



Information about the subject

Degree: Bachelor of Science Degree in Medicine

Faculty: Faculty of Medicine and Health Sciences

Code: 340410 **Name:** Rehabilitation and Physical Therapy

Credits: 3,00 **ECTS Year:** 4 **Semester:** 2

Module: Diagnostic and therapeutical procedures.

Subject Matter: Therapeutic procedure **Type:** Compulsory

Field of knowledge: Health Science

Department: Medical Specialities

Type of learning: Classroom-based learning

Languages in which it is taught: Spanish

Lecturer/-s:

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Module organization

Diagnostic and therapeutical procedures.

Subject Matter	ECTS	Subject	ECTS	Year/semester
Diagnostic procedures	39,00	Basic Immunology	3,00	1/2
		Functional Assessment	6,00	This elective is not offered in the academic year 24/25
		Genetics	3,00	1/1
		Introduction to Medicine	3,00	1/2
		Laboratory of Diagnostic Tests	3,00	5/1
		Medical Microbiology and Parasitology	6,00	3/1
		Pathological Anatomy	6,00	2/2
		Physiological Records and Functional Tests	3,00	2/2
		Radiodiagnostic and Imaging Techniques	6,00	3/1
Therapeutic procedure	27,00	Anaesthesia and Resuscitation	3,00	5/1
		Biotechnology	6,00	This elective is not offered in the academic year 24/25
		General and Special Pharmacology	9,00	3/2



Therapeutic procedure	General Procedures of Intervention	6,00	This elective is not offered in the academic year 24/25
	Rehabilitation and Physical Therapy	3,00	

Learning outcomes

At the end of the course, the student must be able to prove that he/she has acquired the following learning outcomes:

- R1 Know the possibilities of pharmacological and non-pharmacological management of acute and chronic pain
- R2 Know the basics of specialty and clinical evaluation of the disabled patient
- R3 Know the therapeutic techniques in rehabilitation and their clinical indications
- R4 Knowing how to assess disability in the different disorders of the locomotor and neurological system, as well as the fundamental aspects of its treatment
- R5 Know the main children's age-specific disabling diseases and therapeutic possibilities in rehabilitation
- R6 Have knowledge of the different pathologies in which rehabilitation and physical therapy can be useful
- R7 Knowing how to explore a joint
- R8 Knowing how to explore muscle strenght
- R9 Use of functional valuation scales
- R10 Knowing how to make a medical history of a patient with disabling disease
- R11 Perform some of the most common joint and periarticular infiltrations



Competencies

Depending on the learning outcomes, the competencies to which the subject contributes are (please score from 1 to 4, being 4 the highest score):

BASIC		Weighting			
		1	2	3	4
CB1	Students have demonstrated to possess and understand knowledge in a study area that starts from the base of the general secondary education, and is usually found at a level that, while supported by advanced textbooks, also includes some aspects that involve knowledge from the forefront of their field of study				X
CB2	Students know how to apply their knowledge to their job or vocation in a professional way and possess the competences that are usually demonstrated through the elaboration and defense of arguments and the resolution of problems within their area of study				X
CB3	Students have the ability to collect and interpret relevant data (usually within their area of study) to make judgments that include a reflection on relevant social, scientific or ethical topics				X
CB4	Students can pass on information, ideas, problems and solutions to both a specialized and non-specialized audience				X
CB5	Students have developed the learning skills needed to undertake further studies with a high degree of autonomy				X
GENERAL		Weighting			
		1	2	3	4
CG1	Recognizing the essential elements of the medical profession, including ethical principles, legal responsibilities, and patient-centered professional exercise	X			
CG2	Understanding the importance of such principles for the benefit of the patient, society and profession, with special attention to professional secrecy	X			



CG3	Knowing how to apply the principle of social justice to professional practice and understanding the ethical implications of health in a changing global context	x		
CG4	Developing professional practice with respect to patient autonomy, beliefs and culture		x	
CG5	Recognizing the limitations themselves and the need to maintain and update their professional competence, giving special importance to the autonomous learning of new knowledge and techniques and to the motivation for quality			x
CG6	Developing professional practice with respect for other health professionals, acquiring teamwork skills		x	
CG12	Understanding the basis of action, indications and efficacy of therapeutic interventions, based on available scientific evidence			x
CG18	Indicating the most appropriate therapeutics of the most prevalent and chronic acute processes, as well as terminally ill patients		x	
CG21	Listening to carefully, obtain and synthesize relevant information about the problems afflicting the patient and understand the content of this information		x	
CG22	Writing medical histories and other medical records in an understandable way to outsiders			x
CG23	Communicating effectively and clearly, both orally and in writing, with patients, family members, media workers and other professionals		x	
CG30	Basic knowledge of the National Health System and health legislation		x	
CG31	Knowing, critically valuing and knowing how to use the sources of clinical and biomedical information to obtain, organize, interpret and communicate scientific and health information		x	
CG32	Knowing how to use information and communication technologies in clinical, therapeutic, preventive and research activities	x		
CG33	Maintaining and using records with patient information for further analysis, preserving data confidentiality	x		
CG35	Understanding the importance and limitations of scientific thinking in the study, prevention and management of diseases	x		

