



(*Facultade de Fisioterapia

(*Presentación

(*)
As guías docentes recollen información relevante das materias que compoñen o plan de estudos do Grao en Fisioterapia.

(*Equipo Decanal Centro e Directivo dos Departamentos

(*)
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(*)Páxina web

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<http://fisioterapia.uvigo.es/>

(*)Localización

Subjects**Year 1st**

Code	Name	Quadmester	Total Cr.
P05M191V01101		1st	3
P05M191V01102		1st	3
P05M191V01103		1st	9
P05M191V01104		1st	3
P05M191V01105		1st	3
P05M191V01106		1st	3
P05M191V01107		1st	3
P05M191V01108		1st	3
P05M191V01201		2nd	3
P05M191V01202		2nd	3
P05M191V01203		2nd	3
P05M191V01204		2nd	3
P05M191V01205		2nd	3
P05M191V01206		2nd	3
P05M191V01207		2nd	9
P05M191V01208		2nd	9

IDENTIFYING DATA**(*)Bases anatomofuncionais no exercicio terapéutico**

Subject	(*)Bases anatomofuncionais no exercicio terapéutico			
Code	P05M191V01101			
Study programme	Máster Universitario en Ejercicio terapéutico en fisioterapia			
Descriptors	ECTS Credits	Type	Year	Quadmester
	3	Mandatory	1st	1st
Teaching language	Spanish			
Department				
Coordinator	Padín Iruegas, María Elena			
Lecturers	Durán Barbosa, Rafael Justo Cousiño, Lorenzo Antonio Padín Iruegas, María Elena			
E-mail	mepadin@uvigo.es			
Web				
General description	In this subject will tackle the implications that has the exercise in the anatomy and in the Physiology of the human body			

Skills

Code	
CB5	That students have the learning skills that allow them to continue studying in a way that will be largely self-directed or autonomous.
CG6	Develop learning skills that allow them to continue studying in a way that will be largely self-directed or autonomous.
CE1	Incorporate scientific research and evidence-based practice as a professional culture in the practice of therapeutic exercise.
CE9	Understand the complexity of the effects of therapeutic exercise at the cardiovascular, respiratory, endocrine, neurological and skeletal muscle levels in different population groups.
CT1	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.
CT4	Knowledge of statistics applied to Health Sciences, or to the field of study related to the field of study.
CT8	Maintain an attitude of learning and improvement.

Learning outcomes

Learning outcomes	Competences
Knowledges the concepts advanced of Kinesitherapy and therapeutic exercise.	CB5
	CG6
	CE1
	CE9
	CT1
	CT4
Know the effects that the exercise has on the device locomotor.	CB5
	CG6
	CE1
	CE9
	CT1
	CT4
Identify the morphology and physiology changes induced by the exercise.	CB5
	CG6
	CE1
	CE9
	CT1
	CT4
	CT8

Know the clinical applications of the exercise and his pathological limitations	CB5 CG6 CE1 CE9 CT1 CT4 CT8
Know apply properly the knowledges of the anatomy of the knee, the anatomy of the shoulder and the anatomy of the vertebral column for the prescription of the therapeutic exercise.	CB5 CG6 CE1 CE9 CT1 CT4 CT8
Study the physiological mechanisms of adaptation to the physical exercise, as well as the energetic answers, muscular, cardiovascular and respiratory.	CB5 CG6 CE1 CE9 CT1 CT4 CT8

Contents

Topic	
Anatomy and Exercise	1- Concepts advanced. 2- Effects of the physical exercise in the device locomotor 3- anatomical Changes-physiological induced by the physical exercise 4- The shoulder 5- The knee 6- Column
Physiology	7- Introduction: The Physiology and the Exercise 8-metabolic Appearances of the exercise. 9-muscular Answers to the exercise. 10-cardiovascular Answer to the exercise. 11-respiratory Answer to the exercise. 12-Other sistematic answers to the exercise. 13-Other appearances related with the exercise.

Planning

	Class hours	Hours outside the classroom	Total hours
Lecturing	17	39	56
Problem solving	5	3	8
Objective questions exam	1	0	1
Essay	1	9	10

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

Methodologies

	Description
Lecturing	The lecturers structures and/or explains the contents of the subject.
Problem solving	Activity in which they formulate tasks related with the subject of individual way and/or collective

Personalized assistance

Methodologies	Description
Lecturing	Orientation to the students and resolution of doubts on the contents of the matter by means of tutorships face-to-face way, email and/or remote campus.
Problem solving	Orientation to the students and resolution of doubts on the contents of the matter by means of tutorships face-to-face way, email and/or remote campus.

Tests	Description
Essay	Orientation to the students and resolution of doubts on the work of the matter by means of tutorships face-to-face way, email and/or remote campus.

Assessment

Description	Qualification	Evaluated	Competences
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Objective questions exam	Examination type test of 5 options without negative qualification. To approve the theoretical examination is necessary to obtain 70% of the correct answers	70	CB5	CG6	CE1 CE9	CT1 CT4 CT8
Essay	Realisation of a work of individual form or in group	30	CB5	CG6	CE1 CE9	CT1 CT4 CT8

Other comments on the Evaluation

Systems of evaluation. The theoretical knowledges purchased by the students will evaluate by means of an examination type test of 5 options without negative qualification. To approve the theoretical examination is necessary to obtain 70% of the correct answers; it is necessary to surpass the theoretical examination to approve the subject. Realisation of a work will be of 30%. It IS necessary to present it to approve the subject. The same criterion will keep in the successive announcements.

Sources of information

Basic Bibliography

-Jürgen Weineck:, **Anatomía Deportiva**, 5ª,

Mario Lloret Riera, **Anatomía Aplicada a la Actividad Física y Deportiva**,

-Michel Dufour, **Biomecánica Funcional. Miembros, Cabeza, Tronco**, 2ª, 2018

Ken Ashwell, **Manual de Anatomía del Ejercicio**., Paidotribo., 2013

Hamill:, **Biomecánica. Bases del Movimiento Humano**, Wolters Kluwer España, 2021

Andrew Biel, **Guía del Cuerpo Humano en Movimiento**, 2ª, Panamericana, 2021

Michel Dufour, **Los Músculos. Anatomía Clínica de las Extremidades**, Paidotribo., 2021

John Brewer, **Anatomía del Cuerpo En Movimiento**, Librero, 2018

Alberto Manuel Ángeles Castellanos, **Morfología Humana**, Panamericana, 2022

Complementary Bibliography

FOX., **Fisiología del deporte**., Panamericana., 1984.

MONOD - ELANDROIS., **Manual de Fisiología del deporte**, Masson, 1986

CIRO., **Fisiología deportiva**., El Ateneo., 1987.

MOREHOUSE - MILLER., **Fisiología del ejercicio**., El Ateneo., 1986.

LAMB. ., **Fisiología del ejercicio**, Edit. Augusto Pila Teleña., 1985.

BOVE - LOWENTHAL. ., **Medicina del ejercicio**, El Ateneo., 1987.

GOLDBERG - ELLIOT., **Fisiología y fisiopatología en el ejercicio físico**., Interamericana., 1989.

GUILLET - GENETY., **Manual de medicina del deporte**, Toray Masson., 1975.

Recommendations

Other comments

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IDENTIFYING DATA**(*)Fundamentos do exercicio terapéutico e deseño de programas**

Subject	(*)Fundamentos do exercicio terapéutico e deseño de programas			
Code	P05M191V01102			
Study programme	Máster Universitario en Ejercicio terapéutico en fisioterapia			
Descriptors	ECTS Credits	Type	Year	Quadmester
	3	Mandatory	1st	1st
Teaching language	Spanish			
Department				
Coordinator	Abalo Núñez, María del Rocío			
Lecturers	Martín Orive, Francisco José			
E-mail	rocioabalo@uvigo.es			
Web				
General description	With this subject the students will learn to design and schedule a program of therapeutic exercise in different populations and contexts			

Skills

Code	
CB1	Possess and understand knowledge that provides a foundation or opportunity to be original in the development and/or application of ideas, often in a research context.
CB2	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.
CB4	That the students know how to communicate their conclusions and the knowledge and ultimate reasons that support them to specialized and non-specialized audiences in a clear and unambiguous way.
CG2	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.
CG3	Transmit information in a clear way to the users of the health system, as well as with other professionals.
CG6	Develop learning skills that allow them to continue studying in a way that will be largely self-directed or autonomous.
CE4	Analyze, program and apply movement as a therapeutic measure, promoting the participation of the patient/user in the process.
CE6	Ability to solve problems in new and imprecisely defined environments to identify the most appropriate treatment based on therapeutic exercise in the different processes of alteration, prevention and health promotion, as well as integration with other professionals for the benefit of health of the patient/user.
CE11	Adapt therapeutic exercise sessions based on the characteristics of the patient, the pathology and the environment.
CT2	Ability to communicate orally and in writing in the Galician language.
CT8	Maintain an attitude of learning and improvement.

Learning outcomes

Learning outcomes	Competences
Know all the appearances related with the therapeutic exercise	CB4 CG3 CT8
Know design programs of therapeutic exercise	CB1 CB2 CG2 CG3 CE4 CE11 CT2
Adapt the exercises to the person in function of the previous evaluations	CB1 CG6 CE4 CE6 CE11 CT2 CT8

Contents	
Topic	
- Bases of the therapeutic exercise	-
- Design of a program of therapeutic exercise	-
- Therapeutic exercise and physical capacities	-
- Evaluation of the patient	-
- Control engine and therapeutic exercise	-

Planning			
	Class hours	Hours outside the classroom	Total hours
Introductory activities	1	0	1
Lecturing	8	16	24
Case studies	5	12	17
Problem solving	5	12	17
Mentored work	2	11	13
Essay	2	0	2
Case studies	1	0	1

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

Methodologies	
	Description
Introductory activities	Activity directed the presentation of the matter as well as gather information of the students
Lecturing	Exhibition of the contents by part of the/the educational. Theoretical classes-participatory employing the debate where boost the active participation of the students employing half audiovisual
Case studies	Analysis of cases proposed by the teacher
Problem solving	Activities in which the students resolves a situation
Mentored work	Activity directed to the design of programs of therapeutic exercise

Personalized assistance	
Methodologies	Description
Introductory activities	The personalised attention will be centred in the resolution of doubts that can have the students in relation to organisation of the subject
Lecturing	The personalised attention will be centred in the resolution of doubts that can have the students in relation with the subject through tutorships face-to-face, email and/or remote campus.
Tests	Description
Essay	The personalised attention will be centred in the resolution of doubts that can have the students in relation to the work of face-to-face way or through the remote campus
Case studies	The personalised attention will be centred in the resolution of doubts that can have the students in the sessions of collective way and/or individual

Assessment						
	Description	Qualification	Evaluated Competences			
Essay		80	CB1 CB4	CG2 CG3 CG6	CE4	CT2
Case studies		20	CB2 CB4	CG2 CG3 CG6	CE4 CE6 CE11	CT8

Other comments on the Evaluation

Sources of information

Basic Bibliography

Moore GE, Durstine JL, Painte PL, **ACSM's Exercise Management for Persons with chronic diseases and disabilities.**, Human Kinetics, 2016

American College of Sports Medicine, **ACSM's Guidelines for Exercise Testing and Prescription (American College of Sports Medicine)**, 978-1496339072, 10, Lippincott Williams and Wilkins, 2017

American College of Sports Medicine, **ACSM's Resources for the Personal Trainer**, 978-1496322890, 5, Lippincott Williams and Wilkins, 2017

Armando E., Pancorbo Sandoval, **Medicina y ciencias del deporte y actividad física**, 978-84-8473-684-4, Ergon, 2008

Complementary Bibliography

Kisner, C., **Ejercicio terapéutico: Fundamentos y técnicas.**, 978-950-06-0096-5, Panamericana, 2010

Spring, H, **Teoría y práctica del ejercicio terapéutico : (movilidad, fuerza, resistencia, coordinación)**, 84-8019-497-9, Paidotribo, 2000

Garber CE, Blissmer B, Deschenes MR, Franklin BA, Lamonte MJ, Lee IM, Nieman DC, Swain DP, **Quantity and quality of exercise for developing and maintaining cardiorespiratory, musculoskeletal, and neuromotor fitness in apparently healthy adults: guidance for prescribing exercise**, DOI: 10.1249/MSS.0b013e318213fefb, Med Sci Sports Exerc, 2011

Recommendations

IDENTIFYING DATA				
(*)Metodoloxía da investigación				
Subject	(*)Metodoloxía da investigación			
Code	P05M191V01103			
Study programme	Máster Universitario en Ejercicio terapéutico en fisioterapia			
Descriptors	ECTS Credits	Type	Year	Quadmester
	9	Mandatory	1st	1st
Teaching language	Spanish Galician			
Department				
Coordinator	González Represas, Alicia			
Lecturers	González Represas, Alicia Maceiras García, María Lourdes			
E-mail	alicia@uvigo.es			
Web	http://https://moovi.uvigo.gal/			
General description	The Research Methodology course describes the context and legislation in clinical-epidemiological research, the methodology to be followed in the design of clinical-epidemiological research, development of research projects, data analysis and communication of results.			

