
 <p>escoles universitàries gimbernat i Tomàs Cerdà</p> <p>ADSCRITA A LA UPB</p>	<p><b>MASTER'S DEGREE IN PEDIATRIC PHYSIOTHERAPY COURSE GUIDE</b></p>	<p><b>EUIF GIMBERNAT</b> Physiotherapy</p>
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# **Master's Degree in PEDIATRIC PHYSIOTHERAPY**

**Module Course Guides**

**Academic year 2020-2021**

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## GENERAL INFORMATION

### MODULE INFORMATION

Module	<b>M1 Child Anatomy, Physiology and Development</b>		
Code	<b>43955</b>	Academic year	<b>2020-2021</b>
ECTS credits	<b>6</b>	Module type	<b>Compulsory</b>
Year	<b>1</b>	Term	<b>1</b>
Timetable	Available to students enrolled on this module via the virtual campus		
Teaching language	<b>Catalan/Spanish</b>		

### FACULTY DATA

- Module leader

Professor's Name	<b>Dra. NEUS CIURANA MAYNEGRE</b>
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Tutorial Schedule	<b>To be Arranged</b>

- Other faculty data

Professor's Name	<b>DR JOSEP M<sup>a</sup> de ANTA VINYALS</b>
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Tutorial Schedule	<b>To be Arranged</b>



Professor's Name	<b>DR JOSEP PERAPOCH LÓPEZ</b>
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Tutorial Schedule	<b>To be Arranged</b>

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Tutorial Schedule	<b>To be Arranged</b>

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Tutorial Schedule	<b>To be Arranged</b>

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## PREREQUISITES

- There are no official prerequisites


## MODULE CONTEXTUALIZATION

This module provides the student with an understanding of the embryology of the nervous, musculoskeletal and respiratory systems; genetics; the pediatric anatomy and physiology of the nervous, musculoskeletal and respiratory systems; premature newborns and the sensory, motor, cognitive and language development of the child.

## COMPETENCIES AND LEARNING OUTCOMES

### Specific Competencies

<b>Competency</b>	E01 Recognise and differentiate the development and the anatomical and physiological changes that take place during childhood.
Learning outcomes	<p>E01.01 Differentiate the anatomical and physiological changes of the central nervous system that take place during the first few years of life.</p> <p>E01.02 Differentiate the anatomical and physiological changes of the musculoskeletal system that take place during the first few years of life.</p> <p>E01.03 Differentiate the anatomical and physiological changes of the respiratory system that take place during the first few years of life.</p> <p>E01.04 Describe the influence of genetics in child development.</p> <p>E01.05 Differentiate the changes in motor development during infancy.</p> <p>E01.06 Recognise the changes in cognitive development during infancy.</p>

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	E01.07 Recognise the changes in language development during infancy.
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### General/Transversal Competencies

<b>Competency</b>	GT01 Apply critical thinking in order to analyse, synthesise and make decisions regarding different pediatric physiotherapy interventions.
Learning outcomes	GT01.01 Analyse pediatric clinical cases and recognise anatomical and physiological characteristics according to chronological age.
	GT01.02 Analyse pediatric clinical cases and place them in the corresponding stage of development according to the presented characteristics.

### Basic Competencies

<b>Competency</b>	B06 Possess and understand knowledge that provides a basis or opportunity for originality in the development and/or application of ideas, often in a research context.
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<b>Competency</b>	B07 Students should know how to apply acquired knowledge and their problem-solving ability in new or relatively unknown environments within broader (or multidisciplinary) contexts related to their area of study.
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<b>Competency</b>	B08 Students should be able to integrate knowledge and tackle the complexity of making judgements based on information that may be incomplete or limited and includes reflections on the social and ethical responsibilities associated with the application of their knowledge and judgements.
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<b>Competency</b>	B09 Students should be able to present information, ideas, problems and solutions to specialised and non-specialised audiences.
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## CONTENTS

Module contents: 1. Embryology of the central nervous system: 1.1. Embryology of brain structures 1.2. Embryology of the spinal cord
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2. Embryology of the musculoskeletal system:
  - 2.1. Embryology of the muscular system
  - 2.2. Embryology of the skeletal system
3. Embryology of the respiratory system:
  - 3.1. Embryology of the lungs
  - 3.2. Embryology of associated organs
4. Influence of genetics in child development:
  - 4.1. Influence of genetics in normal development
  - 4.2. Influence of genetics on the most common pathologies in pediatrics, which can be treated by a physiotherapist
5. Anatomy and physiology of the nervous system:
  - 5.1. Anatomy and physiology of the central nervous system
  - 5.2. Anatomy and physiology of the peripheral nervous system
6. Anatomy and physiology of the locomotor system:
  - 6.1. Anatomy and physiology of the skeletal system
  - 6.2. Anatomy and physiology of the muscular system
7. Anatomy and physiology of the respiratory system:
  - 7.1. Anatomy and physiology of newborns
  - 7.2. Anatomy and physiology of older children
8. Sensory and motor development:
  - 8.1. Anatomical and physiological development of newborns
  - 8.2. Psychomotor and sensory development of newborns
9. Cognitive development
10. Development of language

## TEACHING METHODOLOGY AND FORMATIVE ACTIVITIES

### **DIRECTED ACTIVITIES (47 hours)**

- Lectures with IT support which will build on students' prior knowledge of anatomy and child development.  
Estimated hours: 37
- Presentation of clinical cases through which students can observe child development.  
Estimated hours: 10.