SPECIFIC	Weighting			
	1	2	3	4



CE71	Knowing the general principles of anesthesia and resuscitation. Nutrition and dietotherapy	X			
CE72	Knowing the main indications of electrophysiological techniques (ECG, EEG, EMG, and others)	X			
CE74	Knowing general surgical indications, preoperative risk and postoperative complications. Transfusions and transplants	X			
CE75	Know the principles and indications of radiotherapy	X			
CE76	Knowing the basics of rehabilitation, the promotion of personal autonomy, the functional adaptation of the environment, and other physical procedures in morbidity, for the improvement of the quality of life				X
CE78	Knowing how to interpret the results of the laboratory's diagnostic tests	X			
CE79	Managing disinfection and sterilization techniques				X
CE80	Knowing how to interpret a radiological image by systematic reading				X
CE81	Knowing how to use different kind of drugs properly			X	
CE82	Knowing how to make and interpret an ECG and EEG		X		
CE83	Correctly writing prescriptions, adapted to each patient's situation and legal requirements		X		
CE84	Assessing nutritional status and develop a diet appropriate to different circumstances	X			
CE85	Practicing elementary surgical procedures: cleaning, hemostatics and wound suture	X			

TRANSVERSAL		Weighting			
		1	2	3	4
CT1	Analytical and synthesis capacity		X		
CT2	Planification and organization capacity		X		
CT6	Manage information capacity		X		



CT7	Solving problems				X
CT8	Making decisions			X	
CT9	Team work			X	
CT10	Interdisciplinary team work				X
CT12	Interpersonal relationship skills				X
CT14	Critical reasoning			X	
CT16	Individual learning				X
CT18	Creativity		X		
CT19	Leadership	X			
CT24	Ability to take responsibility	X			
CT25	Autocriticism capacity			X	
CT26	Knowing how to value personal action and know your own skills and limitations			X	
CT27	Ability to express one's feelings		X		
CT28	Show sensitivity to humanity's problems		X		



Assessment system for the acquisition of competencies and grading system

Assessed learning outcomes	Granted percentage	Assessment method
R1, R2, R3, R4, R5, R6	10,00%	Open questions
R1, R2, R3, R4, R5, R6	70,00%	Tests
R7, R8, R9, R10, R11	15,00%	Practices
R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11	5,00%	Participation in class

Observations

You must pass 50% of the multiple choice test to be able to access class participation points. The exam will be 50 multiple choice questions, counting 80% of the final grade for the subject. The resistance to classes will have a value in the final grade of the subject of 20%.

MENTION OF DISTINCTION:

In accordance with the regulations governing the assessment and grading of subjects in force at UCV, the distinction of "Matrícula de Honor" (Honours with Distinction) may be awarded to students who have achieved a grade of 9.0 or higher. The number of "Matrículas de Honor" (Honours with Distinction) may not exceed five percent of the students enrolled in the group for the corresponding academic year, unless the number of enrolled students is fewer than 20, in which case a single "Matrícula de Honor" (Honours with Distinction) may be awarded. Exceptionally, these distinctions may be assigned globally across different groups of the same subject. Nevertheless, the total number of distinctions awarded will be the same as if they were assigned by group, but they may be distributed among all students based on a common criterion, regardless of the group to which they belong. The criteria for awarding "Matrícula de Honor" (Honours with Distinction) will be determined according to the guidelines stipulated by the professor responsible for the course, as detailed in the "Observations" section of the evaluation system in the course guide.



Learning activities

The following methodologies will be used so that the students can achieve the learning outcomes of the subject:

- M1 Masterclass
- M2 Problems resolution and practical cases
- M4 Content presentations by teacher
- M5 Knowledges and skills explanation
- M6 Laboratory practices
- M7 Oral presentation by student
- M8 Group activities supervised by professor
- M9 Knowledge acquirance through student interaction and activity
- M11 Personalised attention by professor
- M12 Tests to understand the level of knowledge acquirance and skills
- M13 Written work
- M14 Online activity on e-learning
- M15 Personal study
- M16 Information research
- M17 Discussion and solving issues in group



M21 Supervision of clinical histories

IN-CLASS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
Theory class M1, M2, M4, M5	R1, R2, R3, R4, R5, R6, R9, R10	22,00	0,88
Seminar and group practices M16, M17, M21	R7, R8, R9, R10, R11	10,00	0,40
Practices in small groups M16, M17, M21	R7, R8, R9, R10, R11	2,00	0,08
Tutoring M11	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11	3,00	0,12
Evaluation M12	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11	3,00	0,12
TOTAL		40,00	1,60

LEARNING ACTIVITIES OF AUTONOMOUS WORK

	LEARNING OUTCOMES	HOURS	ECTS
No attendance M14, M15, M16	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11	35,00	1,40
TOTAL		35,00	1,40



Description of the contents

Description of the necessary contents to acquire the learning outcomes.