Skills	
Code	
CB1	Possess and understand knowledge that provides a foundation or opportunity to be original in the development and/or application of ideas, often in a research context.
CB2	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.
CB3	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.
CG2	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.
CG4	Acquire advanced scientific training in research in Therapeutic Exercise in Physiotherapy.
CG6	Develop learning skills that allow them to continue studying in a way that will be largely self-directed or autonomous.
CE1	Incorporate scientific research and evidence-based practice as a professional culture in the practice of therapeutic exercise.
CE2	Apply the ethical and legal bases of the profession in the field of research.
CE7	Evaluate and select the appropriate scientific theory and the precise methodology to design a research project based on therapeutic exercise.
CE8	Know how to use methods and models of statistical analysis, interpret and communicate the results of clinical research to specialized audiences through different media (face-to-face, online or social networks).
CT2	Ability to communicate orally and in writing in the Galician language.
CT4	Knowledge of statistics applied to Health Sciences, or to the field of study related to the field of study.
CT8	Maintain an attitude of learning and improvement.

Learning outcomes	
Learning outcomes	Competences
LO1: Know how to design and carry out a clinical-epidemiological research study.	CB1 CB2 CB3 CG2 CG4 CE1 CE2 CE7 CE8 CT2 CT4 CT8

LO2: Know how to write a clinical research project.

CB1
CB2
CB3
CG2
CG4
CG6
CE1
CE2
CE7
CE8
CT2
CT4
CT8

LO3: Know how to interpret and communicate the results of clinical research.

CB1
CB2
CB3
CG4
CG6
CE1
CE7
CE8
CT2
CT4
CT8

Contents

Topic	
Theoretical content:	1.1. Epidemiology and health-related phenomena.
1. Advanced methods in epidemiology.	1.2. Measures of frequency and effect of the disease. 1.3. Biases and confounding factors.
2. Clinical-epidemiological studies.	2.1. Descriptive. 2.2. Analytics. 2.3. Intervention
3. Advanced methods and models of Statistical Data Analysis.	3.1. Preparation of data in clinical research 3.1.1. Sources and Instruments for obtaining data 3.1.2. Sampling. Different sampling techniques. Assignment of subjects to treatments 3.2. Linear models 3.2.1. Linear, simple and multiple regression models 3.2.2. ANOVA models. ANCOVA models 3.2.3. Logistic regression models 3.3. Introduction to Meta-analysis 3.3.1. General concepts. effect size 3.3.2. Fixed Effects and Random Effects Model 3.3.3. The problem of heterogeneity 3.3.4. Publication bias
5. Ethics and legislation in health research.	5.1. Basic ethical principles. 5.2. Ethical requirements in research. 5.3. Research ethics committee. 5.4. Ethics and scientific publication. 5.6. Health research regulations
6. Design and clinical research projects.	6.1. Design and planning of the research project. 6.2. Resources to develop a research project. 6.3. Research project management.
7. Communication of clinical research.	7.1. Scientific communication. 7.1.1. Scientific communication media. 7.1.2. Language in scientific communication. 7.1.3. Resources. 7.2. Scientific publication.
Practical contents	1.1. Analysis and interpretation of results
1. Advanced methods of epidemiology.	
2. Clinical-epidemiological studies.	2.1. Design of clinical-epidemiological studies
3. Advanced statistical data analysis methods and models.	3.1. Linear models. Interpretation of results. 3.2. Meta-analysis. Interpretation of results.
4. Design and clinical research projects.	4.1. Design of research projects. 4.2. Management of research projects.
5. Communication of clinical research.	5.1. Scientific communication.

Planning			
	Class hours	Hours outside the classroom	Total hours
Lecturing	24	50	74
Case studies	15	10	25
Collaborative Learning	6	0	6
Discussion Forum	0	4	4
Practices through ICT	12	60	72
Problem solving	9	10	19
Mentored work	0	19	19
Objective questions exam	2	0	2
Problem and/or exercise solving	3	0	3
Essay	1	0	1

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

Methodologies	
	Description
Lecturing	Presentation by the teacher of the contents on the subject object of study, theoretical bases and / or guidelines of a work, exercise that the student has to develop.
Case studies	Analysis of a fact, problem or real event in order to know it, interpret it, solve it, generate hypotheses, test data, reflect, complete knowledge, diagnose it and train in alternative solution procedures.
Collaborative Learning	It includes a group of teaching procedures that start from the organization of the class in small mixed and heterogeneous groups where the students work in a coordinated way with each other to develop academic tasks and delve into their own learning.
Discussion Forum	Activities developed in a virtual environment in which diverse and current topics related to the academic and / or professional field are discussed.
Practices through ICT	Knowledge application activities in a specific context and the acquisition of basic and procedural skills in relation to the subject, through ICT.
Problem solving	Activity in which problems and / or exercises related to the subject are formulated. The student must develop the analysis and resolution of problems and / or exercises independently.
Mentored work	The student, individually or in groups, prepares a document on the subject or prepares seminars, research, reports, essays, summaries of readings, lectures, etc.

Personalized assistance	
Methodologies	Description
Lecturing	In addition to the attention to students in the established tutorials and depending on the topic to be addressed, students will also be served via email and the remote campus platform at the times available and agreed by both parties. The aim of personalized attention will be to answer any questions that may arise regarding the subject and / or to advise in academic and professional matters in those cases that so request.
Case studies	In addition to the attention to students in the established tutorials and depending on the topic to be addressed, students will also be served via email and the remote campus platform at the times available and agreed by both parties. The aim of personalized attention will be to answer any questions that may arise regarding the subject and / or to advise in academic and professional matters in those cases that so request.
Collaborative Learning	In addition to the attention to students in the established tutorials and depending on the topic to be addressed, students will also be served via email and the remote campus platform at the times available and agreed by both parties. The aim of personalized attention will be to answer any questions that may arise regarding the subject and / or to advise in academic and professional matters in those cases that so request.
Practices through ICT	In addition to the attention to students in the established tutorials and depending on the topic to be addressed, students will also be served via email and the remote campus platform at the times available and agreed by both parties. The aim of personalized attention will be to answer any questions that may arise regarding the subject and / or to advise in academic and professional matters in those cases that so request.
Mentored work	In addition to the attention to students in the established tutorials and depending on the topic to be addressed, students will also be served via email and the remote campus platform at the times available and agreed by both parties. The aim of personalized attention will be to answer any questions that may arise regarding the subject and / or to advise in academic and professional matters in those cases that so request.

Discussion Forum In addition to the attention to students in the established tutorials and depending on the topic to be addressed, students will also be served via email and the remote campus platform at the times available and agreed by both parties. The aim of personalized attention will be to answer any questions that may arise regarding the subject and / or to advise in academic and professional matters in those cases that so request.

Assessment						
	Description	Qualification	Evaluated Competences			
Objective questions exam	The exam will consist of a set of clear and precise questions, to which the student must respond by choosing an option from a series of alternatives.	40	CB1 CB3	CG2 CG4 CG6	CE1 CE7 CE8	CT2 CT4 CT8
Problem and/or exercise solving	The student must be able to recognize, describe, organize and analyze the constitutive elements of the problems posed to devise strategies that allow obtaining, in a reasoned way, a contrasted solution and according to certain pre-established criteria. The student's ability to analyze and solve problems and/or exercises autonomously will be assessed.	40	CB2	CG2 CG4 CG6	CE1 CE7 CE8	CT2 CT4 CT8
Essay	The student must carry out a work in which the contents of the subject will be integrated.	20	CB1 CB3	CG2 CG4 CG6	CE1 CE2 CE7 CE8	CT2 CT4 CT8

Other comments on the Evaluation

Problem solving will account for 40% of the final grade and will consist of solving practical exercises that will be structured in two blocks and must be approved independently.

The objective test represents 40% of the final grade and will consist of a multiple choice test that is structured in two blocks and must be passed independently.

To pass the subject it is necessary to pass the resolution of problems, the objective test and the work of the subject independently.

Considerations:

Students who take this subject are required to conduct themselves responsibly and honestly. Any form of fraud (i.e. copying and / or plagiarism) aimed at falsifying the level of knowledge or skill achieved by a student in any type of test, report or work designed for this purpose is considered inadmissible. Fraudulent conduct may result in the subject being suspended for a full course. will keep an internal record of these actions so that, in the event of recidivism, the opening of a disciplinary case can be requested in the rectory.

Ethical commitment:

The student must exhibit appropriate ethical behavior. In the event of unethical behavior (copying of seminars, plagiarism of work, and use of unauthorized electronic equipment, etc.) that impede the proper development of teaching activities, the student will be considered not to meet the requirements necessary to pass the subject, and in this case your qualification in the current academic year will be suspended (0.0). The use of any electronic device during the assessment tests will not be permitted unless expressly authorized. The fact of introducing an unauthorized electronic device in the examination room will be considered a reason for not passing the subject in the current academic year and the overall grade will be suspended (0.0).

Image and / or audio recording: Unless expressly authorized by the teacher, it will not be allowed to record, in whole or in part, both sound and image, the master classes, seminars or practices of the subject, in accordance with the provisions of the Property Law Intellectual, the Organic Law for the Protection of Personal Data and the Organic Law for the Civil Protection of the Right to Honor, Personal and Family Privacy and Self-Image. Depending on the subsequent use, the non-consensual recording may give rise to civil, disciplinary, administrative and, eventually, criminal liability.

Sources of information

Basic Bibliography

Gerard E. Dallal., **The little handbook of statistical practice**, <http://www.jerrydallal.com/LHSP/LHSP.htm>,
 Macchi, R. L., **Introducción a la estadística en ciencias de la salud**, 9789500696357, 3, Panamericana, 2019
 Unidad de Bioestadística Clínica del Hospital Universitario Ramón y Cajal, **Material docente de la Unidad de Bioestadística Clínica del Hospital Universitario Ramón y Cajal**, http://www.hrc.es/bioest/M_docente.html,

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- Dupont, W. D., **Statistical Modeling for Biomedical Researchers**, 978-0521614801, 2, Cambridge University Press, 2002
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Recommendations

IDENTIFYING DATA**(*)Ejercicio terapéutico na prevención e tratamento de enfermidades cardiovasculares**

Subject	(*)Ejercicio terapéutico na prevención e tratamento de enfermidades cardiovasculares			
Code	P05M191V01104			
Study programme	Máster Universitario en Ejercicio terapéutico en fisioterapia			
Descriptors	ECTS Credits	Type	Year	Quadmester
	3	Mandatory	1st	1st
Teaching language	#EnglishFriendly Spanish Galician			
Department				
Coordinator	González Represas, Alicia			
Lecturers	González Represas, Alicia			
E-mail	alicia@uvigo.es			
Web	http://https://moovi.uvigo.gal/			
General description	The subject Therapeutic exercise in the prevention and treatment of cardiovascular diseases is structured in two fundamental parts. In a first part, the cardiovascular responses in exercise as well as in cardiovascular diseases as well as in the evaluation of the cardiovascular system are delved into, to then address in a second part the prescription of therapeutic and functional exercise in the prevention and treatment of diseases. cardiovascular.			