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**SUPERVISED ACTIVITIES (16 hours)**

- Presentation of different clinical cases to enable students to discuss child development.  
Estimated hours: 10
- Previously read articles will be commented on and compared to content covered in class.  
Estimated hours: 6

**SELF-DIRECTED ACTIVITIES (86 hours)**

- Reading of articles and reports of interest in accordance with the themes covered in the class.  
Estimated hours: 15
- Personal study to prepare for examinations, organise notes and/or materials, resolve clinical cases, individual or group tutorials.  
Estimated hours: 711

TYPE OF ACTIVITY	ACTIVITY	LEARNING OUTCOMES	HOURS OF STUDENT DEDICATION
Directed activities	Lectures	E01.01, E01.02, E01.03, E01.04, E01.5, E01.6, E01.7	37
	Presentation of clinical cases	E01.02, E01.03, E01.5, E01.6, E01.7, GT01.01, GT01.02, B09	10
Supervised activities	Clinical cases	E01.01, E01.02, E01.03, E01.5, E01.6, E01.7, GT01.01,	10

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		GT01.02, B06, B07, B08, B09.	
	Commenting on lectures	GT01.01, GT01.02, B07, B08, B09	6
	Reading of articles	GT01.01, GT01.02, B06, B09	15
Self-directed activities	Personal study	E01.01, E01.02, E01.03, E01.04, E01.5, E01.6, E01.7, GT01.01, GT01.02, B06	71
<b>TOTAL HOURS</b>			<b>149</b>

## ASSESSMENT

Assessment will include:


- Theory tests: Written tests on the knowledge acquired over the course of the module. With an overall weighting of 45%.
- Resolution of clinical cases presented in class or on videos. With an overall weighting of 40%.
- Presentation of written work based on lectures. With an overall weighting of 15%.

The following conditions must be met in order to pass the module:

- Pass each block and corresponding sections with a minimum mark of 5.
- Attend 100% of all practical classes (absences of up to 20% will be permitted for justified causes).
- Achieve an overall module mark of 5 or above.

Internal practical work regulations:

Consult the Center's Internal Practical Work Regulations regarding the minimum requirements expected of students in the development of the practical activities involved in the module.

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Final assessment examination period: 10/12/2020 to 16/01/2021.

Final assessment resits: 04/02/2021 to 06/02/2021.

Remark procedure: consult the center's assessment policy.


Any student that does not complete the programmed assessments or any of the formative activities that are deemed compulsory will be considered "non assessable".

ASSESSMENT ACTIVITIES	PERCENTAGE OF THE FINAL MARK	LEARNING OUTCOMES	HOURS OF STUDENT DEDICATION
Theory tests	45%	E01.01, E01.02, E01.03, E01.04, E01.5, E01.6, E01.7, GT01.01, GT01.02	1
Resolution of clinical cases	40%	E01.01, E01.02, E01.03, E01.5, E01.6, E01.7, GT01.01, GT01.02, B06, B07, B09	-
Presentation of written work	15%	GT01.01, GT01.02, B06, B07, B08, B09	-
<b>TOTAL HOURS</b>			<b>1</b>

## BIBLIOGRAPHY AND WEB LINKS / BASIC SOURCES OF INFORMATION

Libros					
Autor/s	Año	Título	Edición	Lugar	Editorial
Sadler T.W.	2016	Langman Embriología Médica.	12	Madrid	Lippincott Williams and Wilkins.




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					Wolters Kluwer Health
Nieuwenhuys R	2009	El sistema nervioso centrtal humano	4		Panamericana

Artículos						
Autor	Título	Revista	Volumen	Año	Pàginas	Descripción / comentario
Cano de la Cuerda, et al.	Teorías y modelo de control y aprendizaje motor. Aplicaciones clínicas en neurorehabilitación	Elsevier España	30 (1)	2015	32-41	
Lythgo, N., Wilson, C., & Galea, M	Basic gait and symmetry measures for primary school-aged children and young adults. II: Walking at slow, free and fast speed.	Gait and Posture	33(1)	2011	29-35	
Patrick SK, Noah JA, Yang JF.	Developmental constraints of quadrupedal coordinationa cross crawling stylesin human infants.	Neurophysiol.	107(11)	2012	30-50	

Referencias web			
Título	Descripción	URL	
Genetics Home		<a href="https://ghr.nlm.nih.gov/">https://ghr.nlm.nih.gov/</a>	
National Human Genome Researc Institute		<a href="https://www.genome.gov/">https://www.genome.gov/</a>	

Material audiovisual			
Título	Descripción		
Baby Human. Aprendiendo a pensar.	Desarrollocognitivo	<a href="https://www.youtube.com/watch?v=41CQIWW74IE&amp;list=PLm-1_2KjDtWWeaaSIEDPD8OkHzpkb5nZh&amp;index=3&amp;t=0s">https://www.youtube.com/watch?v=41CQIWW74IE&amp;list=PLm-1_2KjDtWWeaaSIEDPD8OkHzpkb5nZh&amp;index=3&amp;t=0s</a>	
Baby Human. Adquisición y desarrollo del lenguaje	Desarrollo del lenguaje	<a href="https://www.youtube.com/watch?v=AWsaKZS_ZKY&amp;list=PLm-1_2KjDtWWeaaSIEDPD8OkHzpkb5nZh&amp;index=4&amp;t=0s">https://www.youtube.com/watch?v=AWsaKZS_ZKY&amp;list=PLm-1_2KjDtWWeaaSIEDPD8OkHzpkb5nZh&amp;index=4&amp;t=0s</a>	
Baby Human. Aprendiendo a caminar	Desarrollo motor	<a href="https://www.youtube.com/watch?v=NC5Aass8f00&amp;list=P_Lm-1_2KjDtWWeaaSIEDPD8OkHzpkb5nZh&amp;index=1">https://www.youtube.com/watch?v=NC5Aass8f00&amp;list=P_Lm-1_2KjDtWWeaaSIEDPD8OkHzpkb5nZh&amp;index=1</a>	


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## **BIBLIOGRAPHY AND WEB LINKS / COMPLEMENTARY SOURCES OF INFORMATION**

### **UPDATING BIBLIOGRAPHY AND WEB LINKS**

## **MODULE TIMETABLE**

This information will be available on the virtual campus to students enrolled on this module.

