



## Information about the subject

**Degree:** Bachelor of Science Degree in Physiotherapy

**Faculty:** Faculty of Medicine and Health Sciences

**Code:** 240317 **Name:** Paediatric Physiotherapy

**Credits:** 6,00 **ECTS Year:** 3 **Semester:** 2

**Module:** MODULE 5: UNIVERSITY-SPECIFIC

**Subject Matter:** Training in physiotherapeutic techniques **Type:** Compulsory

**Field of knowledge:** Health Sciences

**Department:** Physiotherapy

**Type of learning:** Classroom-based learning

**Languages in which it is taught:** Spanish

### Lecturer/-s:

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## Module organization

### MODULE 5: UNIVERSITY-SPECIFIC

Subject Matter	ECTS	Subject	ECTS	Year/semester
Social Sciences	6,00	Science, Reason and Faith	6,00	2/1
Health Research and Documentation	6,00	Health Research and Documentation	6,00	3/2
Training in complementary techniques	6,00	Radiology	6,00	2/2
Training in physiotherapeutic techniques	30,00	Geriatric Physiotherapy	6,00	4/1
		Manual Therapy	6,00	3/2
		Paediatric Physiotherapy	6,00	3/2
		Preventive and Evolutionary Physiotherapy	6,00	3/2
		Special Procedures in Physiotherapy	6,00	3/2

## Recommended knowledge

Basic neuroanatomy and neurophysiology.  
Basic neurological pathology  
Biomechanics



## 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 Each student carries out a clinical case on eligibility for paediatric physiotherapy services in premature children, discriminating developmental warning signs, identifying the most frequent motor disorders in premature children, making decisions regarding the best therapeutic strategies and categorising support products for intervention.
- R2 Each student performs a clinical case on continuous intervention in a child with Cerebral Palsy, choosing the specific assessment scales for planning and measuring results, deciding the therapeutic strategies according to the type of CP and the age of the child, categorising the support products and arguing the different therapeutic approaches and the role of the physiotherapist in each of them.
- R3 The student identifies the different assessment scales in child development according to the ICF paradigm and interprets the results, being able to make decisions for clinical practice.
- R4 Discriminates the warning signs of psychomotor development in children from 0 to 6 years of age, in different child-rearing contexts, through knowledge of the learning theories of movement and postural control.
- R5 Decides on therapeutic strategies according to indications, contraindications and precautions, for symptoms and signs of motor and musculo-skeletal development disorders at paediatric age, being able to discriminate those based on recommendable scientific evidence.
- R6 Categorises the support products applied in paediatric patients with developmental disorders to promote early sitting, standing, walking and autonomous propulsion.
- R7 Discriminates the signs and symptoms of the different paediatric orthopaedic, rheumatological, neuropsychological and pregnancy and childbirth pathologies, which cause motor development disorders.



## 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 demonstrate knowledge and understanding in an area of study that is at the core of general secondary education, and is often at a level that, while supported by advanced textbooks, also includes some aspects that involve knowledge from the cutting edge of their field of study.			X	
CB2	Students know how to apply their knowledge to their work or vocation in a professional way and possess the skills usually demonstrated by developing and defending arguments and solving problems within their area of study.			X	
CB3	Students have the ability to gather and interpret relevant data (usually within their area of study) to make judgments that include reflection on relevant social, scientific or ethical issues.			X	
CB4	Students can convey information, ideas, problems and solutions to both specialized and non-specialized audiences.		X		
CB5	Students develop those learning skills necessary to undertake further studies with a high degree of autonomy.		X		
SPECIFIC		Weighting			
		1	2	3	4
CE1	Students learn human anatomy and physiology, highlighting the dynamic relations between structure and function, especially of the locomotive system and the nervous and cardio-respiratory systems.			X	
CE2	Students identify the physiological and structural changes that can occur as a result of the application of physiotherapy.				X
CE3	Students identify the factors that influence human growth and development throughout life.				X



