



IDENTIFYING DATA

Kinesitherapy

Subject	Kinesitherapy			
Code	P05G171V01203			
Study programme	Grado en Fisioterapia			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	9	Mandatory	2nd	1st
Teaching language	#EnglishFriendly Spanish Galician			
Department				
Coordinator	González Represas, Alicia			
Lecturers	González Represas, Alicia Nóvoa Castro, Borja			
E-mail	alicia@uvigo.es			
Web	http://https://moovi.uvigo.gal/			
General description	Kinesitherapy studied the methods and techniques that use movement as a therapeutic agent. The subject will be developed in the second year of the Degree in Physiotherapy. It is recommended to have acquired knowledge of anatomy, biomechanics, assessment and physiology for a correct follow-up of the subject. Subject of the English Friendly program. International students may request teachers: a) materials and references bibliographies for monitoring the subject in English, b) attend tutoring in English, c) tests and assessments in English.			

Training and Learning Results

Code	
A2	Students are able to apply their knowledge to their work or vocation in a professional manner and possess the competences usually demonstrated through the development and defence of arguments and problem solving within their field of study.
B1	To know how to work in professional teams as a basic unit in which professionals and other personnel of health care organizations are structured in a uni or multidisciplinary and interdisciplinary way.
B4	Acquire basic scientific training in research.
C1	To know the principles and theories of physical agents and their applications in physical therapy.
C3	Identify the psychological and social factors that influence the state of health or disease of individuals, families and community.
C7	Know the physiological and structural changes that can occur as a result of the application of physiotherapy.
C12	To know and apply the theoretical bases and the development of physiotherapeutic methods and procedures.
C15	Understand ergonomic and anthropometric principles.
C16	Analyze, program and apply movement as a therapeutic measure, promoting the participation of the patient/user in the process.
C20	Identify the most appropriate physiotherapeutic treatment in the different processes of alteration, prevention and health promotion as well as in the processes of growth and development.
C21	Identify the situation of the patient/user through a physiotherapy care diagnosis, planning interventions, and evaluating their effectiveness in a cooperative work environment with other professionals in health sciences.
C36	To know and understand the methods, procedures and physiotherapeutic actions, aimed at both the actual therapy to be applied in the clinic for the reeducation or functional recovery, as well as the implementation of activities aimed at the promotion and maintenance of health.
D1	Ability to communicate orally and in writing in Galician.
D2	Computer skills related to the field of study
D5	Developing leadership and organizational skills.
D8	Ability to understand the meaning and application of the gender perspective in different areas of knowledge and professional practice with the aim of achieving a more just and egalitarian society.

Expected results from this subject

Expected results from this subject	Training and Learning Results
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LO1: Describe the concept, the bases, the general principles of application of the Kinesitherapy and classifies the distinct modalities and methods of application of the Kinesitherapy .					C1 C12 C15 C36
LO2: Describe the bases and bases of application of the different methods of Kinesitherapy Passive and Active					C36
LO3: It analyze the differences between them different methods of Kinesitherapy passive and active					C36
LO4: Explain the physiological and therapeutic effects of the Kinesitherapy passive and active					C7
LO5: Identify and explain the indications and contraindications of the Kinesitherapy Passive and Active					C7
LO6: Describe the concept and the bases of the hidrokinesitherapy and classifies his different modalities and methods of application inside the ranking of the Kinesitherapy .					C36
LO7: Describe the progression of the exercise in the water, explain the physiological and therapeutic effects of the hidrokinesitherapy and identify and explain his indications and contraindications					C12 C16
LO8: Define the concept of mechanotherapy and identify and describe the main teams of mechanotherapy					C36
LO9: Practical application of the general principles of the Kinesitherapy in the execution of the different methods of Kinesitherapy Passive and Active and Therapeutic Exercise	A2				C15
LO10: Execute the different methods of Kinesitherapy passive and active in the upper member, inferior member and vertebral column and therapeutic exercise.		B1			C15 C16
LO11: Realize, expose and defend in group a practical work on Kinesitherapy	A2	B1 B4	C3 C12 C16 C20 C21	D1 D2 D5 D8	