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## GENERAL INFORMATION

### MODULE INFORMATION

Module	<b>M2. Pathophysiology. Diagnosis, Evaluation and Physiotherapy Treatment in Pediatric Neurology.</b>		
Code	<b>43956</b>	Academic year	<b>2020-2021</b>
ECTS credits	<b>12</b>	Module type	<b>Compulsory</b>
Year	<b>1</b>	Term	<b>1</b>
Timetable	Available to students enrolled on this module via the Virtual Campus		
Teaching language	Catalan/Spanish		

### FACULTY DATA

- Module leader

Professor's Name	<b>NEUS SUC LERÍN</b>
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Tutorial Schedule	<b>To be Arranged</b>

- Other faculty data

Professor's Name	<b>DR CARME BRUN GASCA</b>
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Tutorial Schedule	<b>To be Arranged</b>


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Tutorial Schedule	<b>To be Arranged</b>

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Tutorial Schedule	To be Arranged

## PREREQUISITES

- There are no official prerequisites.

## MODULE CONTEXTUALIZATION


This module involves the in-depth study of the physiology of the most common neurological pathologies in pediatrics, as well as providing the tools for physiotherapy diagnosis in pediatrics with knowledge of agreed evaluation scales and methodological approaches in order to reach the best treatment choice for the individual patient.

## COMPETENCIES AND LEARNING OUTCOMES

### Specific Competencies

<b>Competency</b>	E02 Precisely identify the most common neurological, respiratory and locomotive pathologies in pediatrics.
Learning outcomes	E02.01 Describe the pediatric neurological pathologies listed in the module contents.
	E02.02 Explain the functional repercussions of the neurological pathologies listed in the module contents.

<b>Competency</b>	E03 Use validated and proven reliable pediatric physiotherapy procedures and instruments to assess the pediatric patient, with the aim of determining their limitations with regards to posture and movement and the related functional implications.
Learning outcomes	E03.01 Establish observation guidelines for a child with a neurological condition in their natural context.
	E03.02 Assess the restrictions in terms of social participation presented by a child with a neurological conditions according to age and context.
	E03.03 Assess the limitations in terms of normal activities presented by a patient with a neurological conditions according to age and context.

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	E03.04 Evaluate the musculoskeletal deficits presented by the patient.
	E03.05 Evaluate the neurological deficits presented by the patient.
	E03.06 Use different agreed pediatric assessment scales.

<b>Competency</b>	E04 Design an advanced pediatrics physiotherapy intervention plan adjusted to the clinic and the needs of the infant patient, taking into account age and the setting in which the physiotherapy will take place, as well as aspects relating to the patient's culture.
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Learning outcomes	E04.01 Outline functional objectives appropriate for the pediatric patient with a condition of the nervous system.
	E04.02 Design a therapeutic plan for an infant patient with a condition of the nervous system based on the outlined objectives and age.
	E04.03 Design the most appropriate therapeutic plan for an infant patient with a condition of the nervous system based on the different contexts of physiotherapy interventions.

<b>Competency</b>	E05 Apply, revise and adapt different pediatric physiotherapy treatment procedures, methods and techniques.
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Learning outcomes	E05.01 Apply the most appropriate pediatric neurological physiotherapy therapeutic procedures for each case.
	E05.02 Apply the most appropriate pediatric physiotherapy treatment methods and techniques for each case.
	E05.03 Revise and adapt decisions applied to the therapeutic intervention specific to the nervous system according to the pediatric patient's progress.

<b>Competency</b>	E06 Indicate the most effective measures for disease prevention in each clinical situation according to the area of pediatric physiotherapy intervention.
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Learning outcomes	E06.01 Indicate the most effective measures for the prevention of musculoskeletal deformities in the patient with a neurological condition.
	E06.02 Indicate the most effective measures for the prevention of respiratory disorders in the patient with a neurological condition.

<b>Competency</b>	E07 Apply scientific method in the approach to and resolution of complex clinical cases in the different areas of pediatric physiotherapy intervention and research.
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Learning outcomes	E07.01 Apply scientific method to the resolution of clinical cases presented in class regarding patients with neurological conditions.
	E07.02 Revise scientific publications regarding practical physiotherapy interventions for neurological injuries in pediatrics.
	E07.03 Select physiotherapy assessment and treatment protocols in pediatric neurology, based on the systematic revision of available literature.

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### General/Transversal Competencies

<b>Competency</b>	GT01 Apply critical thinking in order to analyse, synthesise and make decisions regarding different pediatric physiotherapy interventions.
Learning outcomes	GT01.03 Analyse a pediatric clinical case using evaluation procedures and validated scales in order to determine limitations in activities and restrictions in participation.

<b>Competency</b>	GT02 Resolve problems that arise in professional practice and research.
Learning outcomes	GT02.01 Choose the most appropriate pediatric neurology physiotherapy treatment techniques in accordance with the objectives.