Skills

Code	
CB2	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.
CB4	That the students know how to communicate their conclusions and the knowledge and ultimate reasons that support them to specialized and non-specialized audiences in a clear and unambiguous way.
CG1	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.
CG2	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.
CG3	Transmit information in a clear way to the users of the health system, as well as with other professionals.
CE4	Analyze, program and apply movement as a therapeutic measure, promoting the participation of the patient/user in the process.
CE6	Ability to solve problems in new and imprecisely defined environments to identify the most appropriate treatment based on therapeutic exercise in the different processes of alteration, prevention and health promotion, as well as integration with other professionals for the benefit of health of the patient/user.
CE9	Understand the complexity of the effects of therapeutic exercise at the cardiovascular, respiratory, endocrine, neurological and skeletal muscle levels in different population groups.
CE10	Design and apply therapeutic exercise programs in the prevention and treatment of pathologies or musculoskeletal, cardiovascular, respiratory, endocrine, neurodegenerative diseases, in urogynecological and obstetric dysfunctions, and oncological processes.
CE12	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.
CT1	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.
CT5	Recognition of diversity and multiculturalism.
CT8	Maintain an attitude of learning and improvement.

Learning outcomes

Learning outcomes	Competences
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LO1: Know the cardiovascular effects of exercise.	CB2 CG3 CE9 CT1 CT5 CT8
LO2: Carry out and/or interpret the results of the cardiovascular assessment.	CB2 CB4 CG1 CG2 CG3 CE6 CE9 CE12 CT1 CT5 CT8
LO3: Know and apply risk stratification systems.	CB4 CG1 CG3 CE12 CT8
LO4: Design and apply therapeutic exercise programs in prevention and treatment of pathologies and cardiovascular diseases.	CB2 CB4 CG1 CG2 CG3 CE4 CE6 CE9 CE10 CT1 CT5 CT8
LO5: Know and apply safety, control and cardiovascular monitoring systems.	CB2 CB4 CG1 CG2 CG3 CE4 CE6 CE10 CT8

Contents

Topic	
Theoretical content:	1.1. Structure and function of the cardiovascular system.
1. Functional anatomy and cardiovascular hemodynamics.	1.2. cardiovascular hemodynamics. 1.3. heart disease 1.4. Cardiovascular response to exercise.
3. Cardiovascular evaluation.	3.1. Cardiovascular clinical examination. 3.2. Cardiovascular tests. 3.3. Risk factor.
4. Prescription of cardiovascular therapeutic exercise.	4.1. Therapeutic exercise prescription. 4.2. Safety, control and cardiovascular monitoring during exercise. 4.3. emergency action.
5. Design of therapeutic and functional exercise programs in the prevention and treatment of pathologies or cardiovascular diseases.	5.1. Design of programs for the prevention and promotion of cardiovascular health. 5.2. Design of therapeutic and functional exercise programs in the treatment of pathologies or cardiovascular diseases.
Practical content:	1.1. Risk stratification systems.
1. Cardiovascular evaluation	1.2. Cardiovascular evaluation.
2. Prescription of therapeutic exercise in the prevention and treatment of cardiovascular diseases.	2.1. Design of therapeutic and functional exercise programs in the prevention and treatment of pathologies or cardiovascular diseases.

Planning

	Class hours	Hours outside the classroom	Total hours
Introductory activities	1	0	1
Lecturing	6	12	18
Problem solving	2	4	6
Case studies	2	4	6
Previous studies	0	4	4
Collaborative Learning	4	0	4
Laboratory practical	6	10	16
Mentored work	0	17	17
Systematic observation	2	0	2
Presentation	1	0	1

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

Methodologies

	Description
Introductory activities	Activities aimed at making contact and gathering information about students, as well as presenting the subject.
Lecturing	Presentation by the teacher of the contents on the subject object of study, theoretical bases and / or guidelines of a work, exercise that the student has to develop.
Problem solving	Activity in which problems and / or exercises related to the subject are formulated. The student must develop the appropriate or correct solutions through the exercise of routines, the application of formulas or algorithms, the application of procedures for the transformation of available information and the interpretation of results. It is usually used as a complement to the master class.
Case studies	Analysis of a real fact, problem or event in order to know it, interpret it, solve it, generate hypotheses, test data, reflect, complete knowledge, diagnose it and train in alternative solution procedures.
Previous studies	Search, reading and work of documentation, previous to the classes or practices of laboratory, that realizes the alumnado of autonomous form.
Collaborative Learning	It includes a group of teaching procedures that start from the organization of the class in small mixed and heterogeneous groups where the students work in a coordinated way with each other to develop academic tasks and delve into their own learning.
Laboratory practical	Activities of application of the knowledge to concrete situations and of acquisition of basic and procedural abilities related to the matter object of study. They are developed in special spaces with specialized equipment (Laboratories, computer rooms, etc ...)
Mentored work	The student, individually or in groups, prepares a document on the subject or prepares seminars, research, reports, essays, summaries of readings, lectures, etc.

Personalized assistance

Methodologies	Description
Lecturing	In addition to the attention to students in the established tutorials and depending on the topic to be dealt with, students will also be attended through email and the remote campus platform (online) at the times available and agreed by both parties. Personalized attention will aim to answer any questions that may arise regarding the subject and/or advise on academic and professional matters in those cases that so request.
Case studies	In addition to the attention to students in the established tutorials and depending on the topic to be dealt with, students will also be attended through email and the remote campus platform (online) at the times available and agreed by both parties. Personalized attention will aim to answer any questions that may arise regarding the subject and/or advise on academic and professional matters in those cases that so request.
Problem solving	In addition to the attention to students in the established tutorials and depending on the topic to be dealt with, students will also be attended through email and the remote campus platform (online) at the times available and agreed by both parties. Personalized attention will aim to answer any questions that may arise regarding the subject and/or advise on academic and professional matters in those cases that so request.
Previous studies	In addition to the attention to students in the established tutorials and depending on the topic to be dealt with, students will also be attended through email and the remote campus platform (online) at the times available and agreed by both parties. Personalized attention will aim to answer any questions that may arise regarding the subject and/or advise on academic and professional matters in those cases that so request.

Collaborative Learning	In addition to the attention to students in the established tutorials and depending on the topic to be dealt with, students will also be attended through email and the remote campus platform (online) at the times available and agreed by both parties. Personalized attention will aim to answer any questions that may arise regarding the subject and/or advise on academic and professional matters in those cases that so request.
Laboratory practical	In addition to the attention to students in the established tutorials and depending on the topic to be dealt with, students will also be attended through email and the remote campus platform (online) at the times available and agreed by both parties. Personalized attention will aim to answer any questions that may arise regarding the subject and/or advise on academic and professional matters in those cases that so request.
Mentored work	In addition to the attention to students in the established tutorials and depending on the topic to be dealt with, students will also be attended through email and the remote campus platform (online) at the times available and agreed by both parties. Personalized attention will aim to answer any questions that may arise regarding the subject and/or advise on academic and professional matters in those cases that so request.

Assessment

	Description	Qualification	Evaluated Competences			
Mentored work	Students in small groups prepare a document on a relevant and interesting topic related to the subject. Learning outcomes: LO1, LO2, LO3, LO4, LO5.	50	CB2 CB4	CG1 CG2 CG3	CE4 CE6 CE9 CE10 CE12	CT1 CT5 CT8
Systematic observation	A systematic record of knowledge, skills, attitudes and values that students have in different activities/contexts will be made. The observation criteria will be defined and explained in the presentation of the subject. All this information will also be published on the virtual platform of the subject. Students will receive information about their progress throughout the process. Learning outcomes: LO1, LO2, LO3, LO4, LO5.	30	CB2 CB4	CG1 CG2 CG3	CE4 CE6 CE10 CE12	CT1 CT5 CT8
Presentation	Presentation and defense of the supervised work will be valued. Learning outcomes: LO1, LO2, LO3, LO4, LO5.	20	CB2 CB4	CG1 CG2 CG3	CE4 CE6 CE9 CE10 CE12	CT1 CT5 CT8

Other comments on the Evaluation

Considerations:

Students taking this course are required to behave in a responsible and honest manner. Any form of fraud (i.e. copying and/or plagiarism) tending to falsify the level of knowledge or skill achieved by a student in any type of test, report or work designed for that purpose is considered inadmissible. Fraudulent conduct may result in the subject being suspended for an entire course. It will keep an internal record of these actions so that, in case of recidivism, the opening of a disciplinary file can be requested at the rectory.

Ethical commitment:

The student must exhibit appropriate ethical behavior. In case of unethical conduct (copying of seminars, plagiarism of works, use of unauthorized electronic equipment, etc.) that prevent the correct development of the teaching activity, it will be considered that the student does not meet the necessary requirements to pass the subject, and in this case your grade will be suspended in the current academic year (0.0). The use of any electronic device during the evaluation tests will not be allowed unless expressly authorized. The fact of introducing an unauthorized electronic device in the exam room will be considered a reason for not passing the subject in the current academic year and the overall grade (0.0) will be suspended.

Image and/or audio recording: Unless expressly authorized by the professor, total or partial recording, both of sound and image, of the lectures, seminars or practices of the subject will not be allowed, in accordance with the provisions of the the Law on Intellectual Property, the Organic Law on the Protection of Personal Data and the Organic Law on Civil Protection of the Right to Honour, Personal and Family Privacy and Own Image. Depending on the subsequent use, recording without consent may give rise to civil, disciplinary, administrative and, where appropriate, criminal responsibilities.

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Recommendations

Subjects that continue the syllabus

(*)Prácticas externas/P05M191V01207

(*)Traballo fin de máster/P05M191V01208

Subjects that are recommended to be taken simultaneously

(*)Metodoloxía da investigación/P05M191V01103

Subjects that it is recommended to have taken before

(*)Bases anatomofuncionais no exercicio terapéutico/P05M191V01101

(*)Fundamentos do exercicio terapéutico e deseño de programas/P05M191V01102

IDENTIFYING DATA**(*)Exercicio terapéutico no tratamento de patoloxía musculoesquelética e recuperación do deportista**

Subject	(*)Exercicio terapéutico no tratamento de patoloxía musculoesquelética e recuperación do deportista			
Code	P05M191V01105			
Study programme	Máster Universitario en Ejercicio terapéutico en fisioterapia			
Descriptors	ECTS Credits	Type	Year	Quadmester
	3	Mandatory	1st	1st
Teaching language	Spanish Galician			
Department				
Coordinator	Justo Cousiño, Lorenzo Antonio			
Lecturers	Justo Cousiño, Lorenzo Antonio			
E-mail	lorenzo.justo@uvigo.es			
Web				
General description	Mandatory subject of 3 credits in the that will board the pathologies but frequent in the sportsmen and the treatment by means of therapeutic exercise for his recovery			

Skills

Code	
CB2	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.
CB3	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.
CG1	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.
CG2	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.
CE9	Understand the complexity of the effects of therapeutic exercise at the cardiovascular, respiratory, endocrine, neurological and skeletal muscle levels in different population groups.
CE10	Design and apply therapeutic exercise programs in the prevention and treatment of pathologies or musculoskeletal, cardiovascular, respiratory, endocrine, neurodegenerative diseases, in urogynecological and obstetric dysfunctions, and oncological processes.
CE11	Adapt therapeutic exercise sessions based on the characteristics of the patient, the pathology and the environment.
CE12	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.
CE13	Design, execute and direct injury prevention and recovery programs for athletes based on therapeutic exercise.
CT3	Sustainability and environmental commitment. Equitable, responsible and efficient use of resources.
CT7	Develop leadership and organization skills.
CT8	Maintain an attitude of learning and improvement.