Contents

Topic

THEORY PROGRAM	I.KINESITHERAPY. I.1Conceptual framework. Concept of kinesitherapy. Concept of rest and relaxation I.2. History of kinesitherapy. I.3. Kinetic agents. Physical basis of movement. I.4. General principles of application of kinesitherapy. I.5. Fundamental, derived and annexes positions. I.6. Classification of kinesitherapy: Passive and active. Hidrokinesitherapy. I.7. Isokinetic equipment. Introduction.
I. Kinesitherapy.	
II. Passive Kinesitherapy	II.PASSIVE KINESITHERAPY. II.1 Concept of Passive Kinesitherapy. General principles of application of passive kinesitherapy. II.2. Classification. II.3. Passive kinesitherapy: relaxed and forced passive kinesitherapy. II.3.1. Relaxed passive kinesiotherapy: analytic simple kinesitherapy and functional or global kinesitherapy II.3.2. Forced passive kinesitherapy: maintained and momentary. II.3.2.1 Passive forced maintained Kinesitherapy: Analytic specific kinesiotherapy. Articular tractions. Osteoarticular postures. Muscle stretching. II.3.2.2. Passive forced kinesitherapy momentary: manipulations. II.4. Modalities of application of the Passive kinesitherapy: manual, instrumental and autopassive. II.6. Effects physiological. Therapeutic effects. General indications of the Kinesitherapy passive. General contraindications of passive kinesitherapy.
III. Active Kinesitherapy	III. ACTIVE KINESITHERAPY III.1. Concept. Types of motility: reflects, automatic and voluntary. III.2. Preparation of the voluntary movement. Different types of muscular contraction. III.3. General principles of active kinesitherapy III.4. Classification of active Kinesitherapy: active assistive kinesitherapy, active resistive kinesitherapy. and active kinesitherapy (non resisted or assisted active kinesitherapy) III.5. Physiological effects. Therapeutic effects. Indications and contraindications.
IV. Active assisted Kinesitherapy	IV. ACTIVE ASSISTED KINESITHERAPY IV.1. Concept. General principles. IV.2. Classification: Manual active assisted Kinesitherapy. Instrumental active assisted kinesitherapy. IV.3. Specific Techniques: IV.3.1. Suspension therapy: concept. Types of suspension. IV.3.2. Assisted Poleotherapy: general principles of application. IV.3.3. Combination of suspension and poleotherapy.