### Basic Competencies

<b>Competency</b>	B06 Possess and understand knowledge that provides a basis or opportunity for originality in the development and/or application of ideas, often in a research context.
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<b>Competency</b>	B07 Students should know how to apply acquired knowledge and their problem-solving ability in new or relatively unknown environments within broader (or multidisciplinary) contexts related to their area of study.
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<b>Competency</b>	B08 Students should be able to integrate knowledge and tackle the complexity of making judgements based on information that may be incomplete or limited and includes reflections on the social and ethical responsibilities associated with the application of their knowledge and judgements.
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<b>Competency</b>	B09 Students should be able to present information, ideas, problems and solutions to specialised and non-specialised audiences.
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## CONTENTS


<p>Module contents:</p> <ol style="list-style-type: none"> <li>1. Pathophysiology of pediatric neurological conditions: <ol style="list-style-type: none"> <li>1.1. The premature newborn</li> <li>1.2. Cerebral palsy</li> <li>1.3. Neuromuscular disorders</li> <li>1.4. Childhood ataxia</li> <li>1.5. Neurological pathologies of metabolic origin</li> <li>1.6. Neural tube defects</li> <li>1.7. Peripheral neurological pathologies</li> </ol> </li> </ol>
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<ol style="list-style-type: none"> <li>1.8. Genetic syndromes that result in cognitive or language deficiencies or delayed motor development.</li> <li>1.9. Children with multiple deficiencies</li> <li>1.10. Traumatic brain injury</li> <li>1.11. Autism spectrum disorders (ASD)</li> <li>1.12. Attention deficit disorder (ADD)</li>   <li>2. Physiotherapy diagnosis <ol style="list-style-type: none"> <li>2.1. Evaluation of the child in different stages of development</li> <li>2.2. Functional evaluation</li> <li>2.3. Neurological evaluation</li> <li>2.4. Musculoskeletal evaluation</li> <li>2.5. Validated evaluation scales</li> </ol> </li>   <li>3. Therapeutic plans <ol style="list-style-type: none"> <li>3.1. Therapeutic approaches</li> <li>3.2. Complementary treatments to physiotherapy</li> </ol> </li> </ol>
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## TEACHING METHODOLOGY AND FORMATIVE ACTIVITIES


<p><b><u>DIRECTED ACTIVITIES (93 hours)</u></b></p> <ul style="list-style-type: none"> <li>• Lectures with IT and graphic support to provide students with the knowledge they need to understand and be able to apply the different evaluation and treatment techniques used on patients. Estimated hours: 33</li>   <li>• Practical presentations on a model to provide students with the practical knowledge required for the correct application of exploration and treatment techniques. Estimated hours: 25</li>   <li>• Presentation and resolution of clinical cases in class, requiring students to use clinical reasoning to suggest hypothetical diagnoses and evidence-based evaluation and treatment programmes. Estimated hours: 35</li> </ul> <p><b><u>SUPERVISED ACTIVITIES (32 hours)</u></b></p> <ul style="list-style-type: none"> <li>• <b>Practical activities by students</b> among themselves or on a model and under the supervision of the lecturer, in order to apply the different techniques that have been presented. Estimated hours: 20</li>   <li>• Presentation and resolution of clinical cases. Presentation of different clinical cases from which students produce a therapeutic programme. Estimated hours: 10</li>   <li>• Tutorials to resolve any queries that arise in class and to review self-directed work. Estimated hours: 2</li> </ul>
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<p><b>SELF-DIRECTED ACTIVITIES (173 hours)</b></p> <ul style="list-style-type: none"> <li>• Reading of articles/reports of interest in accordance with the themes covered in the class. Estimated hours: 55</li> <li>• <b>Personal study:</b> Personal study to prepare for examinations, organise notes and/or materials, individual or group tutorials. Estimated hours: 118</li> </ul>
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TYPE OF ACTIVITY	ACTIVITY	LEARNING OUTCOMES	HOURS OF STUDENT DEDICATION
Directed activities	Lectures	E02.01, E02.02, E03.01, E03.02, E03.03, E04.02, E06.01, E06.02	33
	Practical presentations	E03.04, E03.5, E03.06, E04.01, E04.02, E04.03, E05.01, E05.02	25
	Presentation and resolution of clinical cases	E04.01, E04.02, E04.03, E06.01, E06.02, E07.01, E07.02, E07.03	35
Supervised activities	Practical activities by students	E05.01, E05.02, E06.01, E06.02, GT01.03, GT02.01, B07, B08, B09	20
	Presentation and resolution of clinical cases	E04.01, E04.02, E04.03, E06.01, E06.02, E07.01, E07.02, E07.03, GT01.03, GT02.01, B06, B08, B09	10
	Tutorials	E05.01, E05.02, E06.01, E06.02, GT01.03, GT02.01, B07, B08, B09	2
Self-directed activities	Reading of articles	E02.01, E03.01, E03.04, E03.05, E03.06, E04.01, E04.02, E05.02	55
	Personal study	E02.01, E02.02, E03.01, E03.02, E03.03, E04.02, E06.01, E06.02	118



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<b>TOTAL HOURS</b>	<b>298</b>
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## ASSESSMENT

Assessment will include:

- Theory tests: Written tests on the knowledge acquired in each module block. With an overall weighting of 40%.
- Practical tests: Practical or video tests on the student's ability to choose and apply different techniques, evaluations or treatments, as well as the appropriateness of the chosen technique/manoeuvre for the given situation. With an overall weighting of 30%.
- Resolution of clinical cases: Evaluation of the student's resolution of the presented clinical cases. With an overall weighting of 30%.

The following conditions must be met in order to pass the module:

- Pass each block and corresponding sections with a minimum mark of 5.
- Attend 100% of all practical classes (absences of up to 20% will be permitted for justified causes).
- Achieve an overall module mark of 5 or above.

Internal practical work regulations:

Consult the Center's Internal Practical Work Regulations regarding the minimum requirements expected of students in the development of the practical activities involved in the module.


Final assessment examination period: 14/01/2021 to 16/01/2021

Final assessment resits: 04/02/2021 to 06/02/2021

Remark procedure: consult the center's assessment policy.

Any student that does not complete the programmed assessments or any of the formative activities that are deemed compulsory will be considered "non assessable".