Learning outcomes

Learning outcomes	Competences
Know all the appearances related with the therapeutic exercise in musculoskeletal pathologies.	CB2 CG2 CE9 CT3
Know design programs of therapeutic exercise in musculoskeletal pathologies.	CB2 CB3 CG1 CE10 CE11 CE12 CT8

Contents

Topic

- Therapeutic exercise and alterations of the spine. -
- Exercises in different clinical specialitys related with the musculoskeletal system. -
- Therapeutic exercise in the injuries musculoskeletal -
- Recovery of the sporty and prevention of injuries -

Planning

	Class hours	Hours outside the classroom	Total hours
Introductory activities	1	0	1
Lecturing	6	19	25
Laboratory practical	8	19	27
Portfolio / dossier	0	4	4
Systematic observation	8	0	8
Essay	1	9	10

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

Methodologies

	Description
Introductory activities	Activity directed the presentation of the subject as well as gather information of the students
Lecturing	Exhibition of the contents by part of the/the educational. Theoretical classes-participatory where boost the active participation of the students.
Laboratory practical	Collaborative activities and of resolution of problems

Personalized assistance

Methodologies	Description
Introductory activities	The personalised attention will be centred in the resolution of doubts that can have the students in relation to organisation of the subject
Lecturing	The personalised attention will be centred in the resolution of doubts that can have the students in relation with the subject through tutorship face-to-face, email and/or remote campus.
Laboratory practical	The personalised attention will be centred in the resolution of doubts that can have the students in relation to the practical contents of collective or/individual way of face-to-face way or through the remote campus

Tests	Description
Essay	The personalised attention will be centred in the resolution of doubts that can have the students in relation to the work.

Assessment

	Description	Qualification	Evaluated	Competences
Portfolio / dossier	(*)O alumnado terá que elaborar un cartafol das sesións prácticas	20	CG2	CE10 CT3 CE12
Systematic observation	(*)O alumnado será avaliado nas actividades que se propoñan nas sesións prácticas e teóricas	20	CB2	CG1 CE9 CT7 CE10 CT8 CE11 CE12 CE13
Essay	(*)O alumnado realizará o traballo proposto polo docente	60	CB2 CB3	CG2 CE9 CT3 CE10 CT7 CE11 CE13

Other comments on the Evaluation

Sources of information

Basic Bibliography

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Recommendations

IDENTIFYING DATA**(*)Exercicio terapéutico no tratamento de patoloxías no sistema endocrino e respiratorio**

Subject	(*)Exercicio terapéutico no tratamento de patoloxías no sistema endocrino e respiratorio			
Code	P05M191V01106			
Study programme	Máster Universitario en Exercicio terapéutico en fisioterapia			
Descriptors	ECTS Credits	Type	Year	Quadmester
	3	Mandatory	1st	1st
Teaching language	Spanish Galician			
Department				
Coordinator	Lantarón Caeiro, Eva María			
Lecturers	Lantarón Caeiro, Eva María			
E-mail	evalantaron@uvigo.es			
Web				
General description	Among the distinct forms of intervention in endocrine and respiratory pathologies stands out the implementation of programs of therapeutic exercise. In this subject will know in depth the peculiarities that underling in each one of these illnesses with the end that the practice of the exercise be safe and effective according to the needs of each person.			

Skills

Code	
CB2	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.
CG1	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.
CG2	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.
CE4	Analyze, program and apply movement as a therapeutic measure, promoting the participation of the patient/user in the process.
CE6	Ability to solve problems in new and imprecisely defined environments to identify the most appropriate treatment based on therapeutic exercise in the different processes of alteration, prevention and health promotion, as well as integration with other professionals for the benefit of health of the patient/user.
CE9	Understand the complexity of the effects of therapeutic exercise at the cardiovascular, respiratory, endocrine, neurological and skeletal muscle levels in different population groups.
CE10	Design and apply therapeutic exercise programs in the prevention and treatment of pathologies or musculoskeletal, cardiovascular, respiratory, endocrine, neurodegenerative diseases, in urogynecological and obstetric dysfunctions, and oncological processes.
CE12	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.
CT1	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.
CT6	Creativity, entrepreneurial spirit and adaptation to new situations.
CT7	Develop leadership and organization skills.
CT8	Maintain an attitude of learning and improvement.

Learning outcomes

Learning outcomes	Competences
Know fundamental appearances related with the therapeutic exercise in the pathologies of the endocrine system.	CE9
Know fundamental appearances related with the therapeutic exercise in the respiratory pathologies.	CE9

Know design programs of therapeutic exercise in the different endocrine pathologies.	CB2 CG1 CE4 CE6 CE9 CE10 CE12 CT6
Know design programs of therapeutic exercise in the different respiratory pathologies.	CB2 CG1 CE4 CE6 CE9 CE10 CE12 CT6
Adapt the exercises to the person and/or pathology.	CB2 CG1 CG2 CE4 CE6 CE9 CE10 CT1 CT6 CT7 CT8

Contents

Topic	
Metabolic alterations.	-
Therapeutic exercise in patients with metabolic alterations.	-
Pathophysiology modifications of the respiratory system.	-
Assessment of the respiratory function	-
Therapeutic exercise in prevention and treatment-respiratory pathology	

Planning

	Class hours	Hours outside the classroom	Total hours
Lecturing	12	24	36
Laboratory practical	10	10	20
Mentored work	0	9	9
Essay	0	8	8
Presentation	1	0	1
Systematic observation	1	0	1

*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 of the contents by the lecturer. Theoretical classes-participatory where boost the active participation of the students
Laboratory practical	Demonstration by the lecturer of contents (technical, exercises, etc) that the students will make by couples with the supervision of the lecturer.
Mentored work	Activity directed to the design of programs of therapeutic exercise in patients with pathologies in the endocrine or respiratory system

Personalized assistance

Methodologies	Description
Lecturing	The personalised attention will be centred in the resolution of doubts that can have the students in relation with the subject through tutorship face-to-face, email and/or remote campus.

Laboratory practical	The personalised attention will be centred in the resolution of doubts that can have the students in relation with the subject through tutorship face-to-face, email and/or remote campus.
Mentored work	The personalised attention will be centred in the resolution of doubts that can have the students in relation with the subject through tutorship face-to-face, email and/or remote campus.

Assessment						
	Description	Qualification	Evaluated	Competences		
Essay	The work will develop mainly during the practical classes	40	CB2	CG1 CG2	CE4 CE6 CE9 CE10 CE12	CT1 CT6 CT7 CT8
Presentation	It will make a presentation of the work/ program made.	20	CB2	CG1 CG2	CE4 CE6 CE9 CE10 CE12	CT1 CT6 CT7 CT8
Systematic observation	During the practices will carry out a systematic observation to evaluate the aptitude, attitude, skills and knowledges.	40	CB2	CG1 CG2	CE4 CE6 CE9 CE10 CE12	CT1 CT6 CT7 CT8

Other comments on the Evaluation

For the *superación of the matter is compulsory the assistance to 80% of the face-to-face classes and the realisation of the work.

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Recommendations

Subjects that are recommended to be taken simultaneously

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

Subjects that it is recommended to have taken before

(*)Bases anatomofuncionais no exercício terapêutico/P05M191V01101

IDENTIFYING DATA**(*)Exercicio terapéutico no tratamento de enfermidades neurodexenerativas e na diversidade funcional**

Subject	(*)Exercicio terapéutico no tratamento de enfermidades neurodexenerativas e na diversidade funcional			
Code	P05M191V01107			
Study programme	Máster Universitario en Ejercicio terapéutico en fisioterapia			
Descriptors	ECTS Credits	Type	Year	Quadmester
	3	Mandatory	1st	1st
Teaching language	Spanish Galician			
Department				
Coordinator	González González, Yoana			
Lecturers	González González, Yoana Monge Pereira, Esther			
E-mail	yoana@uvigo.es			
Web	http://https://www.uvigo.gal/es/node/263057			
General description	(*)Esta materia está enfocada ó aprendizaxe dos coñecementos teórico-prácticos que debe de ter un fisioterapeuta especializado en implementar programas de exercicio terapéutico en persoas que padecen as consecuencias dunha disfunción do sistema neuromuscoloesquelético. Abordaranse os beneficios da práctica adecuada de exercicio terapéutico naqueles pacientes con disfuncións neuromuscoloesqueléticas, xa que para que ésta sea beneficiosa, debe estar axustada ás capacidades da persoa, respetando as súas limitacións e favorecendo a súa funcionalidade. Para iso, os estudantes adquirirán a formación e o coñecemento que lles permita valorar o estado do paciente e lles permita propor o exercicio axustado ó seu nivel funcional, tendo en conta aquelas prácticas de exercicio que poidan ser contraproducentes. Ademáis, adquirirán competencias para guiar a práctica de exercicio terapéutico.			

Skills

Code	
CB2	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.
CB3	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.
CG1	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.
CE10	Design and apply therapeutic exercise programs in the prevention and treatment of pathologies or musculoskeletal, cardiovascular, respiratory, endocrine, neurodegenerative diseases, in urogynecological and obstetric dysfunctions, and oncological processes.
CE11	Adapt therapeutic exercise sessions based on the characteristics of the patient, the pathology and the environment.
CE12	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.
CT1	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.
CT5	Recognition of diversity and multiculturalism.
CT6	Creativity, entrepreneurial spirit and adaptation to new situations.
CT8	Maintain an attitude of learning and improvement.

Learning outcomes

Learning outcomes	Competences
New	CB3 CE11 CE12

Contents

Topic	
(*)Valoración funcional.	(*)Coñecer a importancia clínica da avaliación funcional do paciente con trastornos neuromusculares.
(*)Medición estandarizada das capacidades funcionais.	(*)Utilizar a avaliación funcional como unha ferramenta útil para adecuar o exercicio terapéutico ó estado funcional do paciente. Utilizar a avaliación funcional para analizar a evolución do paciente que practica exercicio terapéutico.
(*)Consideracións de problemáticas específicas de cada enfermidade neurodegenerativa.	(*)Consideracións a ter en conta ó implementar programas de exercicio terapéutico tras ictus, traumatismos craneoencefálicos, lesións medulares, etc.
(*)Desenvolvemento de programas específicos de exercicio terapéutico según trastornos específicos.	(*)Diseño e aplicación de programas específicos de exercicio terapéutico según o obxectivo terapéutico planteado.

Planning

	Class hours	Hours outside the classroom	Total hours
Introductory activities	1	0	1
Lecturing	6	12	18
Laboratory practical	15	24	39
Presentation	1	2	3
Essay	1	7	8
Portfolio / dossier	1	5	6

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

Methodologies

	Description
Introductory activities	They will indicate the guidelines of the methodologies that will owe to develop the students during the realisation of the matter.
Lecturing	Participatory theoretical classes employing studies of cases and previous study
Laboratory practical	Demonstration by part of the lecturers of the contents and participation of the students resolving the exercises of study of cases proposed
Presentation	The students presents the work of the matter

Personalized assistance

Tests	Description
Essay	It will make the follow-up of the work and will give to know to the students the criteria of evaluation that will take into account for the evaluation of the even.
Portfolio / dossier	It will give answer to the queries made by the students on his dossier and will give to know the criteria of evaluation that will take into account for the evaluation of the even.

Assessment

	Description	Qualification	Evaluated Competences
Essay	(*)Evaluarase a presentación e defensa do traballo.	50	CB2 CB3 CT1 CT5 CT6 CT8
Portfolio / dossier	(*)Evaluarase a presentación e defensa do cartafol.	50	CE10 CE11 CE12 CT1 CT5 CT6 CT8

Other comments on the Evaluation

Sources of information

Basic Bibliography

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de Maria Stokes, Emma Stack, **Fisioterapia En La Rehabilitación Neurológica**, 8490223068, 3^a Edición, Elsevier, 2013

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Roberto Cano de la Cuerda, Susana Collado Vázquez., **Neurorrehabilitación: Métodos específicos de valoración y tratamiento**, 9788491104070, Medica Panamericana, 2012

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Recommendations

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	Type	Year	Quadmester
	3	Mandatory	1st	1st
Teaching language	#EnglishFriendly Spanish Galician			
Department				
Coordinator	Machado de Oliveira, Iris			
Lecturers	Machado de Oliveira, Iris Rodríguez Fuentes, Gustavo			
E-mail	irismacoli@uvigo.es			
Web				
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	
CB2	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.
CB3	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.
CG1	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.
CG2	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.
CG3	Transmit information in a clear way to the users of the health system, as well as with other professionals.
CE11	Adapt therapeutic exercise sessions based on the characteristics of the patient, the pathology and the environment.
CE12	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.
CE14	Design and apply therapeutic exercise programs in the elderly.
CT1	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.
CT5	Recognition of diversity and multiculturalism.
CT6	Creativity, entrepreneurial spirit and adaptation to new situations.
CT8	Maintain an attitude of learning and improvement.