V. Active resisted Kinesitherapy	V. ACTIVE RESISTED KINESITHERAPY 1. Concept. Conditioning factors of muscle development. V.2. Classification: manual Active resisted kinesitherapy. instrumental Active resisted kinesitherapy. V.3. Dynamic methods of direct increasing loads: Delorme method and Dotte method. V.4. Dynamic method of indirect increasing loads: Rocher method. V.5. Dynamic methods of direct decreasing loads: Mac Govern and Luscombe method and method of Zinovieff. V.6. Static methods: Hettinger and Woman method. V.7. Physiological effects Therapeutic effects Indications and contraindications.
VI. Active Kinesitherapy	VI.1. Conceptualization of therapeutic exercise. General principles. VI.2. Physiological and therapeutic effects. VI.3. Indications and contraindications VI.1. Guidelines for conducting therapeutic exercise VI.2. Introduction to specific methods: myotendinous stretching. Proprioception
VII. Hydrokinesitherapy	VII. HYDROKINESITHERAPY. VII.1. Introduction. Concept and history. VII.2. Classification of the hydrokinesitherapy VII.3. Hydrodynamic implications for hydrokinesitherapy VII.3.1. Factors inherent to the aquatic environment. VII.3.2. Factors inherent to the body in movement. VII.4. Movement in the water. VII.5. General principles in hydrokinesitherapy. VII.6. Accessory equipment VII.7. Progression of exercise in the water.
VIII. Hydrokinesitherapy methods	VIII. HYDROKINESITHERAPY METHODS VIII.1. Hydrokinesitherapy Methods. VIII.1.1. Passive hydrokinesitherapy. VIII.1.2. Active hydrokinetherapy. VIII.2. Development of circuits within the water. VIII.3. Physiological and therapeutic effects of hydrokinesitherapy. Indications and contraindications.
IX. Mechanotherapy	IX. MECHANOTHERAPY IX.1. Concept and indications. IX.2. Special equipment: traction devices, kinetic bicycle, shoulder wheel, hand table, benches, parallel, stairs, slope, stairs of fingers, Boheler table and plate, Dotte rocking board and Rocher cage.
PRACTICAL PROGRAM: I. Passive Kinesitherapy	PASSIVE KINESITHERAPY. Manual of passive kinesitherapy I.1. General technique Stretcher height. Position of the patient. Position of the physiotherapist. Placement of contacts hands. I.2. Functional passive kinesitherapy applied manually: I.2.1. Shoulder joint and shoulder girdle. I.2.2. Upper extremity. I.2.3. Pelvic girdle. I.2.4. Lower extremity. I.2.5. Spine. I.3. Passive analytical simple kinesitherapy and Passive analytical specific kinesitherapy: I.3.1. Shoulder joint and shoulder girdle. I.3.2. Upper extremity. I.3.3. Pelvic girdle. I.3.4. Lower extremity. I.3.5. Spine. I.4. Specific techniques of kinesitherapy passive manual. Practical examples of application: I.4.1. Manual joint tractions. I.4.2. Osteoarticular postures I.4.3. Muscle stretching. I.5. Kinesitherapy selfmanage. Passive kinesitherapy instrumental. I.6. passive Relaxed instrumental kinesitherapy: description of equipment, handling of them and care of the equipment. I.7. Passive forced kinesiotherapy. I.7.1. Instrumental articular traction: Description of the equipment, handling of them and care of the equipment. I.7.2. Instrumental articular traction applied the: I.7.2.1. Cervical spine. I.7.2.2. Dorsal column. I.7.2.3. Lumbar spine. I.7.3. Postures osteoarticular.
II. Active Kinesitherapy	ACTIVE KINESITHERAPY Active kinesitherapy, assisted active kinesitherapy and resisted active kinesitherapy. II.1. General techniques. Position of the patient. Position of the physiotherapist. Placement of contacts hands. II.2. Assisted active kinesitherapy and resisted active kinesitherapy manually applied the: II.2.1. Shoulder joint and shoulder girdle. I.2.2. Upper extremity. I.2.3. Pelvic girdle. I.2.4. Lower extremity. I.2.5. Spine. Active assisted kinesitherapy and active resistive kinesitherapy instrumental II.3. Suspension therapy: general technique. Instrumentation necessary for its application. II.4. Suspension therapy: Pendular, concentric axial and eccentric axial applied: II.4.1. Shoulder joint and shoulder girdle. I.4.2. Upper extremity. I.4.3. Pelvic girdle. I.4.4. Lower extremity. I.4.5. Spine II.5. Poleotherapy General technique Instrumentation necessary for its application. Assembly of a pulley circuit. Placement of the first pulley. Placement of the second pulley. Examples Application practice. II.6. Strengthening methods. General methodology. Calculation of the maximum resistance (RM) and the 10th RM. II.6.1. Application of the Delorme method. Dotte's method. Practical examples of application. II.6.2. MacGovern and Luscombe methods. Zinovieff method. Practical examples of application. II.6.3. Method of Hettinger and Muller. Practical examples of application. Kinesitherapy active II.7. Active kinesitherapy applied to: II.7.1 Shoulder joint and shoulder girdle. I.7.2. Upper extremity. I.7.3. Pelvic girdle. I.7.4. Lower extremity. I.7.5. Spine