Theoretical contents:

Content block	Contents
Block I: Fundamentals and evaluation of rehabilitation	<ul style="list-style-type: none">- Fundamentals, measurement of health and multidisciplinary management of the patient.- Clinical evaluation of the musculoskeletal system.- Instrumental evaluation in rehabilitation.
Block II: Specific treatment techniques in rehabilitation	<ul style="list-style-type: none">- Therapeutic exercise- Electrotherapy
Block III: Rehabilitation of locomotor system and central nervous system disorders	<ul style="list-style-type: none">- Upper limb locomotor system rehabilitation.- Rehabilitation in lower limb locomotor system.- Rehabilitation treatment in osteoarthritis.- Rehabilitation management in spinal pathology.- Rehabilitation of fractures. sd. complex regional pain.- Brain damage.- Spinal cord injury.- Amputee patient.- Interventionism and chronic pain.
Block IV: Medical pathology in physical medicine and rehabilitation	<ul style="list-style-type: none">- Lymphedema.- Pelvic floor.- Neuromuscular diseases.- Child rehabilitation.- Cardiac Rehabilitation.- Respiratory rehabilitation.- Disorders of balance, language and communication.
Seminars	<ul style="list-style-type: none">- Physical examination of the locomotor system.



Temporary organization of learning:

Block of content	Number of sessions	Hours
Block I: Fundamentals and evaluation of rehabilitation	3,00	6,00
Block II: Specific treatment techniques in rehabilitation	5,00	10,00
Block III: Rehabilitation of locomotor system and central nervous system disorders	5,00	10,00
Block IV: Medical pathology in physical medicine and rehabilitation	5,00	10,00
Seminars	2,00	4,00

References

- Sánchez, B., Ferrero Méndez, A., Aguilar Naranjo, J., & Climent Barberá, J. (2006). Manual SERMEF de rehabilitación y medicina física. Buenos Aires, Madrid: Médica Panamericana.
- Manual de rehabilitación medicina física 2018. EDITORES Francisco Manuel Martín del Rosario Miguel Ángel Ruiz Fernández Agustín Miguel García Bravo María Nieves Martín Álamo Jesús Sánchez Enríquez. ISBN edición online: 978-84-09-00977-0.
- Cuccurullo, S. (2019). *Physical Medicine and Rehabilitation Board Review, Fourth Edition* (4th ed.). Springer Publishing Company. Retrieved from <https://www.perlego.com/book/1447819/physical-medicine-and-rehabilitation-board-review-fourth-edition-pdf> (Original work published 2019).
- W. Frontera, J. Silver, T. Rizzo. 2020. Manual de medicina física y rehabilitación 4ªED. ISBN: 978-84-9113-634-7.
- + Web link:
 - <https://www.sermef.es>
 - <https://svmefr.com>



Addendum to the Course Guide of the Subject

Due to the exceptional situation caused by the health crisis of the COVID-19 and taking into account the security measures related to the development of the educational activity in the Higher Education Institution teaching area, the following changes have been made in the guide of the subject to ensure that Students achieve their learning outcomes of the Subject.

Situation 1: Teaching without limited capacity (when the number of enrolled students is lower than the allowed capacity in classroom, according to the security measures taken).

In this case, no changes are made in the guide of the subject.

Situation 2: Teaching with limited capacity (when the number of enrolled students is higher than the allowed capacity in classroom, according to the security measures taken).

In this case, the following changes are made:

1. Educational Activities of Onsite Work:

All the foreseen activities to be developed in the classroom as indicated in this field of the guide of the subject will be made through a simultaneous teaching method combining onsite teaching in the classroom and synchronous online teaching. Students will be able to attend classes onsite or to attend them online through the telematic tools provided by the university (videoconferences). In any case, students who attend classes onsite and who attend them by videoconference will rotate periodically.

In the particular case of this subject, these videoconferences will be made through:

☒ Microsoft Teams

☐ Kaltura



Situation 3: Confinement due to a new State of Alarm.

In this case, the following changes are made:

1. Educational Activities of Onsite Work:

All the foreseen activities to be developed in the classroom as indicated in this field of the guide of the subject, as well as the group and personalized tutoring, will be done with the telematic tools provided by the University, through:

☒ Microsoft Teams

☐ Kaltura

Explanation about the practical sessions:



2. System for Assessing the Acquisition of the competences and Assessment System

ONSITE WORK

Regarding the Assessment Tools:

☒ The Assessment Tools will not be modified. If onsite assessment is not possible, it will be done online through the UCVnet Campus.

☐ The following changes will be made to adapt the subject's assessment to the online teaching.

Course guide		Adaptation	
Assessment tool	Allocated percentage	Description of the suggested changes	Platform to be used

The other Assessment Tools will not be modified with regards to what is indicated in the Course Guide.

Comments to the Assessment System: