the ethical and legal principles of the physiotherapist profession into professional practice, as well as integrate social and community aspects in decision-making in interventions focused on Therapeutic Exercise in Physiotherapy.
B3	Transmit information in a clear way to the users of the health system, as well as with other professionals.
C11	Adapt therapeutic exercise sessions based on the characteristics of the patient, the pathology and the environment.
C12	Apply a protocol for measuring the functional capacity of patients based on their characteristics, as well as the pathology in the different areas of specialization.
C14	Design and apply therapeutic exercise programs in the elderly.
D1	Ability to understand the meaning and application of the gender perspective in the different fields of knowledge and in professional practice with the aim of achieving a fairer and more equal society.
D5	Recognition of diversity and multiculturalism.
D6	Creativity, entrepreneurial spirit and adaptation to new situations.
D8	Maintain an attitude of learning and improvement.

Learning outcomes

Expected results from this subject	Training and Learning Results
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To know how affects the process of aging to the conditions of health of elderly people.	A3 B1 D1 D5 D8
To know the prevalent pathology in elderly people and its basic characteristics.	A2 A3 B1 D1 D5 D8
To be able to assess the functional capacity of elderly patients that goes to receive treatment based on therapeutic exercise.	A3 B1 B3 C12 D1 D5 D8
To design and apply programs of therapeutic exercise for the prevention and treatment of different pathologies and clinical situations of elderly people.	A2 A3 B2 B3 C11 C14 D1 D5 D6

Contents

Topic

- Process of aging and health.	It will treat the thematic related to the physiological, functional, and cognitive changes associated with the aging process and how these changes can drive the development of the prevalent pathologies in elderly people.
- Prevalent pathology in elderly people.	It will treat the thematic related to the prevalent pathologies among elderly people based on the different corporal systems.
- Instruments of assessment of the functional capacity of the elderly people related to different pathological processes.	They will present the main tools used nowadays for the evaluation of the functional capacity of elderly people with examples based on different pathologies.
- Scientific evidence on therapeutic exercise in elderly people.	Presentation of a compilation of the up-to-date evidence on the effect of the therapeutic exercise in elderly people with different pathologies.
- Programs of therapeutic exercise for the prevention and the treatment of pathologies in elderly people.	Presentation, examples, design, and application of different protocols of therapeutic exercise directed to the prevention and treatment of different pathologies in elderly people based on his/her functionality and clinical status.

Planning

	Class hours	Hours outside the classroom	Total hours
Lecturing	12	24	36
Laboratory practical	12	12	24
Portfolio / dossier	0	3	3
Essay	0	10	10
Case studies	0	2	2

*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies

	Description
Lecturing	Exhibition by part of the professor of the contents on Therapeutic Exercise in Elderly People, in addition to debates on selected case studies.
Laboratory practical	Activities of application of the knowledge and concrete situations and acquisition of advanced skills in the functional evaluation of the elderly people that present different pathological processes and designing and application of intervention protocols in Therapeutic Exercise applied to this population.

Personalized assistance

Methodologies	Description
Lecturing	The personalized attention will be centered on the solution of doubting about the theoretical subjects that can have the students, and on orienting his/her efforts in the matter. It can be developed in face-to-face guiding sessions in the respective lecturer's office or virtually by Remote Campus in the respective virtual lecturer's offices after a previous agreement between the interested student and lecturers.
Laboratory practical	The personalized attention will be centered on the solution of doubting about the practical subjects that can have the students, and on orienting his/her efforts in the matter. It can be developed in face-to-face guiding sessions in the respective lecturer's office or virtually by Remote Campus in the respective virtual lecturer's offices after a previous agreement between the interested student and lecturers.
Tests	Description
Portfolio / dossier	The personalized attention will be centered on solving doubts, orienting the development of the dossier to make in the matter, and carrying register and value the made by the students. It can be developed in face-to-face guiding sessions in the respective lecturer's office or virtually by Remote Campus in the respective virtual lecturer's offices after a previous agreement between the interested student and lecturers.
Essay	The personalized attention will be centered on solving doubts, orienting the work to make in the matter, and carrying register and value the made by the students of the same group and also of individual form for each member. It can be developed in face-to-face guiding sessions in the respective lecturer's office or virtually by Remote Campus in the respective virtual lecturer's offices after a previous agreement between the interested student and lecturers.
Case studies	The personalized attention will be centered on solving doubts, orienting the development of the report of the case study to make in the matter, and carrying the register and value the made by the students. It can be developed in face-to-face guiding sessions in the respective lecturer's office or virtually by Remote Campus in the respective virtual lecturer's offices after a previous agreement between the interested student and lecturers.