(*)II. CINESITERAPIA ACTIVA

(*)Kinesiterapia activa, kinesiterapia activa asistida e kinesiterapia activa resistida. II.1. Técnicas xerais. Posición do paciente. Posición do fisioterapeuta. Colocación das mans de contactos. II.2. Kinesiterapia activa asistida e kinesiterapia activa resistida aplicaron manualmente: II.2.1. Articulación do ombreiro e cintura escapular. I.2.2. Extremidade superior. I.2.3. Cinto pélvico. I.2.4. Extremidade inferior. I.2.5. Columna vertebral. Kinesiterapia activa asistida e kinesiterapia activa resistiva instrumental II.3. Terapia de suspensión: técnica xeral. Instrumentación necesaria para a súa aplicación. II.4. Terapia de suspensión: Aplicación pendular, axial concéntrica e axial excéntrica: II.4.1. Articulación do ombreiro e cintura escapular. I.4.2. Extremidade superior. I.4.3. Cinto pélvico. I.4.4. Extremidade inferior. I.4.5. Columna vertebral II.5. Poleoterapia Técnica xeral Instrumentación necesaria para a súa aplicación. Montaxe dun circuíto de poleas. Colocación da primeira polea. Colocación da segunda polea. Exemplos Práctica de aplicación. II.6. Métodos de reforzo. Metodoloxía xeral. Cálculo da resistencia máxima (RM) e do décimo RM. II.6.1. Aplicación do método Delorme. Método de Dotte. Exemplos prácticos de aplicación. II.6.2. Métodos MacGovern e Luscombe. Método Zinovieff. Exemplos prácticos de aplicación. II.6.3. Método de Hettinguer e Muller.Exemplos prácticos de aplicación. Kinesiterapia activa II.7. Kinesiterapia activa aplicada a: II.7.1 Articulación do ombreiro e cintura escapular. I.7.2. Extremidade superior. I.7.3. Cinto pélvico. I.7.4. Extremidade inferior. I.7.5. Columna vertebral

Planning

	Class hours	Hours outside the classroom	Total hours
Introductory activities	2	0	2
Lecturing	23	64	87
Problem solving	2	0	2
Collaborative Learning	5	8	13
Case studies	2	0	2
Laboratory practical	41	69	110
Mentored work	1	4	5
Essay questions exam	1	0	1
Laboratory practice	1	0	1
Objective questions exam	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
Introductory activities	Activities aimed at making contact and gathering information about the students, as well as the presentation of the subject.
Lecturing	Classes will be theoretical-participatory. Lecturer will teach the contents on the subject, making the students participate actively during the classes. New information and communication technologies will be used for the development of classes. Debate, case study and problem-solving strategies will be used too. The student will have at his disposal documents that will serve as a guide.
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 the available information and the interpretation of results. It is usually used as a complement to the master class.
Collaborative Learning	Activities in small groups where students work to learn and develop skills, attitudes and values through collaboration.
Case studies	Analysis of a real clinical case, problem to know it, interpret it, solve it, generate hypotheses, test data, reflect, complete knowledge, diagnose it and train in alternative solution procedures.
Laboratory practical	Activities for the application of knowledge to specific situations and the acquisition of basic and procedural skills related to the subject studied. They are developed in special laboratories with specialized equipment. The experimental demonstration, the simulation strategy, the didactic treatment of errors and systematic training will be used. The teacher will demonstrate how the technique is to be performed, then the students will practice in pairs the practice between them, being corrected by the teacher and clarifying all the doubts that may arise. The correction will take into account the user / patient position, hands positions, as well as the execution of the maneuver and on the other hand the height of the treatment table and the position of the student that is carrying out the practice. Likewise, the attitude of the student will be taken into account.