ASSESSMENT ACTIVITIES	PERCENTAGE OF THE FINAL MARK	LEARNING OUTCOMES	HOURS OF STUDENT DEDICATION
Theory tests	40%	E02.01, E02.02, E03.01, E03.02, E03.03, E03.04,	1


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		E03.5, E03.06, E04.01, E04.02, E04.03.	
Practical tests	30%	E05.01, E05.02, E06.01, E06.02, GT01.03, GT02.01, B07, B08, B09	1
Resolution of clinical cases	30%	E04.01, E04.02, E04.03, E06.01, E06.02, E07.01, E07.02, E07.03, GT01.03, GT02.01, B06, B08, B09	-
<b>TOTAL HOURS</b>			<b>2</b>

## BIBLIOGRAPHY AND WEB LINKS / BASIC SOURCES OF INFORMATION


Libros					
Autor/es	Año	Título	Edición	Lugar	Editorial
Macías L, Fagoaga J	2018	Fisioterapia en pediatría	2ª	Madrid	Panamericana
Leonhardt M, Bel C, et al.	2015	Un cambio de mirada. Bebé prematuro, familia y profesionales		Roquetas de Mar (Almería)	Circulo Rojo
Soro-Camats E, Basil C, Rosell C	2012	Pluridiscapacidad y contextos de intervención		Barcelona	ICE-UB

Artículos						
Autor	Título	Revista	Volu men	Año	Páginas	Descripció n/ comentari o
Palisano R, Rosenbaum P, Bartlett D, Livingston M	GMFCS - E & R ©	CanChild Centre for Childhood Disability Research, McMaster University		2007		
Rosenbaum et al	Prognosis for Gross Motor Development in Cerebral Palsy. Creation of Motor Growth Curves	JAMA	288	2002	1357-63	
Flores MB, Da silva CP.	Trunk control and gross motor outcomes after body weight supported	Dev Neurorehabil	Oct 5	2018	1-5	

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	treadmill training in young children with severe cerebral palsy: a non-experimental case series.					
Heyrman L, Molenaers G, Desloovere K, Verheyden G, De Cat J, Monbaliu E, Feys H.	A clinical tool to measure trunk control in children with cerebral palsy: The Trunk Control Measurement Scale.	Research in Developmental Disabilities	32	2011	2624–2635	
McDowell BC, Duffy C, Lundy C	Pain report and musculoskeletal impairment in young people with severe forms of cerebral palsy: A population-based series.	Rev Dev Disabil.	60	2017	277-284	
Engel-HoekL, HardingC, van Gerven M, Cockerill H.	Pediatric feeding and swallowing rehabilitation: An overview	Pediatr Rehabil Med.	10 (2)	2017	95-105	
Otto HeiseC, MartinsR, SiqueiraM	Neonatal brachial plexus palsy: a permanente challenge	Archivos de Neuro-Psiquiatría	73(9)	2015	803-808	
KaplanS.L., ColleenC., Sargent B	Physical Therapy management of Congenital torticollis: A 2018 Evidence-Based Clinical Practice Guideline form de APTA Academy of Pediatric Physical Therapy.	Pediatric Physical Therapy	30	2018	240-290	

Referencias web			
Título	Descripción	URL	
Método Feldenkrais		<a href="http://www.feldenkrais-method.org">www.feldenkrais-method.org</a>	
Ortopedia PBO		<a href="http://ortopediapas.com/ortopedia-pediatria/ortopedia-pbo">Htt://ortopediapas.com/ortopedia-pediatria/ortopedia-pbo</a>	
Comunicación aumentativa		<a href="https://www.utac.cat/apps-per-a-la-comunicacio">https://www.utac.cat/apps-per-a-la-comunicacio</a>	

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## BIBLIOGRAPHY AND WEB LINKS / COMPLEMENTARY SOURCES OF INFORMATION

Libros					
Autor/es	Año	Título	Edición	Lugar	Editorial
Unsel P	2018	El microcosmos del movimiento	1ª	Barcelona	Herder
Roig-Quilis, M; Pennington, L.	2011	Oromotor Disorders in Childhood	1ª	Barcelona	Viguera

Artículos						
Autor	Título	Revista	Volumen	Año	Páginas	Descripción/ comentario
Camfield P, Camfield C.	Incidence, prevalence and aetiology of seizures and epilepsy in children.	Epileptic Disorde.	17(2)	2015	117-23	
Manning KY, et al	Neuroplastic Sensorimotor Resting State Network Reorganization in Children With Hemiplegic Cerebral Palsy Treated With Constraint-Induced Movement Therapy.	J Child Neurol	31 (2)	2016	220-6	
Brazel A, et al	Home-based constraint-induced movement therapy for patients with upper limb dysfunction after stroke (HOMECIMT): a cluster-randomised, controlled trial.	Lancet Neurol	14 (9)	2015	893-902	
Lee, S.K., O'Brien, K	Parents as primary caregivers in the neonatal intensive care unit.	CMAJ,	186 (11)	2014	845-847	
Cano-de la Cuerda R. et al.	Teorías y modelos de control y aprendizaje motor. Aplicaciones clínicas en neurorehabilitación.	Neurología (Elsevier)	30(1)	2015	32-41	

## MODULE TIMETABLE

This information will be available on the virtual campus to students enrolled on this module.

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## GENERAL INFORMATION

### MODULE INFORMATION

Module	<b>M3. Pathophysiology. Diagnosis, Evaluation and Physiotherapy Treatment of the Respiratory System and the Musculoskeletal System in Pediatrics.</b>		
Code	<b>43960</b>	Academic year	<b>2020-2021</b>
ECTS credits	<b>12</b>	Module type	<b>Compulsory</b>
Year	<b>1</b>	Term	<b>2</b>
Timetable	Available to students enrolled on this module via the Virtual Campus		
Teaching language	<b>Catalan/Spanish</b>		

### FACULTY DATA

- Module leader


Professor's Name	<b>Sra. MARTA SABATÉ LÓPEZ</b>
Email	<b>marta.sabate@eug.es</b>
Tutorial Schedule	<b>To be Arranged</b>

- Other faculty data

Professor's Name	<b>VANESA BAYO TALLÓN</b>
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Professor's Name	<b>Sra. LAURA LÓPEZ SALA</b>
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Tutorial Schedule	<b>To be Arranged</b>

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Tutorial Schedule	<b>To be Arranged</b>

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Email	<b>ricard.tutaus@eug.es</b>
Tutorial Schedule	<b>To be Arranged</b>

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## PREREQUISITES

- There are no official prerequisites.

