



IDENTIFYING DATA

General physiotherapy II

Subject	General physiotherapy II			
Code	P05G171V01205			
Study programme	Grado en Fisioterapia			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	9	Mandatory	2nd	2nd
Teaching language	Spanish Galician			
Department				
Coordinator	Rodríguez Fuentes, Gustavo			
Lecturers	Machado de Oliveira, Iris Rodríguez Fuentes, Gustavo			
E-mail	gfuentes@uvigo.es			
Web	http://gfuentes.webs.uvigo.es/index.htm			
General description	<p>This is a compulsory subject in the 2nd year of the Physiotherapy Degree (taught in the 2nd four-month period). It studies the therapeutic use of electric currents, ultrasound, phototherapy, magnetotherapy and their modalities.</p> <p>Due to its contents, it is important to have previous knowledge of anatomy, physiology, biophysics and palpatory anatomy. In addition, its framework within the Degree also serves to generate in the students, together with the other subjects on basic general and specific knowledge of Physiotherapy, a base that facilitates the development of the subjects called in the curriculum as "Physiotherapy in Clinical Specialities" and "Clinical" Stays, in third and fourth years, and which involve the interrelation of the knowledge of basic and specific assessment and treatment used within the arsenal of a physiotherapist to treat specific pathological processes within each clinical speciality: traumatology, rheumatology, orthopaedics, peripheral neurology, genitourinary, etc.</p>			

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.
B3	Communicate effectively and clearly, both orally and in writing, with users of the health system as well as with other professionals.
B4	Acquire basic scientific training in research.
C1	To know the principles and theories of physical agents and their applications in physical therapy.
C2	Understand the principles of biomechanics and electrophysiology, and their main applications in the field of physical therapy.
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.
C14	Understand and apply the manual and instrumental methods and procedures of assessment in Physical Therapy and Physical Rehabilitation, as well as the scientific evaluation of their usefulness and effectiveness.
C17	Know, design and apply the different modalities and general procedures of intervention in Physiotherapy: Massage Therapy, Electrotherapy, Magnetotherapy, Hydrotherapy, Balneotherapy, Climatotherapy, Thalassotherapy, Thermotherapy, Cryotherapy, Vibrotherapy, Phototherapy, Pressure Therapy, therapies derived from other physical agents, as well as fundamental aspects of Ergotherapy and other therapies related to the field of competence of physiotherapy.
C18	Encourage the participation of the user and family in their recovery 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.
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

D7 Maintain an attitude of learning and improvement.

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			
New		B3	C1 C12 C17 C36	
New	A2	B3	C2 C7 C12 C14 C17 C18 C36	D1
New		B3	C1 C12 C17 C36	
New	A2	B3	C2 C7 C12 C14 C17 C18 C36	D1
New		B3	C1 C12 C17 C36	
New	A2	B3	C2 C7 C12 C14 C17 C18 C36	D1
New		B3	C1 C12 C17 C36	
New	A2	B3	C2 C7 C12 C14 C17 C18 C36	D1
New	A2	B3 B4	C12 C18 C20	D1 D2 D7 D8

Contents

Topic	
T1. Electrotherapy.	T1.1. Electrotherapy: Basic information. T1.2. Galvanic current. T1.3. Low frequency currents. T1.4. Medium frequency currents. T1.5. High frequency currents.
T2. Ultrasound therapy.	T2.1. Ultrasound therapy. T2.2. Combined therapy.
T3. Shockwave therapy.	T3.1. Extracorporeal shockwave therapy. T3.2. Radial shockwave therapy.

T4. Phototherapy.	T4.1. Phototherapy: Basic information. T4.2. Infrared therapy. T4.3. Ultraviolet therapy. T4.4. Laser therapy.
T5. Magnetic field therapy.	T5.1. Magnetic field therapy.
P1. Electrotherapy.	P1.1. Practical applications of galvanic currents. P1.2. Practical applications of low frequency currents. P1.3. Practical applications of medium frequency currents. P1.4. Practical applications of high frequency currents.
P2. Ultrasound therapy.	P2.1. Practical applications of ultrasound therapy. P2.2. Practical applications of combined therapy.
P3. Phototherapy.	P3.1. Practical applications of infrared therapy. P3.2. Practical applications of ultraviolet therapy. P3.3. Practical applications of laser therapy.
P5. Magnetic field therapy.	P5. Practical applications of magnetic field therapy.