Mentored work	The student will elaborate a project with others students about a topic related with the subject. It is an autonomous activity of the students that includes the search and collection of information, reading and handling of bibliography, writing, exposition and defense of the work elaborated about a modality of Kinesitherapy that they will have to demonstrate in the practice.
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Personalized assistance

Methodologies	Description
Lecturing	In addition to helping the students with the provided tutorials and depending on the topic to be dealt with, students will also be addressed via email. Personalized attention will be offered by answering the doubts that may arise regarding the subject and / or by giving advise in academic and professional matters in those cases that request it
Laboratory practical	In addition to helping the students with the provided tutorials and depending on the topic to be dealt with, students will also be addressed via email. Personalized attention will be offered by answering the doubts that may arise regarding the subject and / or by giving advise in academic and professional matters in those cases that request it
Mentored work	In addition to helping the students with the provided tutorials and depending on the topic to be dealt with, students will also be addressed via email. Personalized attention will be offered by answering the doubts that may arise regarding the subject and / or by giving advise in academic and professional matters in those cases that request it
Case studies	In addition to helping the students with the provided tutorials and depending on the topic to be dealt with, students will also be addressed via email. Personalized attention will be offered by answering the doubts that may arise regarding the subject and / or by giving advise in academic and professional matters in those cases that request it

Assessment

	Description	Qualification	Training and Learning Results			
Case studies	Analysis of a fact, problem or real event with the purpose of knowing it, interpreting it, solving it, generating hypotheses, contrasting data, reflecting, completing knowledge, diagnosing it and train in alternative solution procedures. Learning outcomes: LO1, LO2, LO3, LO4, LO5, LO6, LO7, LO8.	20	A2	B1	C1 C3 C7 C12 C15 C16 C20 C21 C36	D1 D2
Mentored work	The performance and presentation and defense of the group work within the deadlines established at the beginning of the course is mandatory for pass the subject This activity includes the search and collection of information, reading and handling bibliography, writing and analysis critique of the work, as well as the presentation, exhibition and defense of the work. Learning outcomes: LO1, LO2, LO3, LO4, LO5, LO6, LO7, LO8, LO9, LO10, LO11.	10	A2	B1 B4	C1 C3 C7 C12 C15 C16 C20 C21 C36	D1 D2 D5 D8
Essay questions exam	Tests in which the students must develop, relate, organize and present the knowledge they have about the subject in a reasoned answer. Learning outcomes: LO1, LO2, LO3, LO4, LO5, LO6, LO7, LO8.	30	A2		C1 C3 C7 C12 C15 C16 C20 C21 C36	D1
Laboratory practice	The students must execute and reason different Kinesitherapy techniques. Learning outcomes: LO9, LO10.	40	A2	B1	C1 C3 C7 C12 C15 C16 C20 C21 C36	D5 D8

Other comments on the Evaluation

Two evaluation systems are established for the first opportunity: continuous evaluation and global evaluation. The default evaluation of each student, in the first opportunity of this subject, is the continuous evaluation.

In order for a student to be eligible for the overall assessment of this subject at the first opportunity, they must renounce the continuous assessment system for this subject and adhere to the overall assessment system for this subject, in accordance with the procedure and deadlines established by the center .

The evaluation of each student, in the second opportunity and in the final call for this subject, will be carried out through a global evaluation.

Continuous assessment:

The continuous evaluation will be carried out through different activities that must be carried out within the deadlines established at the beginning of the teaching and that will be published on the moovi platform. In the presentation of the subject, all the information related to the continuous evaluation will be detailed. It is the obligation of the students to collect all the necessary information to be able to follow the continuous evaluation in accordance with the instructions given by the teacher at the beginning of the subject.

Continuous evaluation will be carried out through the following activities:

- Case study (20%): It will consist of different activities related to the theoretical and practical contents of the subject.
- Examination of development questions (30%). Tests in which the student must develop, relate, organize and present the knowledge they have on the subject through reasoned answers.
- Work (10%): The evaluation of the work will take into account the submitted work of the subject - manuscript - (5%) and the presentation and defense of the work of the subject (5%).
- Laboratory practice (40%): Students must execute and reason different kinesitherapy techniques.

Overall evaluation:

The official exam dates are published on the center's website <http://fisioterapia.uvigo.es/gl/e> on the subject's moovi platform <https://moovi.uvigo.gal/>.

Theoretical contents:

- Theoretical exam (40%): The theoretical exam will consist of 5 development questions related to the theoretical contents of the subject.