Assessment				
Description		Qualification	Training and Learning Results	
Portfolio / dossier	The students will have to draft a dossier in which it collects the description of one of the assessment tools of the functional capacity of the elderly people including at least three evidences (publications) of his use in elderly people and a final comment in which present fortresses of the tool and limitations of the same, with reference to his application or to the results that generates. The instructions about the preparation and terms of delivery of this dossier will be published in the Moovi teaching platform in the specific space of the matter.	30	A3 B1 B3 C12 D1 D5 D8	
Essay	The students in groups of 4-5 students will have to choose a prevalent pathology among the elderly people and make a research of at least 3 clinical studies that employ some modality of therapeutic exercise in said pathology. It will deliver an archive in PPT with audio associated in which it presents the results by graphic form of the studies selected and his main characteristics in addition to presenting some brief conclusions of the analysis made.	50	A2 A3 B1 B2 B3 C11 C14 D1 D5 D6 D8	
Case studies	In groups of 2-3 students and following an example of clinical case developed in the face-to-face sessions, the students have to present a different proposal of functional assessment or a different proposal of protocol of therapeutic exercise allocated to diminish the functional limitations presented by the patient. The most detailed orientations of the development of the case and form of delivery will be publish in the Moovi platform of teaching in the specific space of the subject.	20	A2 A3 B1 B2 B3 C11 C12 C14 D1 D5 D6 D8	

Other comments on the Evaluation

Sources of information

Basic Bibliography

Linguori, **Manual ACSM para la valoración y prescripción del ejercicio**, 9788418563348, 2021

Houglum, **Therapeutic Exercise for Musculoskeletal Injuries**, 9781450468831, 2016

Rose DJ, **Equilibrio y Movilidad con Personas Mayores**, 8480198389, 2005

Complementary Bibliography

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Mende et al, **Progressive machine-based resistance training for prevention and treatment of sarcopenia in the oldest old: A systematic review and meta-analysis**, 10.1016/j.exger.2022.111767, 2022

Kim & Yeun, **Effects of Resistance Training on C-Reactive Protein and Inflammatory Cytokines in Elderly Adults: A Systematic Review and Meta-Analysis of Randomized Controlled Trials**, 10.3390/ijerph19063434, 2022

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Macdonald et al, **Primary care interventions to address physical frailty among community-dwelling adults aged 60 years or older: A meta-analysis**, 10.1371/journal.pone.0228821, 2020

Taylor et al, **Active Video Games for Improving Physical Performance Measures in Older People: A Meta-analysis**, 10.1519/JPT.0000000000000078, 2018

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Frost et al, **Health promotion interventions for community-dwelling older people with mild or pre-frailty: a systematic review and meta-analysis**, 10.1186/s12877-017-0547-, 2017

Dodds et al, **Global variation in grip strength: a systematic review and meta-analysis of normative data**, 10.1093/ageing/afv192, 2016

Pamoukdjian et al, **Measurement of gait speed in older adults to identify complications associated with frailty: A systematic review**, 10.1016/j.jgo.2015.08.006, 2015

Barry et al, **Is the Timed Up and Go test a useful predictor of risk of falls in community dwelling older adults: a systematic review and meta-analysis**, 10.1186/1471-2318-14-14, 2014

Giné-Garriga et al, **Physical Exercise Interventions for Improving Performance-Based Measures of Physical Function in Community-Dwelling, Frail Older Adults: A Systematic Review and Meta-Analysis**, 10.1016/j.apmr.2013.11.007, 2014

Cadore et al, **Effects of Different Exercise Interventions on Risk of Falls, Gait Ability, and Balance in Physically Frail Older Adults: A Systematic Review**, 10.1089/rej.2012.1397, 2013

Savva et al, **Using Timed Up-and-Go to Identify Frail Members of the Older Population**, 10.1093/gerona/gls190, 2013

Guralnik et al, **A short physical performance battery assessing lower extremity function: association with self-reported disability and prediction of mortality and nursing home admission**, Journal of Gerontology Mar 1;49(2):M85-94, 1994

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Kisner et al, **Therapeutic Exercises: foundations and techniques**, 9780803658509, 2018

Hall & Brody, **Ejercicio terapéutico: Recuperación funcional**, 84-8019-858-3, 2006

Ministerio de Sanidad, **Documento de consenso sobre prevención de fragilidad y caídas en la persona mayor**, NIPO: 680-14-143-0, 2014

Ministerio de Sanidad, **Actualización del documento de consenso sobre prevención de la fragilidad en la persona mayor**, 2022

Unión Europea, **Vivifrail**, <https://vivifrail.com/es/documentacion/>, 2022

Recommendations

Subjects that continue the syllabus

(*)Prácticas externas/P05M191V01207

Subjects that are recommended to be taken simultaneously

(*)Bases anatomofuncionais no exercício terapêutico/P05M191V01101

(*)Exercício terapêutico no tratamento de enfermidades neurodegenerativas e na diversidade funcional/P05M191V01107

(*)Fundamentos do exercício terapêutico e design de programas/P05M191V01102