## MODULE CONTEXTUALIZATION


This module involves the in-depth study of the physiology of the respiratory and locomotor pathologies in pediatrics, as well as providing the tools for physiotherapy diagnosis in pediatrics using knowledge of validated evaluation scales and methodological approaches in order to reach the best treatment choice for the individual patient.

## COMPETENCIES AND LEARNING OUTCOMES

### Specific Competencies

<b>Competency</b>	E02 Identify the most common neurological, respiratory and locomotive pathologies in pediatrics.
Learning outcomes	E02.03 Describe the most common pediatric respiratory pathologies listed in the module contents. E02.04 Explain the functional repercussions of the respiratory pathologies listed in the module contents. E02.05 Describe the most common pediatric pathologies of the locomotor system listed in the module contents. E02.06 Explain the functional repercussions of the pathologies of the locomotor system listed in the module contents.

<b>Competency</b>	E03 Use validated and proven reliable pediatric physiotherapy procedures and instruments to assess the pediatric patient, with the aim of determining their limitations with regards to posture and movement and the related functional implications
Learning outcomes	E03.07 Evaluate the respiratory system of the pediatric patient. E03.08 Evaluate the locomotor system of the pediatric patient. E03.09 Establish observation guidelines for a child with a disorder of the locomotor system in their natural context. E03.10 Assess the restrictions in terms of social participation presented by a child with a disorder of the locomotor system. E03.11 Assess the limitations in terms of normal activities presented by a patient with a disorder of the locomotor system according to age and context.

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<b>Competency</b>	E04 Design an advanced pediatrics physiotherapy intervention plan adjusted to the clinic and the needs of the infant patient, taking into account age and the setting in which the physiotherapy will take place, as well as aspects relating to the patient's culture.
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Learning outcomes	E04.04 Design a therapeutic plan for a pediatric patient with a respiratory system condition based on the outlined objectives and age.
	E04.05 Outline appropriate functional objectives for the pediatric patient with a condition of the locomotor system.
	E04.06 Design the most appropriate therapeutic plan for a pediatric patient with a condition of the locomotor system based on the different contexts of physiotherapy interventions.

<b>Competency</b>	E05 Apply, revise and adapt different pediatric physiotherapy treatment procedures, methods and techniques.
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Learning outcomes	E05.04 Apply the most appropriate pediatric respiratory physiotherapy therapeutic procedures for each case.
	E05.02 Apply the most appropriate pediatric physiotherapy methods and treatment techniques for a patient with a disorder of the locomotor system.
	E05.06 Revise and adapt decisions applied to the therapeutic intervention specific to the respiratory system according to the pediatric patient's progress.
	E05.07 Revise and adapt the therapeutic intervention specific to the locomotor system according to the pediatric patient's progress.

<b>Competency</b>	E06 Indicate the most effective measures for disease prevention in each clinical situation according to the area of pediatric physiotherapy intervention.
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Learning outcomes	E06.03 Indicate the most effective measures for the prevention of respiratory disorders.
	E06.04 Indicate the most effective measures for the prevention of musculoskeletal deformities.


<b>Competency</b>	E07 Apply scientific method in the approach to and resolution of complex clinical cases in the different areas of pediatric physiotherapy intervention and research.
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Learning outcomes	E07.04 Conduct a bibliographical search concerning a specific topic in physiotherapy of the respiratory system.
	E07.05 Select physiotherapy assessment and treatment protocols in pediatric respiratory physiotherapy, based on the systematic revision of available literature.

### General/Transversal Competencies

<b>Competency</b>	GT01 Apply critical thinking in order to analyse, synthesise and make decisions regarding different pediatric physiotherapy interventions.
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Learning outcomes	GT01.04 Analyse a pediatric clinical case using evaluation procedures and validated scales in order to determine limitations in activities and restrictions in participation.
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<b>Competency</b>	GT02 Resolve problems that arise in professional practice and research.
Learning outcomes	GT02.02 Choose the most appropriate complementary treatments to pediatric physiotherapy for disorders of the locomotor system.
	GT02.03 Propose appropriate therapeutic options for respiratory conditions and justify the decisions.

### Basic Competencies

<b>Competency</b>	B06 Possess and understand knowledge that provides a basis or opportunity for originality in the development and/or application of ideas, often in a research context.
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<b>Competency</b>	B07 Students should know how to apply acquired knowledge and their problem-solving ability in new or relatively unknown environments within broader (or multidisciplinary) contexts related to their area of study.
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<b>Competency</b>	B08 Students should be able to integrate knowledge and tackle the complexity of making judgements based on information that may be incomplete or limited and includes reflections on the social and ethical responsibilities associated with the application of their knowledge and judgements.
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<b>Competency</b>	B09 Students should be able to present information, ideas, problems and solutions to specialised and non-specialised audiences.
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## CONTENTS

### Module contents:

1. Pathophysiology of pediatric respiratory conditions:
  - 1.1. Primary pathology of the respiratory system
  - 1.2. Secondary pathology of the respiratory system
2. Pathophysiology of the pediatric locomotor system:
  - 2.1. Rheumatic diseases
  - 2.2. Deformities of the rachis
  - 2.3. Agenesis or amputation of the extremities
  - 2.4. Pathologies that result in short stature
3. Respiratory evaluation
4. Functional evaluation