Practical contents:

- Laboratory practice (40%): In the practical exam the student will have to execute and reason about different Kinesitherapy techniques.
- Case study (20%): The student must reason and argue the kinesitherapy techniques relating the physiological effects, the indications and contraindications as well as the characteristics of the maneuvers applied in the case presented.

To pass the subject it is necessary to separately pass the theoretical exam (get at least 5 on the scale from 0 to 10) and the laboratory practice (get at least 5 on the scale from 0 to 10).

Considerations:

Students who take this subject are required to behave responsibly and honestly. Any form of fraud (i.e. copying and/or plagiarism) tending to falsify the level of knowledge or ability reached 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. An internal record of these actions will be kept so that, in the event of recidivism, the opening of a disciplinary file can be requested at the rectory.

Ethical commitment:

Students must exhibit appropriate ethical behavior. In the event of unethical conduct (copying of seminars, plagiarism of work, use of unauthorized electronic equipment, etc.) that prevents 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 the grade will be suspended for the current academic year (0.0). The use of any electronic device will not be allowed during the evaluation tests unless expressly authorized. The fact of introducing an unauthorized electronic device into the exam room will be considered a reason for

failing 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 teacher, recording, in whole or in part, both sound and image, of master classes, seminars or practices of the subject will not be allowed, in accordance with the provisions of the Intellectual Property Law, the Organic Law on Protection of Personal Data and the Organic Law on Civil Protection of the Right to Honor, Personal and Family Privacy and Own Image. Depending on the subsequent use, the recording without consent may give rise to civil, disciplinary, administrative and, where appropriate, criminal responsibilities.

Sources of information

Basic Bibliography

Génot C, Neiger H, Leroy A, Pierron G, Dufour M, Péninou G., **Kinesiterapia**, 3, Médica Panamericana, 2012

Neiger, Henri, **Estiramientos analíticos manuales. Técnicas pasivas**, 3, Médica Panamericana, 1998

Cook G, **Movement : functional movement systems : screening, assessment, and corrective strategies**, 5, On Target Publications, 2020

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Hall, C.M., Brody, L.T, **Therapeutic Exercise: Moving Toward Function**, 3, Lippincott Williams & Williams., 2005

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Fernandez de las Peñas C., Melian Ortiz A., **Cinesiterapia: Bases Fisiológicas Y Aplicación Práctica**, 2, Elsevier, 2010

Complementary Bibliography

Lapierre A, **La reeducación física. física. Tomo I,II,III**, 6, CIE. Dossat, 2000

Kaltenborn FM., **Fisioterapia Manual**, 10, McGraw-Hill Interamericana,, 2004

Jose Luis Martinez Gil, **Poleas y Suspensiones en la actividad física**, 1, Aran Ediciones, 2008

Susan L. Edmond, **Joint Mobilization/Manipulation: Extremity and Spinal Techniques**, 3, Elsevier, 2016

Michael Higgings, **Therapeutic Exercise From Theory to Practice**, 1, FAD, 2011

Robert A. Donatelli, Michael J. Wooden, **Orthopaedic Physical Therapy**, 4, Churchill Livingstone, 2009

Manske, Robert C., Lehecka, Brian , Reiman, Michael, Loudon, Janice, **Orthopedic Joint Mobilization and Manipulation: An Evidence-Based Approach**, 1, Human Kinetics, 2018

Darlene Hertling, Randolph M. Kessler, **Management of Common Musculoskeletal Disorders: Physical Therapy Principles**, 1, Lippincott Williams & Williams, 2006

Houglum, Peggy A, **Therapeutic Exercise for Musculoskeletal Injuries**, 4, Human Kinetics, 2016

Recommendations

Subjects that continue the syllabus

Manual Therapy/P05G171V01206

Subjects that are recommended to be taken simultaneously

Human anatomy: Medical conditions/P05G171V01201

Human anatomy: Surgical conditions/P05G171V01202

Subjects that it is recommended to have taken before

Human anatomy: Human anatomy/P05G171V01101

Physiology: Functional movement in physiotherapy/P05G171V01105

Physiotherapy evaluation/P05G171V01108