Learning outcomes

Learning outcomes	Competences
To know how affects the process of aging to the conditions of health of elderly people.	CB3 CG1 CT1 CT5 CT8
To know the prevalent pathology in elderly people and its basic characteristics.	CB2 CB3 CG1 CT1 CT5 CT8

To be able to assess the functional capacity of elderly patients that goes to receive treatment based on therapeutic exercise.	CB3 CG1 CG3 CE12 CT1 CT5 CT8
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To design and apply programs of therapeutic exercise for the prevention and treatment of different pathologies and clinical situations of elderly people.	CB2 CB3 CG2 CG3 CE11 CE14 CT1 CT5 CT6
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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	Evaluated Competences				
Portfolio / dossier	30	CB3	CG1	CE12	CT1	CT5
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.			CG3		CT8	
Essay	50	CB2	CG1	CE11	CT1	CT5
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.		CB3	CG2	CE14	CT6	CT8
Case studies	20	CB2	CG1	CE11	CT1	CT5
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.		CB3	CG2	CE12	CT6	CT8

Other comments on the Evaluation

Sources of information

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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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- Wang et al, **Muscle mass, strength, and physical performance predicting activities of daily living: a meta-analysis**, 10.1002/jcsm.12502, 2020
- 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
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- 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
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- Savva et al, **Using Timed Up-and-Go to Identify Frail Members of the Older Population**, 10.1093/gerona/gls190, 2013
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Recommendations

Subjects that continue the syllabus

(*)Prácticas externas/P05M191V01207

Subjects that are recommended to be taken simultaneously

(*)Bases anatomofuncionais no exercício terapéutico/P05M191V01101

(*)Exercício terapéutico no tratamento de enfermidades neurodexenerativas e na diversidade funcional/P05M191V01107

(*)Fundamentos do exercício terapéutico e desenho de programas/P05M191V01102

IDENTIFYING DATA**(*)Ejercicio terapéutico en pacientes oncológicos e/ou sobreviventes de cancro**

Subject	(*)Ejercicio terapéutico en pacientes oncológicos e/ou sobreviventes de cancro			
Code	P05M191V01201			
Study programme	Máster Universitario en Ejercicio terapéutico en fisioterapia			
Descriptors	ECTS Credits	Type	Year	Quadmester
	3	Mandatory	1st	2nd
Teaching language	Spanish			
Department				
Coordinator	Abalo Núñez, María del Rocío			
Lecturers	Gómez Nicolás, Marta			
E-mail	rocioabalo@uvigo.es			
Web				
General description	Subject oriented to the therapeutic exercise in patients oncological or patients that surpassed the illness.			

Skills

Code	
CB2	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.
CB4	That the students know how to communicate their conclusions and the knowledge and ultimate reasons that support them to specialized and non-specialized audiences in a clear and unambiguous way.
CG1	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.
CG2	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.
CG3	Transmit information in a clear way to the users of the health system, as well as with other professionals.
CE4	Analyze, program and apply movement as a therapeutic measure, promoting the participation of the patient/user in the process.
CE6	Ability to solve problems in new and imprecisely defined environments to identify the most appropriate treatment based on therapeutic exercise in the different processes of alteration, prevention and health promotion, as well as integration with other professionals for the benefit of health of the patient/user.
CE11	Adapt therapeutic exercise sessions based on the characteristics of the patient, the pathology and the environment.
CE12	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.
CT1	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.
CT6	Creativity, entrepreneurial spirit and adaptation to new situations.
CT8	Maintain an attitude of learning and improvement.

Learning outcomes

Learning outcomes	Competences
Be able to value the functional capacity of a patient with process oncological that goes to receive treatment based in therapeutic exercise.	CB2 CG3 CE12 CT1 CT8
Design and apply programs of therapeutic exercise in different pictures oncological	CB4 CG1 CG2 CE4 CE6 CE11 CT6

Contents	
Topic	
Physiotherapy in the processes oncological	Classification of the cancer Treatment of the cancer New approach in physiotherapy
Therapeutic exercise in the patient oncological	Functional assessment Design of programs of therapeutic exercise
Indications of the exercise in processes oncological	-
Contraindications of the exercise in processes oncological	-

Planning			
	Class hours	Hours outside the classroom	Total hours
Introductory activities	1	0	1
Lecturing	10	24	34
Laboratory practical	10	11	21
Mentored work	1	14	15
Systematic observation	2	0	2
Case studies	1	0	1
Simulation or Role Playing	1	0	1

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

Methodologies	
	Description
Introductory activities	Activity directed the presentation of the matter as well as gather information of the students
Lecturing	Exhibition of the contents by part of the/the educational. Theoretical classes-participatory where boost the active participation of the students by means of debates and studies of case.
Laboratory practical	Demonstration by part of the teacher of the technicians that the students will make by couples with the supervision of the/the educational.
Mentored work	Realisation work based in clinical cases that will propose the educational

Personalized assistance	
Methodologies	Description
Introductory activities	The personalised attention will be centred in the resolution of doubts that can have the students in relation to organisation of the subject
Lecturing	The personalised attention will be centred in the resolution of doubts that can have the students in relation with the subject through tutorship face-to-face, email and/or remote campus.
Laboratory practical	The personalised attention will be centred in the resolution of doubts that can have the students in relation to the practical contents of collective or/individual way of face-to-face way or through the remote campus
Mentored work	The personalised attention will be centred in the resolution of doubts that can have the students in relation with the work through tutorship face-to-face, email and/or remote campus.

Assessment		Qualification	Evaluated	Competences
	Description			
Systematic observation	The students will be valued during the session by his participation in the activities of the theoretical and practical classes	10	CB4 CG3	CE6 CT1 CE12 CT6
Case studies	The students will have to give solution to the cases that propose him by the lecturs	40	CB2 CB4 CG1 CG2	CE4 CE11 CE12 CT1 CT6 CT8
Simulation or Role Playing	The students will have to carry out a session to a oncological patient or cancer survivor	50	CB4 CG3	CE4 CE6 CE11 CE12 CT6

Other comments on the Evaluation

Sources of information

Basic Bibliography

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Recommendations

IDENTIFYING DATA**(*)Ejercicio terapéutico en procesos e patoloxías obstétricas e urogincolóxicas**

Subject	(*)Ejercicio terapéutico en procesos e patoloxías obstétricas e urogincolóxicas			
Code	P05M191V01202			
Study programme	Máster Universitario en Ejercicio terapéutico en fisioterapia			
Descriptors	ECTS Credits	Type	Year	Quadmester
	3	Mandatory	1st	2nd
Teaching language	Spanish Galician			
Department				
Coordinator	Soto González, María Mercedes			
Lecturers	Cuña Carrera, Iria da Soto González, María Mercedes			
E-mail	m.soto@uvigo.es			
Web				
General description	It is a compulsory matter of the second semester. It pretends that the students purchase the necessary knowledges for the design and application of programs of therapeutic exercise in the distinct processes and pathologies obstetrics and urogynecology.			

Skills

Code	
CB2	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.
CB3	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.
CG1	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.
CE10	Design and apply therapeutic exercise programs in the prevention and treatment of pathologies or musculoskeletal, cardiovascular, respiratory, endocrine, neurodegenerative diseases, in urogynecological and obstetric dysfunctions, and oncological processes.
CE11	Adapt therapeutic exercise sessions based on the characteristics of the patient, the pathology and the environment.
CE12	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.
CT1	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.
CT6	Creativity, entrepreneurial spirit and adaptation to new situations.
CT8	Maintain an attitude of learning and improvement.

Learning outcomes

Learning outcomes	Competences
Identify the dysfunctions urogynecology more frequent in the man and in the woman	CB3 CT1 CT8
Know the physiological changes that become in the woman in the pregnancy and in the postpartum	CB2 CB3 CT1 CT8
Design and apply programs of therapeutic exercise in obstetrics	CB2 CB3 CG1 CE10 CE11 CE12 CT6 CT8

Design and apply programs of therapeutic exercise in urinary dysfunctions and defecation	CB2 CB3 CG1 CE10 CE11 CE12 CT6 CT8
Design and apply programs of therapeutic exercise in sexual dysfunctions	CB2 CB3 CG1 CE10 CE11 CE12 CT6 CT8

Contents

Topic

*Anatomía-fisiología Of the woman and of the man -

*Ejercicio Therapeutic for the prevention and treatment of dysfunctions *obstétricas and *uroginecológicas -

Planning

	Class hours	Hours outside the classroom	Total hours
Lecturing	6.5	23	29.5
Laboratory practical	15.5	19	34.5
Mentored work	0	9	9
Essay	1	0	1
Systematic observation	0.5	0	0.5
Objective questions exam	0.5	0	0.5

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

Methodologies

	Description
Lecturing	In the masterclasses will carry out introductory activities, resolution of problems and studies of cases
Laboratory practical	In the practical classes will carry out resolution of problems and studies of cases
Mentored work	The students will have to make a work on the contents of the subject

Personalized assistance

Methodologies	Description
Lecturing	The students will be able to request tutorship by email, by remote or face-to-face campus
Laboratory practical	The students will be able to request tutorship by email, by remote or face-to-face campus
Mentored work	The students will be able to request tutorship by email, by remote or face-to-face campus

Assessment

	Description	Qualification	Evaluated	Competences
Essay	Will carry out a work in group that will consist in the reading and analysis of scientific articles	30	CB3	CG1
Systematic observation	During the realisation of the practices will effect a systematic observation that value the attitude, aptitude and development of the practices	60	CB2 CB3	CG1 CE10 CE11 CE12 CT6 CT8
Objective questions exam	Will carry out one tests type test	10	CB2 CB3	CG1 CE10 CE11 CE12 CT1 CT6 CT8

Other comments on the Evaluation

For the *superación of the matter is compulsory the assistance to 80% of the classes *presencialmente

Sources of information

Basic Bibliography

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Recommendations

Subjects that are recommended to be taken simultaneously

(*)Ejercicio terapéutico no tratamiento de alteraciones abdomino-lumbo-pelvianas/P05M191V01205

IDENTIFYING DATA				
(*)Pilates terapéutico				
Subject	(*)Pilates terapéutico			
Code	P05M191V01203			
Study programme	Máster Universitario en Ejercicio terapéutico en fisioterapia			
Descriptors	ECTS Credits	Type	Year	Quadmester
	3	Optional	1st	2nd
Teaching language	Spanish Galician			
Department				
Coordinator	Rodríguez Fuentes, Gustavo			
Lecturers	Rodríguez Fuentes, Gustavo			
E-mail	gfuentes@uvigo.es			
Web	http://gfuentes.webs.uvigo.es/index.htm			
General description	In this subject will deepen in the application of the method Pilates with therapeutic ends in different groups, pathologies and illnesses, as well as in the prevention of the illness and the promotion of the health. This deepening will do in base to the current scientific evidence and will cover so much the assessment like the design of programs of prevention and treatment based in the method of Pilates.			

Skills	
Code	
CB2	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.
CB3	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.
CG2	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.
CG3	Transmit information in a clear way to the users of the health system, as well as with other professionals.
CE11	Adapt therapeutic exercise sessions based on the characteristics of the patient, the pathology and the environment.
CE12	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.
CE15	Design and apply therapeutic exercise programs based on the Pilates method, adapting them to the clinical and health characteristics of the patients.
CT1	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.
CT2	Ability to communicate orally and in writing in the Galician language.
CT5	Recognition of diversity and multiculturalism.
CT6	Creativity, entrepreneurial spirit and adaptation to new situations.
CT8	Maintain an attitude of learning and improvement.

Learning outcomes	
Learning outcomes	Competences
Know the basic principles that allow to use the method Pilates like therapeutic tool	CB2 CT1 CT5 CT8
Be able to value the posture and the mobility of a patient that goes to receive treatment based in the method Pilates	CB2 CB3 CG2 CG3 CE12 CT1 CT2 CT5 CT8

Design and apply programs of Pilates therapeutic in different pathologies and clinical situations of health	CB2 CB3 CG2 CG3 CE11 CE15 CT1 CT2 CT5 CT6 CT8
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Contents

Topic

Foundation based in the evidence of the Pilates therapeutic.