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5. Musculoskeletal evaluation
6. Walking assessment
7. Assessment of pain in pediatrics
8. Therapeutic approaches
9. Complementary treatments to physiotherapy
10. Influences of different cultures in child upbringing
11. Strategies for giving advice
12. Family intervention

## TEACHING METHODOLOGY AND FORMATIVE ACTIVITIES

### **DIRECTED ACTIVITIES (93 hours)**


- Lectures with IT and graphic support to provide students with the knowledge required in order to understand and be able to apply the different evaluation and treatment techniques used on patients.  
Estimated hours: 33
- Practical presentations on a model to provide students with the practical knowledge required for the correct application of exploration and treatment techniques.  
Estimated hours: 25
- Presentation and resolution of clinical cases, requiring students to use clinical reasoning to suggest hypothetical diagnoses and evidence-based evaluation and treatment programmes.  
Estimated hours: 35

### **SUPERVISED ACTIVITIES (32 hours)**


- Practical activities by students among themselves or on a model and under the supervision of the lecturer, in order to apply the different techniques that have been presented.  
Estimated hours: 20
- Presentation and resolution of clinical cases. Presentation of different clinical cases from which students produce a therapeutic programme.  
Estimated hours: 10
- Tutorials to resolve any queries that arise in class and to review self-directed work.  
Estimated hours: 2

### **SELF-DIRECTED ACTIVITIES (173 hours)**

- Reading of articles/reports of interest in accordance with the themes covered in the class.  
Estimated hours: 55
- **Personal study:** Personal study to prepare for examinations, organise notes and/or materials, individual or group tutorials.  
Estimated hours: 118

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TYPE OF ACTIVITY	ACTIVITY	LEARNING OUTCOMES	HOURS OF STUDENT DEDICATION
Directed activities	Lectures	E02.03, E02.04, E02.05, E02.06, E03.10, E03.11, E04.05, E06.03, E06.04	33
	Practical presentations	E03.07, E03.08, E04.04, E04.05, E04.06, E05.04, E05.05	25
	Presentation and resolution of clinical cases	E03.09, E03.10, E03.11, E04.04, E04.05, E04.06, E05.06, E05.07, E06.03, E06.04, E07.04, E07.05	35
Supervised activities	Practical activities by students	E03.07, E03.08, E05.04, E05.05, GT02.02, GT02.03, B07, B08, B09	20
	Presentation and resolution of clinical cases	E03.09, E03.10, E03.11, E04.04, E04.05, E04.06, E05.06, E05.07, E06.03, E06.04, E07.04, E07.05, GT01.04, GT02.02, GT02.03, B06, B08, B09	10
	Tutorials	E05.04, E05.05, E06.03, E06.04, GT01.04, GT02.02, GT02.03, B07, B08, B09	2
Self-directed activities	Reading of articles	E02.03, E02.05, E05.06, E05.07, E07.04, E07.05	55
	Personal study	E02.03, E02.04, E02.05, E06.03, E06.04	118
<b>TOTAL HOURS</b>			<b>298</b>

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## ASSESSMENT

Assessment will include:

- Theory tests: Written tests on the knowledge acquired in each module block. With an overall weighting of 40%.
- Practical tests: Practical or video tests on the student's ability to choose and apply different techniques, evaluations or treatments, as well as the appropriateness of the chosen technique/manoeuvre for the given situation. With an overall weighting of 30%.
- Resolution of clinical cases: Evaluation of the student's resolution of the presented clinical cases. With an overall weighting of 30%.

The following conditions must be met in order to pass the module:

- Pass each block and corresponding sections with a minimum mark of 5.
- Attend 100% of all practical classes (absences of up to 20% will be permitted for justified causes).
- Achieve an overall module mark of 5 or above.

Internal practical work regulations:

Consult the Center's Internal Practical Work Regulations regarding the minimum requirements expected of students in the development of the practical activities involved in the module.


Final assessment examination period: 27/05/2021 to 29/05/2021.

Final assessment resits: 10/06/2021 to 12/06/2021.

Remark procedure: consult the center's assessment policy.

Any student that does not complete the programmed assessments or any of the formative activities that are deemed compulsory will be considered "non assessable".

ASSESSMENT ACTIVITIES	PERCENTAGE OF THE FINAL MARK	LEARNING OUTCOMES	HOURS OF STUDENT DEDICATION
Theory tests	40%	E02.03, E02.04, E02.05, E02.06, E06.03, E06.04	1
Practical tests	30%	E03.07, E03.08, E04.05, E04.06, E05.04, E05.05, GT02.02, GT02.03, B07, B08, B09	1


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Resolution of clinical cases	30%	E03.09, E03.10, E03.11, E04.04, E04.05, E04.06, E05.06, E05.07, E06.03, E06.04, E07.04, E07.05, GT01.04, GT02.02, GT02.03, B06, B08, B09	-
<b>TOTAL HOURS</b>			<b>2</b>

## BIBLIOGRAPHY AND WEB LINKS / BASIC SOURCES OF INFORMATION


Libros					
Autor/es	Año	Título	Edición	Lugar	Editorial
Molina, F; Carratalá, M	2020	La Marcha humana. Biomecánica, evaluación y patología		Madrid	Editorial médica panamericana.
Perry, J., & Burnfield, J. M.	2015	Análisis de la marcha: función normal y patológica		Barcelona	Editorial Base
Madero L, LassalettaÁ, Sevilla J..	2015	Hematología y oncología pediátrica	3º	Madrid	Ergon
Redondo M A, Conejero J A	2012	Rehabilitación Infantil.	1ª	Madrid	Panamericana
Butler, D., Moseley, G.L	2010	Explicando el dolor		Adelaide	Noigroup Publications
Cardona et al.	2011	Alumnado con pérdida auditiva		Barcelona	Graó
Tutusaus R, Potau JM	2015	Sistema fascial. Anatomía, valoración y tratamiento		Madrid	Panamericana