Planning

	Class hours	Hours outside the classroom	Total hours
Introductory activities	1	0	1
Lecturing	28	56	84
Laboratory practical	44	66	110
Mentored work	2	23	25
Objective questions exam	1	0	1
Essay questions exam	1	0	1
Essay questions exam	1	0	1
Essay	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	Activities aimed at making contact with and gathering information about the student body, as well as to presenting the subject.
Lecturing	Theoretical-participative classes where the active participation of students is encouraged. General use of audiovisual media. Throughout the four-month period, students will receive through the Moovi distance-learning platform or the website of the lecturer coordinating the subject (http://gfuentes.webs.uvigo.es/index.htm) the presentations prepared by the teaching staff that will serve as a guide.
Laboratory practical	Practical classes will follow a demonstrative methodology with a reasoned analysis of practical cases. practical cases. The teacher will show the different physiotherapy methods and techniques, as well as their applications. The students will then carry out the practice between them in pairs, being corrected by the teacher, while trying to clarify any doubts that may arise.
Mentored work	The work to be carried out by the students of the subject will be an application protocol in a clinical case using one of the physical agents seen in the subject. The clinical cases will be established by the teaching staff. The work will be done individually, although several people will work on the same clinical case. clinical case. Subsequently, all those who have worked on the same clinical case will have to analyse the protocol proposals made by their colleagues. Each one will deliver a commentary on the analysis of each of the works to the teacher in charge. In addition, and also individually, the student will have to make an infographic on a theoretical or practical aspect of the subject proposed by the teacher.

Personalized assistance

Methodologies	Description
Introductory activities	It will take place in a large group and/or synchronous virtual session and will be aimed at guiding the development of the subject and its development of the subject and its evaluation, as well as to solve possible doubts.
Lecturing	Personalised attention will be focused on solving any doubts that students may have and on guiding their efforts in the subject. students and to guide their efforts in the subject.
Laboratory practical	Personalised attention will be focused on resolving any doubts students may have and on clarifying the evaluation rubric for the practical exam.
Mentored work	Personalised attention will be focused on resolving any doubts students may have and clarifying the rubric for assessing the mentored work.

Assessment						
	Description	Qualification	Training and Learning Results			
Objective questions exam	20 single answer questions (maximum duration 25 minutes); all questions shall be of equal same value. In addition, it should be noted that blanks will not count against the number of questions left blank, but wrong answers will be counted, as indicated in the following formula: Marking = [correct answers - (errors/no. of options-1) / no. of questions] - 10	10	B3	C1 C2 C7 C12 C17 C36	D1 D8	
Essay questions exam	Theoretical examination of 3 short questions (maximum duration 35 minutes). All questions shall be of equal value.	15	B3	C1 C2 C7 C12 C17 C36	D1 D8	
Essay questions exam	Theoretical examination of 5 short questions (maximum duration 60 minutes). All questions shall be of equal value.	20	B3	C1 C2 C7 C12 C17 C36	D1 D8	
Essay	The completion of the work is compulsory in order to pass the subject. The work of the subject will consist of the elaboration of a protocol for the clinical case, as well as an infographic on a theoretical or practical aspect of the subject. theoretical or practical aspect of the subject. The work will have to be submitted in computer support to the teacher, using the MooVi virtual teaching platform (https://moovi.uvigo.gal/), uploading the work as a whole to the space indicated by the teacher responsible for it.	15	A2 B3 B4	C12 C14 C17 C18 C20 C36	D1 D2 D7 D8	
Simulation or Role Playing	Examination where each student will answer 4 questions in a practical way (10 minutes per practical way (10 minutes per exercise). The question to be answered will be chosen at random by the students themselves from the set of cases that were made throughout the course on these contents. This exam will take place on the official date that corresponds to the subject in January. All questions will be graded from 0 to 10 points.	40	A2 B3	C2 C7 C12 C14 C17 C18 C36	D1 D8	

Other comments on the Evaluation

Students opting for **continuous assessment** will be assessed as described above and with the percentages indicated:

- multiple-choice exam in the 6th week of teaching, provided that the contents had been taught.
- 2 examinations of developmental questions, one in the 8th week and the other in the 13th week, provided that the contents had been taught.
- practical exam 1, on the official date corresponding to the subject (May-June).
- a work to be handed in the different parts in the 13th, 14th and 15th weeks of teaching.

Students who do not pass the subject will keep the part they have passed for the second chance exam of the same academic year (passed part means having at least 0.5 points in the multiple-choice exam, 0.75 and 1 point in the theoretical exams with developmental questions, 0.75 points in the work and 2 points in the practical exam).

In the event that the student does not pass each of the parts of the subject, and even if the average gives a pass mark, he/she will fail the subject and will be given a mark of 4.5.

On the other hand, those students who decide to opt for a **global assessment**, this will initially be done on the official dates of the subject (May-June) and will consist of:

- a theory exam with 10 short essay questions and a maximum duration of 90 minutes. In this exam, all questions will have the same value (each one will be assessed from 0 to 10 points). The value of this exam will be 45% of the total grade for the subject.
- a practical exam of 4 scenarios carried out under the same conditions as those described in the continuous assessment for

the practical exam. The value of this exam will be 45% of the total grade for the subject.

- an individual work consisting in the elaboration of an application protocol and an infographic for a new clinical case proposed by a teacher of the subject.

As in the case of continuous assessment, in order to pass the subject, **the student will have to pass each of these assessment tests** (obtain a 5 out of 10 or more in each one of them, which means at least 2.25 points in the theoretical and practical exams, and 0.5 points in the work), **the part passed will be saved for the second chance exam** of the same academic year, and, **in the event that the student does not pass the subject**, he/she will fail the subject and a grade of 4.5 will be given in the transcript of records.

The Teaching Guide follows the "Regulation on the evaluation, grading and quality of teaching and the student learning process of the student learning process", approved by the Cloister on 18 April 2023, as well as the specific adaptations for the Degree in the Degree in Physiotherapy determined by the Board of the Centre.

Sources of information

Basic Bibliography

Albornoz Cabello M, Maya Martín J, Toledo Marhuenda JV., **Electroterapia práctica: avances en investigación clínica.**, Elsevier, 2016

Cameron MH., **Agentes físicos en rehabilitación: práctica basada en la evidencia.**, 5ª, Elsevier España, 2019

Rodríguez Martín JMª., **Electroterapia en fisioterapia.**, 3ª, Médica Panamericana, 2014

Watson T, Nussbaum E., **Modalidades en electroterapia. Práctica basada en la evidencia.**, 13ª, Elsevier España, 2021

Complementary Bibliography

Agne JE., **Electrotermofototerapia**, O Autor, 2013

Kitchen Sh, Coord., **Electrotherapy: evidence-based practice.**, 12ª, Elsevier Churchill Livingstone, 2008

Martín Cordero JE., **Agentes físicos terapéuticos.**, ECIMED, 2008

Maya Martín J, Albornoz Cabello M., **Estimulación eléctrica transcutánea y neuromuscular.**, Elsevier España, 2010

Plaja Masip, J., **Analgesia por medios físicos.**, McGraw-Hill/Interamericana, 2002

Prentice WE., **Técnicas de rehabilitación en Medicina Deportiva.**, 4ª, Paidotribo, 2009

Seco Calvo J, dir., **Procedimientos Generales en Fisioterapia.**, Médica Panamericana, 2021

Valera Garrido F, Minaya Muñoz F., **Fisioterapia invasiva.**, 2ª, Elsevier, 2017

Recommendations

Subjects that continue the syllabus

Physical therapy in clinical specialties II/P05G171V01309

Subjects that are recommended to be taken simultaneously

General physiotherapy I/P05G171V01204

Subjects that it is recommended to have taken before

Human anatomy: Medical-surgical conditions/P05G171V01107

Human anatomy: Human anatomy/P05G171V01101

Biochemistry-Physics: Biochemistry and biophysics/P05G171V01103

Physiology: Human physiology/P05G171V01102

Physiotherapy evaluation/P05G171V01108

Other comments

In the MooVi e-learning platform, in the personal data, in addition to the e-mail address, it would be convenient to indicate a contact telephone number (where you can be reached quickly in case of emergency, normally the mobile phone) and to upload a photograph (to make it easier for the teacher, especially in the first weeks, to identify the students).