CE4	Students know the principles and theories of physics, biomechanics, kinesiology and ergonomics, applicable to physiotherapy.			X
CE5	Students know the physical bases of the different physical agents and their applications in Physiotherapy.			X
CE7	Students know the application of ergonomic and anthropometric principles.			X
CE8	The psychological and social factors that influence the health/disease status of the individual, family and community.			X
CE9	Students assimilate theories of communication and interpersonal skills.	X		
CE10	Learning theories to be applied in health education and in your own lifelong learning process		X	
CE11	Students identify the factors involved in teamwork and leadership situations.	X		
CE12	The general aspects of pathology of endogenous and exogenous etiology related to physiotherapy of all devices and systems with their medical, surgical, physiotherapeutic and orthopedic treatments.			X
CE13	The structural, physiological, functional and behavioral changes that occur as a result of the intervention of physiotherapy.			X
CE14	Students identify the theoretical bases of Physiotherapy as a science and profession. The models of action in Physiotherapy. The theoretical bases of the assessments, tests and functional verifications: knowledge of their modalities and techniques as well as the scientific evaluation of their utility and effectiveness. The diagnosis of Physiotherapy. Methodology of the research applied to Physiotherapy.			X
CE15	General physiotherapeutic procedures: Kinesitherapy, Massage and Massage Therapy, Electrotherapy, Magnetic Therapy, Ergotherapy, Hydrotherapy, Balneotherapy, Climatotherapy, Thalassotherapy; Thermotherapy, Cryotherapy, Vibrotherapy, Phototherapy, Pressotherapy, and the derivatives of other physical agents		X	
CE16	Physiotherapeutic Procedures based on specific Methods and Techniques of physiotherapeutic actions to be applied in the different pathologies of all the apparatuses and systems, and in all the specialties of Medicine and Surgery, as well as in the promotion and conservation of the health, and in the prevention of the disease.			X
CE18	Students resort to theories that support problem-solving capacity and clinical reasoning.			X



CE22	Students evidence the fundamental concepts of health, health systems and levels of care. Epidemiology. Physiotherapy in the health-disease process.	X		
CE28	Students prepare and systematically fill in the complete Physiotherapy Clinical History, where all the steps followed from the reception of the patient/user to the report at the discharge of Physiotherapy are properly and efficiently recorded.		X	
CE29	Students assess the functional state of the patient/user, considering the physical, psychological and social aspects.			X
CE30	Students determine the Physiotherapy Diagnosis according to the internationally recognized standards and international validation instruments. This competency includes prioritizing the needs of the patient/user to attend with priority to those that most compromise the recovery process.			X
CE31	Students know how to design the Physiotherapy Intervention Plan. To elaborate a specific Physiotherapy Intervention Plan using problem-solving skills and clinical reasoning: in line with the available resources; formulating the intervention objectives with the user and, if appropriate, with the significant people in his environment, collecting his expectations regarding care; selecting the protocols or procedures most appropriate to the planned care, attending to criteria of appropriateness, validity and efficiency.			X
CE32	Students execute, direct and coordinate the Physiotherapy Intervention Plan, attending to the principle of the user's individuality and using the therapeutic tools typical of Physiotherapy, that is, the set of methods, procedures, actions and techniques that through the application of physical means: cure, recover, enable, rehabilitate, adapt and readapt people with deficiencies, functional limitations, disabilities and handicaps; prevent diseases and promote health to people who want to maintain an optimum level of health.			X
CE33	Students evaluate the evolution of the results obtained with the Physiotherapy treatment in relation to the objectives set and the established results criteria. To do this it will be necessary: to define and establish the results criteria; to carry out the evaluation of the evolution of the patient/user; to redesign the objectives according to the evaluation, if necessary; and to adapt the intervention or treatment plan to the new objectives, if necessary.			X



CE34	Students prepare the report upon discharge from Physiotherapy. When it is considered that the proposed objectives have been met, either because the process has been cured or because the possibilities of recovery with the therapeutic measures available have been exhausted, discharge from Physiotherapy will be proposed and the relevant report will be drawn up	X		
CE35	Students provide a Physiotherapy attention in an effective way, giving an integral assistance to the patients/users, for which it will be necessary: To interpret the medical prescriptions; to prepare the environment in which the Physiotherapy attention will be carried out so that it is comfortable; to keep the patient informed of the treatment that is applied, explaining him/her the tests and maneuvers that are practiced, the preparation that they require, and to exhort him/her to collaborate at all times; to register daily the application of the Physiotherapy attention, the evolution and the incidents of it.			X
CE36	Students participate in the areas of health promotion and disease prevention. This includes, among others: identifying the social and economic factors that influence health and health care; designing and carrying out disease prevention and health promotion activities; advising on the development and implementation of care and education policies in the field of physiotherapy; identifying risks and risk factors; assessing and selecting users who can benefit from preventive measures; providing health education to the population in the various fields.			X
CE37	Students relate effectively with the whole multidisciplinary team. This includes: establishing the objectives of Physiotherapy within the team; collecting, listening and assessing the reflections of the rest of the multidisciplinary team towards their actions; accepting and respecting the diversity of criteria of the rest of the team members; recognizing the competences, skills and knowledge of the rest of the health professionals.		X	
CE41	Students keep the foundations of the knowledge, skills and attitudes of the professional competences updated, through a process of continuous training (throughout life); to critically analyse the methods, protocols and treatments of the care in Physiotherapy and to ensure that they are adapted to the evolution of scientific knowledge.			X
CE44	Students cope with stress, which involves the ability to control oneself and one's environment in stressful situations.	X		





CE46	Motivate others. This means having the ability to generate in others the desire to actively and enthusiastically participate in any project or task.	X		
CE47	Students maintain an attitude of learning and improvement. This includes expressing interest and acting in a constant search for information and professional improvement, committing to contribute to professional development in order to improve practice competence and maintain the status that corresponds to a qualified and regulated profession.			X
CE48	Students manifest a high degree of self-concept, with optimal self-acceptance, without self-centeredness but without prejudices.	X		
CE49	Students conform to the limits of their professional competence in health care.		X	
CE50	Students collaborate and cooperate with other professionals, enriching each other. This includes: resolving most situations by establishing direct and assertive communication and seeking consensus; assisting other health professionals in professional practice; knowing interprofessional boundaries and employing appropriate referral procedures.		X	
CE51	Show respect, appreciation and sensitivity to the work of others.		X	
CE52	Develop the ability to organize and lead work teams effectively and efficiently.		X	
CE54	Work responsibly, which means being able to cope with the activities of your job without the need for strict supervision.		X	
CE55	Show its orientation towards the patient/user, making it clear in its actions that the citizen and his/her needs are the axis around which its decisions revolve. As can be seen, some of the competencies that we have gathered as specific coincide in their denomination and contents with certain transversal competencies, but we have decided to incorporate them as specific competencies, given the extraordinary importance that national and international Professional Associations and Colleges confer on them			X

TRANSVERSAL		Weighting			
		1	2	3	4
CT1	Decision-making			X	





CT2	Problem solving.			X
CT3	Capacity for organization and planning.		X	
CT4	Analysis and synthesis capacity.		X	
CT5	Oral and written communication in the native language.		X	
CT6	Information management capacity.		X	
CT7	Computer skills related to the field of study.	X		
CT8	Knowledge of a foreign language.		X	
CT9	Ethical commitment.			X
CT10	Teamwork.		X	
CT11	Interpersonal relationship skills.		X	
CT12	Work in an interdisciplinary team		X	
CT13	Critical Reasoning			X
CT14	Work in an international context.	X		
CT15	Recognition of diversity and multiculturalism			X
CT16	Motivation for quality			X
CT17	Adaptation to new situations.		X	
CT18	Creativity		X	
CT19	Autonomous learning			X
CT20	Initiative and entrepreneurship		X	
CT21	Leadership.	X		



CT22 Knowledge of other cultures and customs

x

CT23 Sensitivity to environmental issues.

x



## Assessment system for the acquisition of competencies and grading system

Assessed learning outcomes	Granted percentage	Assessment method
R3	20,00%	OPEN QUESTIONS: Written exam in which theoretical knowledge and the student's ability to relate, integrate and express it coherently in written language are evaluated. It allows the following generic or transversal skills to be assessed: 4 Capacity for analysis and synthesis. 3 Capacity for organisation and planning. 5 Oral and written communication in the native language. 8 Knowledge of a foreign language. 2 Problem-solving 19 Autonomous learning.
R4, R5, R6	30,00%	TEST TYPE: Multiple choice test with one correct answer out of five possible ones. It allows the student to know in greater detail the contents acquired by him/her. It allows the following generic or transversal competences to be assessed: 2 Problem solving 1 Decision making 13 Critical thinking
R1, R2, R7	20,00%	WORKS: The student, individually or in a group, elaborates a revision or research topic and presents it, in writing, for the evaluation by the teacher. The following generic or transversal competences are valued: 4 Capacity for analysis and synthesis. 3 Capacity for organisation and planning. 7 Computer skills. 6 Information management skills. 10 Teamwork. 14 Working in an international context. 11 Interpersonal skills. 13 Critical thinking. 19 Autonomous learning. 18 Creativity. 21 Leadership. 20 Initiative and entrepreneurship. 16 Motivation for Quality. 70 Maintaining an attitude of learning and improvement. 72 Knowing one's own skills and limitations.



	0,00%	PRACTICAL EXAM: The student is faced with a test in which s/he must demonstrate through practical application the acquisition of certain knowledge. For example, histological or anatomopathological diagnosis, image interpretation or diagnostic tests. This test evaluates the following generic or transversal skills: 13 Critical reasoning. 19 Autonomous learning.
	0,00%	PRESENTATION: The student develops, through an oral presentation, supported or not by audiovisual means, a subject or work commissioned by the teacher. This is the method of evaluation of the Final Degree's Project. At the end of the presentation, the teacher or the audience can ask questions.
	0,00%	ATTENDANCE AND PARTICIPATION IN CLASS: The teacher evaluates the participation, involvement and progression of the student's acquisition of knowledge and skills during the theoretical and practical classes. It will not exceed 5% of the final grade.
R1, R2	30,00%	STUDY AND RESOLUTION OF CASES

## Observations

In order to pass the course it will be mandatory to pass all the items proposed as compulsory (test, short questions, clinical cases and questionnaires of other pathologies), in the case that the student has not completed any of these items, he/she must complete them for the second call, keeping the grade of the remaining items between calls as long as these items are approved.

## EVALUATION CRITERIA

### 1st call

**Evaluation of multiple-choice questions (30% of the final grade):** It will consist of 40 questions with 5 answers, only one correct. It will deduct 1 point for every 4 wrong answers. The minimum grade to pass the theoretical evaluation will be 5 out of 10. This evaluation must be passed in order to be evaluated for the practical part. If the grade is passed, it will be kept for the second exam.

**Practical evaluation (50% of the final grade) = (A+B) by means of a practical correction checklist.** The result of the practical evaluation will be the average of the parts:

**1.Evaluation open questions (20% of the final grade):** 2 short questions with practical orientation will be formulated on the subject matter taught in the practical sessions and seminars



(this evaluation item will be carried out on the day of the exam type test due to the time required for each type of evaluation). These questions will be saved for the second exam if they have been passed (a 1 must be obtained between both questions).

**2.Resolution of clinical cases (30% of the final grade):** it will consist of the realization of two clinical cases where the clinical reasoning must be implemented with all the knowledge that has been carried out in the course. Each clinical case must be approved with a 5 to pass and average with the rest of the grades. The minimum grade to pass the practical evaluation will be 5 out of 10, after averaging the two parts (A+B).

1.The first clinical case (prematurity) must be passed with a 5 with a minimum of 1 point out of 4 in the last question (intervention strategies).

2.In the second clinical case (cerebral palsy) one third of the score of the second question must be obtained (2 points out of 6 possible) to add up to the final grade of the clinical case.

3.The grades for each clinical case are kept separately for the second exam, therefore, if only the second clinical case is failed, only that clinical case must be taken in the second exam (but half clinical cases are not kept, that is, if the grade of a clinical case cannot be added because the grades are not reached, the whole case will be failed).

**Individual and group work (20%).** There are two types of work in the course, those of a compulsory nature and those of an optional nature (evaluation and continuous study), although all of them make average for the final grade of the individual and group work.

**1.Compulsory individual work (10%):** the student must study on his own the topics of Other pathologies through the material provided by the teacher of the subject. The student will have one questionnaire for each topic, having one opportunity to complete it. Once the questionnaire is finished, the student will be able to see the errors and the explanation of the correct answer. The average grade of all these questionnaires will be 10% of the grade (the other 10% will be the optional works).

**2.Optional individual work (5%):** with the intention of favoring the progressive learning of the student, and the continuous evaluation of the subject, a questionnaire of each topic seen in class and a task of clinical reasoning on the therapeutic strategies of that topic will be carried out. The questionnaires can be done twice and the highest score will be taken into account for the grade, in addition to being able to see the correct and incorrect answers with their corrections. The assignments will be evaluated with a pass (a 10) if the activity is submitted on time and a fail (4) if it is not submitted or submitted after the deadline. Once the deadline for submission is over, the corrected assignment will be uploaded so that the student can make a self-correction of each assignment.

**3.Optional group work (5%):** the task of topic 2 will be done in group, having to review all the material indicated by the teacher to elaborate a table of developmental milestones by months/trimester and all the areas of development. This table will be used for the subsequent study of psychomotor development. If the assignment is submitted on time it will be evaluated with a pass (10) and if it is not submitted or submitted late it will be evaluated with a fail (4). This work will not be corrected.



## 2nd call.

For the second round, all the evaluation tests passed in the first round will be saved, since each one of them evaluates different learning outcomes. In this way: the grade of the theoretical exam passed in the first round will be saved, the grade of the open questions passed in the first round will be saved, the clinical case studies passed in the first round will be saved, and the average grade of the individual and group work, both optional and compulsory, will be saved.

The student must take the second exam if he/she has not passed any of the compulsory evaluation tests, therefore, in this case, neither the individual nor the optional group work will be taken into account.

## CRITERIA FOR THE AWARDING OF HONORS:

The mention of Matrícula de Honor may be awarded to students who have obtained a grade equal to or higher than 9.0. Their number may not exceed 5% of the students enrolled in a subject in the corresponding academic year, unless the number of students enrolled is less than 20, in which case only one Honorable Mention may be awarded (Royal Decree 1125/2003).

## 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	Master class Problem solving Exposition of contents by the teacher. Explanation of knowledge and skills
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- M2 Case resolution: Analysis of sample realities - real or simulated - that allow the student to connect theory with practice, to learn from models of reality or to reflect on the processes used in the cases presented.
- M4 Personalized attention. Period of instruction and/or guidance by a tutor with the aim of analyzing with the student their work, activities and their evolution in learning the subjects.
- M5 Set of tests carried out to know the degree of acquisition of knowledge and skills of the student.
- M7 Discussion and problem solving.
- M11 Oral presentation
- M12 Group work: Group work sessions supervised by the teacher. Knowledge construction through student interaction and activity.
- M14 Group work to search, discuss and filter information about the subjects
- M15 Seminar, supervised monographic sessions with shared participation
- M16 Student's study: Individual preparation of readings, essays, problem solving, seminars.





## IN-CLASS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
Theoretical lessons M1, M2, M7	R3, R4, R5, R6	36,00	1,44
Practice lessons M1, M2, M7, M12	R1, R2, R3, R4, R5, R6	13,00	0,52
Seminar M1, M2, M7, M15	R1, R2	4,00	0,16
Office Hours M4, M7, M12	R1, R2, R3, R4, R5, R6, R7	3,00	0,12
Assessment M5	R1, R2, R3, R4, R5, R6, R7	4,00	0,16
<b>TOTAL</b>		<b>60,00</b>	<b>2,40</b>

## LEARNING ACTIVITIES OF AUTONOMOUS WORK

	LEARNING OUTCOMES	HOURS	ECTS
Autonomous work M16	R1, R2, R3, R4, R5, R6, R7	70,00	2,80
Group work M14	R4	20,00	0,80
<b>TOTAL</b>		<b>90,00</b>	<b>3,60</b>



## Description of the contents

Description of the necessary contents to acquire the learning outcomes.

### Theoretical contents:

Content block	Contents
Unit I: Physiotherapy in Pediatrics	1. Skills and fields of intervention
Unit II: Psychomotor development	2. Motor learning 3. Typical and atypical psychomotor development 4. Postural control learning and intervention strategies
Unit III: Pediatric physiotherapeutic evaluation	5. Assessment for eligibility of motor disorders in physical therapy services. 6. Evaluation for eligibility of all developmental areas in physical therapy services. 7. Evaluation according to ICF for physical therapy intervention.
Unit IV: The importance of stable sitting	8. Importance of sitting: assessment and therapeutic resources
Unit V: The importance of standing	9. Normal musculoskeletal development 10. Assessment and therapeutic strategies for standing
Unit VI: Normal and pathological gait in pediatrics	11. Normal gait reminder 12. Evaluation of pathological gait 13. Pathological gait and therapeutic strategies to promote stable gait.
Unit VII: Therapeutic approaches to pediatric physiotherapy	14. What is evidence-based practice? 15. Evidence from pediatric physiotherapy approaches
Unit VIII: Prematurity	16. Etiology and prognosis of premature infants 17. Evaluation and intervention in the ICU and after hospital discharge in premature infants



## Unit IX: Cerebral Palsy

- 18. Etiology and clinic
- 19. Classifications and forecast
- 20. Evaluation and therapeutic strategies

## Unit X: Other pediatric pathologies (autonomous study of the student)

- 21. Other pediatric pathologies and their intervention: pregnancy and childbirth; orthopedic and rheumatologic pathologies.
- 22. Other pediatric pathologies and their intervention: hypotonia and rare diseases.

## Unit XI: Practices and Seminars

- 23. Clinical reasoning on postural control strategies.
- 24. Intervention strategies in pediatrics: modeling and motor facilitation. Type of physical therapist supports.
- 25. Warning signs scale for Age and Stage eligibility.
- 26. TIMPSY: eligibility screening for the evaluation of postural reactions and reflexes.
- 27. Merrill Palmer R normo-referenced general developmental scale.
- 28. Family Ecomap: assessment of the environment (family supports)
- 29. Interview based on family and/or school routines. SMART functional objectives measured with GAS
- 30. Clinical case of prematurity
- 31. Clinical case of CP

## TUTORING AND EVALUATION

- A. Face-to-face tutorials by appointment and virtual tutorials through direct messages and tutorials from the moodle UCV platform
- B. Two exam appointments in each session



## Temporary organization of learning:

Block of content	Number of sessions	Hours
Unit I: Physiotherapy in Pediatrics	1,00	2,00
Unit II: Psychomotor development	3,00	6,00
Unit III: Pediatric physiotherapeutic evaluation	3,00	6,00
Unit IV: The importance of stable sitting	1,00	2,00
Unit V: The importance of standing	2,00	4,00
Unit VI: Normal and pathological gait in pediatrics	3,00	6,00
Unit VII: Therapeutic approaches to pediatric physiotherapy	2,00	4,00
Unit VIII: Prematurity	2,00	4,00
Unit IX: Cerebral Palsy	3,00	6,00
Unit X: Other pediatric pathologies (autonomous study of the student)	0,00	0,00
Unit XI: Practices and Seminars	9,00	18,00
TUTORING AND EVALUATION	1,00	2,00



## References

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### FURTHER READING

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