Assessment of the mobility and of the relation between tone and posture of a patient participant in a program of Pilates therapeutic.

Basic concepts for the design of programs of prevention and treatment based in the application of the method Pilates.

Programs of prevention and treatment based in the application of the method Pilates.

Guidelines of security and reduction of risks in the practice of the method *Pilates.

Planning

	Class hours	Hours outside the classroom	Total hours
Lecturing	5	8	13
Laboratory practical	16	16	32
Case studies	3	6	9
Mentored work	0	12	12
Problem and/or exercise solving	0	2	2
Case studies	0	3	3
Report of practices, practicum and external practices	0	4	4

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

Methodologies

	Description
Lecturing	Theoretical classes-participatory where will boost the active participation of the students and that will enter and will facilitate so much the studies of case like the work of the subject and the practices. Employment of generic form of audiovisual means. It will give information through the Moovi platform .
Laboratory practical	In the practices will follow a demonstrative methodology with an analysis reasoned of the exercises that compose the program of prevention and/or treatment based in the method Pilates. It will give information through the Moovi platform.
Case studies	It will present to the students a real clinical situation to which have to give a solution in base to the use of the method Pilates. It will be elaborated in small group.
Mentored work	The works will involve a paper entirely activate by part of the students. It will comport to give solution to a problem and/or resolve exercise posed by the educational basing in the method Pilates (elaborated in small group). Besides, it will comprise the realisation of a report of practices where have to describe the tasks developed and give justification to the open questions posed in the same (elaborated of individual form). It will give information through the Moovi platform. The lecturer will guide and support in the process of preparation of the work in each group.

Personalized assistance

Methodologies	Description
Lecturing	The personalised attention will be centred in the solution of students doubts and to orient his efforts in the matter. This personalised attention will do so much face-to-face, in the schedule of tutorship official, as through post-and (indicating in subject tutorship).
Laboratory practical	The personalised attention will be centred in the solution of students doubts and to clear the questions tied to the report of practices to present.

Case studies	The personalised attention will be centred in the solution of students doubts in the realisation of the distinct cases proposed and in the evidences to present.
Mentored work	The personalised attention, basically, will be centred in solving doubts, in orienting the work to make in the subject and to carry register and value the done by the students.

Assessment							
	Description	Qualification	Evaluated Competences				
Problem and/or exercise solving	It will consist in making a research of 2 scientific articles that work a determinate pathology, population or group *etario using the method *Pilates (with indication of the program of *Pilates applied) and analyse *reflexivamente the *adecuación of said proposal. The indications and terms of delivery will publish in the platform of *teledocencia *Moovi.	20	CB2 CB3	CG2 CG3	CE11 CE12 CE15	CT1 CT2 CT5 CT6 CT8	
Case studies	It will consist in the presentation of a therapeutic program based in the method *Pilates linked to a pathology, population or group *etario determinate. The indications and terms of delivery will publish in the platform of *teledocencia *Moovi.	40	CB2 CB3	CG2 CG3	CE11 CE12 CE15	CT1 CT2 CT5 CT6 CT8	
Report of practices, practicum and external practices	Each student will deliver a report of the practices made in the matter, in which they also will give answer to open questions posed in the clinical cases analysed. The indications and terms of delivery will publish in the platform of *teledocencia *Moovi.	40	CB2 CB3	CG2 CG3	CE11 CE12 CE15	CT1 CT2 CT5 CT6 CT8	

Other comments on the Evaluation

Sources of information

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Isacowitz R., **Pilates: manual completo del método Pilates**, 9788499105352, 2ª, Paidotribo, 2016

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Calais-Germain B, Raison B., **Pilates sin riesgo: 8 riesgos del Pilates y cómo evitarlos**, 9788492470174, La Liebre de Marzo, 2011

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Pedregal Canga M., **Pilates para la tercera edad**, 9788499109398, Paidotribo, 2021

Richardson C, Hodges P, Hides J., **Therapeutic exercise for lumbopelvic stabilization. A motor control approach for the treatment and prevention of low back pain**, 9780443072932, 2ª, Churchill Livingstone, 2004

Richey B., **Back exercise: stabilize, mobilize, and reduce pain**, 9781492594765, Human Kinetics, 2021

Wells et al., **Effectiveness of Pilates exercise in treating people with chronic low back pain: a systematic review of systematic reviews**, 10.1186/1471-2288-13-7, 2013

Byrnes et al., **Is Pilates an effective rehabilitation tool? A systematic review**, 10.1016/j.jbmt.2017.04.008, 2018

Casonatto J, Yamacita CM., **Pilates exercise and postural balance in older adults: A systematic review and meta-analysis of randomized controlled trials**, 10.1016/j.ctim.2019.102232, 2020

da Silva et al., **Pilates Reducing Falls Risk Factors in Healthy Older Adults: A Systematic Review and Meta-Analysis**, 10.3389/fmed.2021.708883, 2021

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Engers et al., **The effects of the Pilates method in the elderly: a systematic review**, 10.1016/j.rbre.2016.05.005, 2016

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- Kamioka et al., **Effectiveness of Pilates exercise: A quality evaluation and summary of systematic reviews based on randomized controlled trials**, 10.1016/j.ctim.2015.12.018, 2016
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- Miranda S, Marques A., **Pilates in noncommunicable diseases: A systematic review of its effects**, 10.1016/j.ctim.2018.05.018, 2018
- Pinto-Carral et al., **Pilates for women with breast cancer: A systematic review and meta-analysis**, 10.1016/j.ctim.2018.09.011, 2018
- Rodríguez-Fuentes et al., **Therapeutic Effects of the Pilates Method in Patients with Multiple Sclerosis: A Systematic Review**, 10.3390/jcm11030683, 2022
- Suárez-Iglesias et al., **Benefits of Pilates in Parkinson's Disease: A Systematic Review and Meta-Analysis**, 10.3390/medicina55080476, 2019
- Wang et al., **Pilates for Overweight or Obesity: A Meta-Analysis**, 10.3389/fphys.2021.643455, 2021
- Yamato et al., **Pilates for low back pain**, 10.1002/14651858.CD010265.pub2, 2015

Recommendations

Subjects that continue the syllabus

(*)Prácticas externas/P05M191V01207

Subjects that it is recommended to have taken before

- (*)Bases anatomofuncionais no exercício terapêutico/P05M191V01101
- (*)Exercício terapêutico no tratamento de enfermidades neurodegenerativas e na diversidade funcional/P05M191V01107
- (*)Exercício terapêutico no tratamento de patoloxía musculoesquelética e recuperación do deportista/P05M191V01105
- (*)Exercício terapêutico en persoas maiores/P05M191V01108
- (*)Fundamentos do exercício terapêutico e deseño de programas/P05M191V01102
- (*)Metodoloxía da investigación/P05M191V01103

IDENTIFYING DATA**(*)Ejercicio terapéutico en medio acuático**

Subject	(*)Ejercicio terapéutico en medio acuático			
Code	P05M191V01204			
Study programme	Máster Universitario en Ejercicio terapéutico en fisioterapia			
Descriptors	ECTS Credits	Type	Year	Quadmester
	3	Optional	1st	2nd
Teaching language	Spanish Galician			
Department				
Coordinator	Abalo Núñez, María del Rocío			
Lecturers	Abalo Núñez, María del Rocío			
E-mail	rocioabalo@uvigo.es			
Web				
General description	Optative subject of 3 credits that pretends to teach wools possibilities of him therapeutic exercise in him water			

Skills

Code	
CB2	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.
CG1	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.
CG2	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.
CE4	Analyze, program and apply movement as a therapeutic measure, promoting the participation of the patient/user in the process.
CE6	Ability to solve problems in new and imprecisely defined environments to identify the most appropriate treatment based on therapeutic exercise in the different processes of alteration, prevention and health promotion, as well as integration with other professionals for the benefit of health of the patient/user.
CE11	Adapt therapeutic exercise sessions based on the characteristics of the patient, the pathology and the environment.
CE12	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.
CT1	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.
CT3	Sustainability and environmental commitment. Equitable, responsible and efficient use of resources.
CT6	Creativity, entrepreneurial spirit and adaptation to new situations.
CT7	Develop leadership and organization skills.
CT8	Maintain an attitude of learning and improvement.

Learning outcomes

Learning outcomes	Competences
Know fundamental appearances related with the therapeutic exercise in half aquatic.	CG2 CE4 CT3 CT6
Know design programs of therapeutic exercise in half aquatic.	CG1 CE4 CE11 CE12 CT1 CT6 CT7 CT8

Contents

Topic	
General appearances of in half aquatic and his installations for the practice of therapeutic exercise	Characteristic hydrodynamic principles of wool functional recovery in the Material water and *implementos of flotation basic Norms of security
Different technical of therapeutic exercise in half aquatic	Therapeutic exercise in deep swimming pool. Therapeutic exercise in swimming pool little deep.
Design of sessions of aquatic therapeutic exercise oriented the different pathologies	Aquatic therapeutic exercise in the upper quadrant aquatic therapeutic Exercise in the inferior quadrant
Design of aquatic therapeutic exercise according to the populational group	Aquatic therapeutic exercise in the sporty therapeutic Exercise aquatic in boys and girls aquatic Exercise in greater people aquatic Exercise in pregnant women

Planning

	Class hours	Hours outside the classroom	Total hours
Introductory activities	1	0	1
Lecturing	7	35	42
Practicum, External practices and clinical practices	10	16	26
Systematic observation	3	0	3
Case studies	3	0	3

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

Methodologies

	Description
Introductory activities	Activity directed the presentation of the matter as well as gather information of the students
Lecturing	Exhibition of the contents by part of the/the educational. Theoretical classes-participatory where boost the active participation of the students employing half audiovisual.
Practicum, External practices and clinical practices	Demonstration by the teaching staff of the techniques that the students will carry out in pairs with the supervision of the lecturer. Proposal of clinical cases in which, following the guidelines of collaborative learning, the plot is reached by applying the therapeutic exercise. Also activities based on problem solving. The students will make a portfolio/dossier of the practices

Personalized assistance

Methodologies	Description
Introductory activities	The personalised attention will be centred in the resolution of doubts that can have the students in relation to organisation of the subject.
Lecturing	The personalised attention will be centred in the resolution of doubts that can have the students in relation with the subject through tutorship face-to-face, email and/or remote campus
Practicum, External practices and clinical practices	The personalised attention will be centred in the resolution of doubts that can have the students in relation to the practical contents of collective or/individual way of face-to-face way or through the remote campus

Assessment

	Description	Qualification	Evaluated	Competences
Systematic observation	(*)O alumnado será avaliado durante as sesións prácticas	60	CB2 CG1	CE4 CT1 CE6 CT3 CE11 CT6 CE12 CT7
Case studies	(*)O alumnado revolverá as actividades propostas polo profesorado	40	CB2 CG2	CE4 CT1 CE6 CT8 CE11 CE12

Other comments on the Evaluation

In order to pass the subject, it is compulsory to attend 80% of the classes in person.

Sources of information

Basic Bibliography

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Corvillo I, Varela E, Armijo F, Álvarez-Badillo A, Armijo O, Maraver F, **Efficacy of aquatic therapy for neck pain: a systematic review**, DOI: 10.1007/s00484-019-01738-6, International Journal of Biometereology, 2020

Brandao T, Marcelino J, Fles B, Tassiana C, Mazzarioli R, Pasqual A, Lopes E, Rosa J., **The effectiveness of aquatic physical therapy in the treatment of fibromyalgia: a systematic review with meta-analysis**, <https://doi.org/10.1177/0269215513484772>, Clinical Rehabilitation, 2013

Recommendations

IDENTIFYING DATA**(*)Ejercicio terapéutico no tratamento de alteracións abdomino-lumbo-pelvianas**

Subject	(*)Ejercicio terapéutico no tratamento de alteracións abdomino-lumbo-pelvianas			
Code	P05M191V01205			
Study programme	Máster Universitario en Ejercicio terapéutico en fisioterapia			
Descriptors	ECTS Credits	Type	Year	Quadmester
	3	Optional	1st	2nd
Teaching language	Spanish Galician			
Department				
Coordinator	Cuña Carrera, Iria da			
Lecturers	Cuña Carrera, Iria da Soto González, María Mercedes			
E-mail	iriadc@uvigo.es			
Web				
General description	It is a matter *optativa of the second semester. It pretends that the students know different methods of assessment of the abdominal musculature as well as different exercises for the boarding of alterations *abdomino-*lumbo-*pelvianas.			

Skills

Code	
CB1	Possess and understand knowledge that provides a foundation or opportunity to be original in the development and/or application of ideas, often in a research context.
CB5	That students have the learning skills that allow them to continue studying in a way that will be largely self-directed or autonomous.
CG3	Transmit information in a clear way to the users of the health system, as well as with other professionals.
CE4	Analyze, program and apply movement as a therapeutic measure, promoting the participation of the patient/user in the process.
CE12	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.
CE14	Design and apply therapeutic exercise programs in the elderly.
CT2	Ability to communicate orally and in writing in the Galician language.
CT6	Creativity, entrepreneurial spirit and adaptation to new situations.
CT8	Maintain an attitude of learning and improvement.

Learning outcomes

Learning outcomes	Competences
Know the anatomy and physiology of the abdominal cavity as well as his dysfunctions	CB1 CT2 CT8
Be able to evaluate the abdominal musculature with different devices of assessment	CE12 CT2 CT8
Know design and apply a program of therapeutic exercise in the dysfunctions *abdómino-*lumbo-*pelvianas	CB5 CG3 CE4 CE14 CT2 CT6 CT8

Contents

Topic	
Anatomy and physiology of the abdominal cavity	-
Methods of evaluation of the abdominal musculature	-
Abdominal exercises applied to dysfunctions *abdomino-*lumbo-*pelvianas	-

Planning

	Class hours	Hours outside the classroom	Total hours

Lecturing	6	14	20
Laboratory practical	11.5	19	30.5
Mentored work	5	18	23
Systematic observation	0.5	0	0.5
Essay	1	0	1

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

Methodologies

	Description
Lecturing	They will employ methodologies like introductory activities, lesson magistral and flipped learning
Laboratory practical	They will make practices related with the *temario of the matter
Mentored work	Will carry out a work related with the contents of the matter

Personalized assistance

Methodologies	Description
Lecturing	The students will be able to request *tutorías by email, by remote or face-to-face campus
Laboratory practical	The students will be able to request *tutorías by email, by remote or face-to-face campus
Mentored work	The students will be able to request *tutorías by email, by remote or face-to-face campus

Assessment

	Description	Qualification	Evaluated	Competences
Systematic observation	During the practices will carry out a systematic observation to evaluate the aptitude, attitude, knowledges and skills	50	CB1 CB5 CG3	CE4 CE12 CE14 CT2 CT6 CT8
Essay	The work will develop mainly during the practical classes	50	CB1 CB5 CG3	CE4 CE12 CE14 CT2 CT6 CT8

Other comments on the Evaluation

For the *superación of the matter is compulsory the assistance to 80% of the face-to-face classes and the realisation of the work.&**nbsp;

Sources of information

Basic Bibliography

Diane Lee, Surrey BC, **Diastasis Rectus Abdominis, A Clinical Guide for Those Who Are Split Down The Middle,** 978-0-9732963-1-6, Learn with Diane Lee, 2017

McGill S., **Trastornos de la Espalda Baja. Prevención y Rehabilitación Basadas en la Evidencia,** 9788409304776, Editorial Orbishealth, 2021

Presto DC, Sahpiro BE., **Electromiografía y trastornos neuromusculares,** 978-8491139065, 4ª, Elsevier, 2021

Torres M, Meldaña A, **Fisioterapia del suelo pélvico,** 9788491104537, panamericana, 2022

Complementary Bibliography

De Gasquet, B., **Abdominales: ¡detén la masacre!**, 978-84-9056-465-3, RBA Libros, S.A., 2015

Caufriez, M.; Esparza, S; Caufriez, S, **El Método Hipopresivo del Dr. Marcel Caufriez, Tomo I: Génesis y Programa Estático de Base de la GAH,** 9788460878902, MC Editions, 2021

Da Cuña-Carrera I; Alonso-Calvete A; Soto-González M; Lantarón Caeiro E., **How Do the Abdominal Muscles Change during Hypopressive Exercise?**, 10.3390/medicina57070702, 2021

Da Cuña-Carrera I; Soto González E; Alonso-Calvete A; González-González Y; Lantarón Caeiro E., **Immediate effects of different types of abdominal exercises on the inter-rectus distance,** 10.3233/IES-203161, 2021

Da Cuña-Carrera I; Alonso-Calvete A; Lantarón Caeiro EM.; Soto-González M.;, **Are There Any Differences in Abdominal Activation between Women and Men during Hypopressive Exercises?**, 10.3390/ijerph18136984, 2021

Da Cuña-Carrera I; Alonso-Calvete A; González-González Y; Soto-González M., **Changes in abdominal muscles architecture induced by different types of breathing,** 10.3233/IES-210159, 2022

Recommendations

Subjects that it is recommended to have taken before

(*)Ejercicio terapéutico en procesos e patologías obstétricas e urogincológicas/P05M191V01202

IDENTIFYING DATA**(*)Exercicio terapéutico en patoloxías relacionadas coa saúde mental**

Subject	(*)Exercicio terapéutico en patoloxías relacionadas coa saúde mental			
Code	P05M191V01206			
Study programme	Máster Universitario en Exercicio terapéutico en fisioterapia			
Descriptors	ECTS Credits	Type	Year	Quadmester
	3	Optional	1st	2nd
Teaching language				
Department				
Coordinator	Abalo Núñez, María del Rocío			
Lecturers	Muñoz-Cruzado Barba, Miguel			
E-mail	rocioabalo@uvigo.es			
Web				
General description	This subject has like aim the employment of the therapeutic exercise in people with mental disorders to *diminish his **siontomatoloxía and improve his quality of life.			

Skills

Code	
CB1	Possess and understand knowledge that provides a foundation or opportunity to be original in the development and/or application of ideas, often in a research context.
CB2	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.
CG1	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.
CE4	Analyze, program and apply movement as a therapeutic measure, promoting the participation of the patient/user in the process.
CE6	Ability to solve problems in new and imprecisely defined environments to identify the most appropriate treatment based on therapeutic exercise in the different processes of alteration, prevention and health promotion, as well as integration with other professionals for the benefit of health of the patient/user.
CE11	Adapt therapeutic exercise sessions based on the characteristics of the patient, the pathology and the environment.
CE12	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.
CT5	Recognition of diversity and multiculturalism.
CT6	Creativity, entrepreneurial spirit and adaptation to new situations.
CT7	Develop leadership and organization skills.
CT8	Maintain an attitude of learning and improvement.

Learning outcomes

Learning outcomes	Competences
Know in which situations of mental alteration the physiotherapist can take part.	CB2 CE6 CT5 CT6 CT8
Clinical implications of the application of the therapeutic exercise in the mental illnesses	CB1 CG1 CE4 CE11 CE12 CT6 CT7

Contents

Topic	
Introduction to the physiotherapy in the mental health.	

Physiotherapy interventions in mental health	-
Pathologies but frequent and his handle by means of therapeutic exercise	-

Planning			
	Class hours	Hours outside the classroom	Total hours
Introductory activities	1	0	1
Lecturing	3	11	14
Laboratory practical	13	21	34
Mentored work	4	19	23
Simulation or Role Playing	1	0	1
Presentation	2	0	2

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

Methodologies	
	Description
Introductory activities	Activity directed the presentation of the subject as well as gather information of the students
Lecturing	Exhibition of the contents by part of the educational. Theoretical classes-participatory where boost the active participation of the students employing a forum of discussion and with activities directed to the resolution of problems
Laboratory practical	Demonstration by part of the lecturer of the technicians that the students will make by couples with the supervision!. Also they will do studies of cases and resolution of problems.
Mentored work	Proposal of a clinical case/s in which, following the guidelines of clinical reasoning, the plot is reached by applying the therapeutic exercise

Personalized assistance	
Methodologies	Description
Introductory activities	The personalised attention will be centred in the resolution of doubts that can have the students in relation to organisation of the subject
Lecturing	Personalised attention will be centred in the resolution of doubts that can have the students in relation with the subject through tutorship face-to-face, email and/or remote campus.
Laboratory practical	The personalised attention will be centred in the resolution of doubts that can have the students in relation to the practical contents of collective or/individual way of face-to-face way or through the remote campus
Mentored work	The personalised attention will be centred in the resolution of doubts that can have the students in the realisation of the work

Assessment						
	Description	Qualification		Evaluated Competences		
Mentored work		50	CB1 CB2	CG1	CE11 CE12	CT6 CT7 CT8
Simulation or Role Playing		30	CB2	CG1	CE4 CE6 CE11 CE12	CT5
Presentation		20	CB1 CB2	CG1	CE11 CE12	CT6 CT7 CT8

Other comments on the Evaluation

Sources of information

Basic Bibliography

Guarín, C, **Fisioterapia en Salud Mental**, 9789587845884, Rosario, 2020
 Catalán, D, **La Fisioterapia En Salud Mental**, 3844340424, Academia Espanola, 2012
 allgren M, Vancampfort D, Giesen ES, Lundin A, Stubbs B., **Exercise as treatment for alcohol use disorders: systematic review and meta-analysis**, <http://dx.doi.org/10.1136/bjsports-2016-096814>, Br J Sports Med, 2017

Complementary Bibliography

Probst, M, **Physiotherapy in Mental Health and Psychiatry**, 9780702072680, Elsevier, 2017
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- Crescentini C, Matiz A, Fabbro F, **Improving personality/character traits in individuals with alcohol dependence: the influence of mindfulness-oriented meditation**, DOI:10.1080/10550887.2014.991657, J Addict Dis, 2015
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- Bobes J, **Salud mental: Enfermería psiquiátrica (Enfermería, fisioterapia y podología)**, 978-8477382362, Síntesis, 1994
- Catalan-matamoros D, Helvik-skjaerven L, . **A pilot study on the effect of Basic Body Awareness Therapy in patients with eating disorders: a randomized controlled trial**, DOI: 10.1177/0269215510394223, clinic Rehabil, 2011
- Catalán Matamoros DJ, **Fisioterapia en salud mental. Efectividad de una intervención fisioterapéutica en trastornos alimentarios**, <https://riuma.uma.es/xmlui/handle/10630/2686>, Universidad de Málaga,
- Muñoz-Cruzado y Barba M, **La enfermedad de Alzheimer como factor de riesgo psicosomático para el familiar cuidador de enfermos crónicos discapacitados**, <https://riuma.uma.es/xmlui/handle/10630/2688>, Universidad de Málaga, 2007
- Bravo Navarro C, **Fisioterapia en Salud Mental. Efectividad de la Basic Body Awareness Therapy en pacientes de fibromialgia**, <https://ichgcp.net/es/clinical-trials-registry/NCT02830295>, Universidad de Lleida, 2017
- Ezzatvar de Llago, **Factors influencing musculoskeletal pain among physical therapists**, <https://roderic.uv.es/handle/10550/75654>, Universidad de Valencia, 2020

Recommendations

IDENTIFYING DATA**(*)Prácticas externas**

Subject	(*)Prácticas externas			
Code	P05M191V01207			
Study programme	Máster Universitario en Ejercicio terapéutico en fisioterapia			
Descriptors	ECTS Credits	Type	Year	Quadmester
	9	Mandatory	1st	2nd
Teaching language	#EnglishFriendly Spanish Galician			
Department				
Coordinator	Machado de Oliveira, Iris			
Lecturers				
E-mail				
Web				
General description	They are those that configure integrated academic activities as a subject of the plan of studies of the Máster of Therapeutic Exercise in Physiotherapy that has an educational load of 9 credits during the second term. In this subject, the students have to make clinical stays and a dossier concerning the same.			

Skills

Code	
CB1	Possess and understand knowledge that provides a foundation or opportunity to be original in the development and/or application of ideas, often in a research context.
CB2	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.
CB3	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.
CB4	That the students know how to communicate their conclusions and the knowledge and ultimate reasons that support them to specialized and non-specialized audiences in a clear and unambiguous way.
CB5	That students have the learning skills that allow them to continue studying in a way that will be largely self-directed or autonomous.
CG1	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.
CG2	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.
CG3	Transmit information in a clear way to the users of the health system, as well as with other professionals.
CG6	Develop learning skills that allow them to continue studying in a way that will be largely self-directed or autonomous.
CE3	Integrate all knowledge, abilities, skills, attitudes and values; acquired in all subjects, developing all professional skills and training for effective physiotherapy care
CE4	Analyze, program and apply movement as a therapeutic measure, promoting the participation of the patient/user in the process.
CE5	Acquire the appropriate clinical experience in the use of therapeutic exercise that provides intellectual abilities and technical and manual skills; that facilitates the incorporation of ethical and professional values; and to develop the ability to integrate the content acquired.
CE6	Ability to solve problems in new and imprecisely defined environments to identify the most appropriate treatment based on therapeutic exercise in the different processes of alteration, prevention and health promotion, as well as integration with other professionals for the benefit of health of the patient/user.
CE11	Adapt therapeutic exercise sessions based on the characteristics of the patient, the pathology and the environment.
CE12	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.
CT1	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.
CT2	Ability to communicate orally and in writing in the Galician language.
CT3	Sustainability and environmental commitment. Equitable, responsible and efficient use of resources.
CT4	Knowledge of statistics applied to Health Sciences, or to the field of study related to the field of study.
CT5	Recognition of diversity and multiculturalism.
CT6	Creativity, entrepreneurial spirit and adaptation to new situations.
CT7	Develop leadership and organization skills.
CT8	Maintain an attitude of learning and improvement.

Learning outcomes

Learning outcomes	Competences
- To design and schedule a program of therapeutic exercise adapted to the needs of the population.	CB1 CB2 CB3 CG1 CE3 CE4 CE6 CE11 CT1 CT4 CT5 CT6 CT8
- To evaluate populations and surroundings with demand of therapeutic exercise.	CB2 CB3 CG1 CG2 CE3 CE6 CE12 CT1 CT3 CT5 CT6 CT8
- To promote the realization and to develop the application of the therapeutic exercise in different clinical populations.	CB1 CB2 CB3 CB4 CB5 CG2 CG3 CG6 CE3 CE4 CE5 CE6 CE11 CT1 CT2 CT3 CT5 CT6 CT7

Contents

Topic

- Application of programs of therapeutic exercise in different groups of population and with different pathologies.	The student will have to evaluate the pathological population patients in the collaborator entity for the realization of the Practicum and schedule and apply a protocol of therapeutic exercise with a determinate clinical purpose.
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Planning

	Class hours	Hours outside the classroom	Total hours
Introductory activities	2	1	3
Practicum, External practices and clinical practices	120	72	192
Portfolio / dossier	0	15	15
Systematic observation	0	15	15

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

Methodologies

Description

Introductory activities	It will be explained all the rights and duties of the students to facilitate the realization of the clinical Practicum. It will be presented the specific Regulation of external Practices well like the document of the orientation of realization of the practices and like executing and delivering of the dossier, as it will be structured the evaluation of the subject, as it requests and assigns the destinations for the realization of the practices and as they carry out the tutor guidance of the subject.
Practicum, External practices and clinical practices	The student evaluates the clinical population of the center where he/she makes the practices and schedules and applies the physiotherapy treatment based on therapeutic exercise in a clinical context and looking to reach some previously posed aims in the project of external practices. In this clinical context, the student will have to resolve problems that can arise with the application of the protocol posed and make the necessary adaptations for its set up.

Personalized assistance

Methodologies	Description
Practicum, External practices and clinical practices	The personalized attention will be centered on solving doubts, orienting the development of the dossier to make in the subject, and carrying register and value the made by the students during the realisation of the external practices. It can be developed in face-to-face tutor guidance in the respective offices of the academic co-tutor/to guider or of the coordinator of external practices (academic tutor) or by virtually form through Remote Campus in the respective virtual office of the co-tutors or coordinator related to the previous subject agreement between students and lecturers.

Assessment

Description	Qualification	Evaluated Competences
Portfolio / dossier	20	CB1 CG1 CE3 CT1 CB2 CG2 CE6 CT2 CB3 CG3 CT4 CB4
Systematic observation	80	CB1 CG1 CE3 CT1 CB2 CG2 CE4 CT3 CB3 CG3 CE5 CT5 CB4 CG6 CE6 CT6 CB5 CE11 CT7 CE12 CT8

Other comments on the Evaluation

Sources of information

Basic Bibliography

Dunleavy & Slowik, **Therapeutic Exercise Prescription**, 9780323280532, 2019

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

Hall & Brody, **Ejercicio terapéutico: Recuperación Funcional**, 9788480198585, 2006

Complementary Bibliography

Palermi et al, **Indirect Structural Muscle Injuries of Lower Limb: Rehabilitation and Therapeutic Exercise**, 10.3390/jfmk6030075, 2021

Voet, **Exercise in neuromuscular disorders: a promising intervention**, PMID 31970319, 2019

Skou & Roos, **Physical therapy for patients with knee and hip osteoarthritis: supervised, active treatment is current best practice**, PMID: 31621559, 2019

Young et al, **The influence of dosing on effect size of exercise therapy for musculoskeletal foot and ankle disorders: a systematic review**, 10.1016/j.bjpt.2017.10.001, 2018

Verbrugge et al, **Motion detection supported exercise therapy in musculoskeletal disorders: a systematic review**, 10.23736/S1973-9087.18.04614-2, 2018

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

Smith et al, **Should exercises be painful in the management of chronic musculoskeletal pain? A systematic review and meta-analysis**, 10.1136/bjsports-2016-097383, 2017

Chih-hsiu et al, **Long-term effects of therapeutic exercise on nonspecific chronic neck pain: a literature review**, PMID: 25995604, 2015

Hoogeboom et al, **Merits of exercise therapy before and after major surgery**, 10.1097/ACO.000000000000062, 2014

Recommendations

Subjects that continue the syllabus

(*)Traballo fin de máster/P05M191V01208

Subjects that it is recommended to have taken before

(*)Bases anatomofuncionais no exercicio terapéutico/P05M191V01101

(*)Fundamentos do exercicio terapéutico e deseño de programas/P05M191V01102

IDENTIFYING DATA**(*)Traballo fin de máster**

Subject	(*)Traballo fin de máster			
Code	P05M191V01208			
Study programme	Máster Universitario en Ejercicio terapéutico en fisioterapia			
Descriptors	ECTS Credits	Type	Year	Quadmester
	9	Mandatory	1st	2nd
Teaching language	Spanish Galician			
Department				
Coordinator	Monge Pereira, Esther			
Lecturers				
E-mail				
Web				
General description	Subject with 9 credits that consists in the realization and public presentation of the end of masters' project about some specific question related with the therapeutic exercise			

Skills

Code	
CB1	Possess and understand knowledge that provides a foundation or opportunity to be original in the development and/or application of ideas, often in a research context.
CB2	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.
CB3	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.
CB4	That the students know how to communicate their conclusions and the knowledge and ultimate reasons that support them to specialized and non-specialized audiences in a clear and unambiguous way.
CB5	That students have the learning skills that allow them to continue studying in a way that will be largely self-directed or autonomous.
CG3	Transmit information in a clear way to the users of the health system, as well as with other professionals.
CG4	Acquire advanced scientific training in research in Therapeutic Exercise in Physiotherapy.
CG5	Being able to present and defend, before a university tribunal, a final master's project, consisting of an exercise of integration of the training content received and the skills acquired.
CG6	Develop learning skills that allow them to continue studying in a way that will be largely self-directed or autonomous.
CE1	Incorporate scientific research and evidence-based practice as a professional culture in the practice of therapeutic exercise.
CE2	Apply the ethical and legal bases of the profession in the field of research.
CE7	Evaluate and select the appropriate scientific theory and the precise methodology to design a research project based on therapeutic exercise.
CE8	Know how to use methods and models of statistical analysis, interpret and communicate the results of clinical research to specialized audiences through different media (face-to-face, online or social networks).
CE12	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.
CT1	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.
CT2	Ability to communicate orally and in writing in the Galician language.
CT3	Sustainability and environmental commitment. Equitable, responsible and efficient use of resources.
CT4	Knowledge of statistics applied to Health Sciences, or to the field of study related to the field of study.
CT5	Recognition of diversity and multiculturalism.
CT6	Creativity, entrepreneurial spirit and adaptation to new situations.
CT7	Develop leadership and organization skills.
CT8	Maintain an attitude of learning and improvement.

Learning outcomes

Learning outcomes	Competences
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Design and make a work of investigation related with the therapeutic exercise

CB1
CB3
CB4
CB5
CG3
CG4
CG5
CG6
CE1
CE2
CE7
CE8
CE12
CT2
CT4
CT8

Integrate the practical contents and scientists learnt in the master

CB2
CB3
CB5
CG3
CG6
CE12
CT1
CT3
CT5
CT6
CT7
CT8

Contents

Topic

Preparation of an individual work of investigation - based in the therapeutic exercise.

Presentation and defence of the work in front of a - court.

Planning

	Class hours	Hours outside the classroom	Total hours
Introductory activities	1	0	1
Mentored work	22	0	22
Presentation	1	0	1
Presentation	1	0	1
Essay	0	200	200

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

Methodologies

	Description
Introductory activities	Will have the aim to present the subject, explain the contents of the guide of learning for the realisation of the EOM project according to the specific rule, as well as resolve the possible relative doubts to the same that they expose the students.
Mentored work	The students will have to elaborate a work of investigation related with the therapeutic exercise, based in the rule of preparation approved and published by the Academic Commission.
Presentation	The students will have to expose his *TFM in front of a court by means of audiovisual means following the rule of presentation approved and published by the Academic Commission, as well as answer to the questions formulated by the court.

Personalized assistance

Methodologies Description

Mentored work	The students will have of a/to tutor/to that it will do him of guide by means of corrections and tutorship that will concretise between both, for the preparation of the memory written and the oral defence of the end of masters´ project..
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Assessment

Description	Qualification	Evaluated	Competences
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Presentation	The court will take into account for the evaluation the following criteria:	40	CB4	CG3 CG5	CT2 CT8	
	<ul style="list-style-type: none"> - Importance of the work. - Presentation by means of audiovisual means adapted. - Clarity in the exhibition. - Defence in front of the questions formulated. 					
Essay	The lecturer will evaluate by means of process of learning and development of the .(20%)	60	CB1 CB2 CB3	CG4 CG6	CE1 CE2 CE7 CE8 CE12	CT1 CT3 CT4 CT5 CT8
	The court will evaluate by means of End of Masters project adapts to the exposed rule, and that the contents and the methodology are suitable to the subject of investigation.(40%)					

Other comments on the Evaluation

The students will have to have surpassed all the credits of the master to be able to present and defend his End of Masters 'project.

Sources of information

Basic Bibliography

Molina M, **El ovillo y la espada: manual de lectura crítica de documentos científicos**, 979-86-525-9557-9, 2020

Amat O, Rocafort A, **Cómo investigar: Trabajo fin de grado, tesis de máster, tesis doctoral y otros proyectos de investigación.**, 978-8416904693, Profit Editorial, 2017

Complementary Bibliography

<http://www.equator-network.org/>,

Miguel Ángel Martínez González et al., **Bioestadística Amigable**, 978-8491134077, 4, Elsevier, 2020

Vallejo-Nágera JA., **Aprender a hablar en público hoy. Cómo cautivar y convencer por medio de la palabra.**, 9788422634850, 2, Planeta, 2013

Rodríguez ML, Llanes J, **El trabajo fin de máster. fases para su elaboración y sugerencias para evaluarlo**, 9788447539062, Universitat de Barcelona, 2015

da Cunha I, Cabré MT, **El trabajo de fin de grado y de máster. Redacción, defensa y publicación**, 978-8490643907, UOC, 2016

del Pino R, Martínez Riera J., **Manual para la elaboración y defensa del trabajo fin de grado en ciencias de la salud.**, 9788491139416, 2, Elsevier ES, 2022

Recommendations

Subjects that it is recommended to have taken before

(*)Metodología da investigación/P05M191V01103