Artículos						
Autor	Título	Revista	Volumen	Año	Páginas	Descripción / comentario

 <p>escoles universitàries gimbernat i Tomàs Cerdà ADSCRITA A LA UPB</p>	<b>MASTER'S DEGREE IN PEDIATRIC PHYSIOTHERAPY COURSE GUIDE</b>	<b>EUIF GIMBERNAT</b> Physiotherapy
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Rodríguez-Raecke R, Niemeier A, Ihle K, Ruether W, May A.	Brain gray matter decrease in chronic pain is the consequence and not the cause of pain.	J Neurosci	29(44)	2009	13746-13750	
Harrison LE, Pate JW, Richardson PA, Ickmans K, Wicksell R K, Simons LE.	Best-Evidence for the Rehabilitation of Chronic Pain Part1: Pediatric Pain.	J Clin Med	8(9)	2019		
Hurley-Wallace A, Wood C, Franck LS, Howard RF, Lioffi C.	Paediatric pain education for health care professionals.	Pain Rep.	481)	2018		
Cha HK, Cho HS, Choi JD.	Effects of the nerve mobilization technique on lower limb function in patients with post stroke hemiparesis.	J Phys TherSci	26(7)	2014	981-3	
Yam TTT, Wong MS, Fong SSM	Effect of Kinesio taping on electromyographic activity of leg muscles during gait in children with developmental coordination disorder: A randomized controlled trial.	Medicine (Baltimore)	98(6)	2019	E14423	


Referencias web			
Título	Descripción	URL	
Formación en biomecánica. LUIS ENRIQUE ROCHE.		<a href="https://youtu.be/ynFvpwOK8_0">https://youtu.be/ynFvpwOK8_0</a> Biomechanics	
Asociación española de pediatría	Protocolos de reumatología.	<a href="http://www.aeped.es">www.aeped.es</a>	
	Protocolos de reumatología	<a href="http://www.reumaped.es">www.reumaped.es</a>	
Pain in motion be		<a href="http://www.paininmotion.be/pne4kids">http://www.paininmotion.be/pne4kids</a>	

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## BIBLIOGRAPHY AND WEB LINKS / COMPLEMENTARY SOURCES OF INFORMATION

Libro					
Autor/es	Año	Título	Edición	Lugar	Editorial
Espada G	2006	Manual práctico de reumatología pediátrica		Buenos Aires	Nobuko
Timmermans et al	2013	Stress and excitatory synapses: from Health to disease			Neuroscience

Artículos						
Autor	Título	Revista	Volumen	Año	Páginas	Descripción / comentario
Montse-Alguacil J, et al.	The influence of childhood obesity on spatio-temporal gait parameters.	Gait & Posture	71	2019	69-73	
Chagas P.S.G., et al	Neuromuscular mechanisms and anthropometric modifications in the initial stages of independent gait.	Gait & Posture	24	2006	375-381	
Kuyper MA, Breedijk M, Mulders AH, et al.	Prosthetic management of children in The Netherlands with upper limb deficiencies.	Prosthet Orthotnt	25	2001	228-34	
BoonstraAM, RijndersLJM, GroothoffJW, EismaWH.	Children with congenital deficiencies or acquired amputations of the lower limbs: functional aspects	Prosthet Orthotnt	24	2000	19-27	
Röricht S, Machetanz J, Irlbacher K, Niehaus L, Biemer E, Meyer BU.	Reorganization of human motor cortex after hand replantation.	Ann Neurol.	50(2)	2001	240-9	


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Gatta G,Botta L, Rossi S,et al.	Childhood cancer survival in europe1999-2007: Results of EUROCARE-5-apopulation-based study.	Lancet Oncol	15(1)	2014	35-47	
Gilchrist L S, Galantino M L,Wampler M, Marchese V G, Morris G S, Ness K K .	A framework for assessment in oncology rehabilitation	Phys Ther	89(3)	2009	286-306	
Tanir M K, Kuguoglu S.	Impact of exercise on lower activity levels in children with acute lymphoblastic leukemia: Arandomized controlled trial from turkey	Rehabil Nurs	38(1)	2013	48-59	
Perondi M B,Gualano B, Artioli G G,e tal.	Effects of a combined aerobic and strength training program in youth patients with acute lymphoblastic leukemia.	Sports Sci Med.	11(3)	2012	387-392	
Winter C,Muller C, Hoffmann C, Boos J, Rosenbaum D	Physical activity and childhood cancer.	Pediatr Blood Cancer	54(4)	2010	501-510	
KocaT T, Ataseven H.	What is hippotherapy? The indications and effectiveness of hippotherapy	North Clin Istanbul	2(3)	2015	247-252	

## MODULE TIMETABLE

This information will be available on the virtual campus to students enrolled on this module.



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## GENERAL INFORMATION

### MODULE INFORMATION

Module	<b>M4. Research Methodology</b>		
Code	<b>43957</b>	Academic year	<b>2020-2021</b>
ECTS credits	<b>9</b>	Module type	<b>Compulsory</b>
Year	<b>1</b>	Term	<b>Annual</b>
Timetable	Available to students enrolled on this module via the virtual campus		
Teaching language	<b>Catalan/Spanish</b>		

### FACULTY DATA

- Module leader

Professor's Name	<b>DR JORDI ESQUIROL</b>
Email	<b>Jordi.esquirol@eug.es</b>
Tutorial Schedule	<b>To be Arranged</b>

- Other faculty data

Professor's Name	<b>VANESA BAYO TALLÓN</b>
Email	<b>Vanesa.bayo@eug.es</b>
Tutorial Schedule	<b>To be Arranged</b>

Professor's Name	<b>DR ISHAR DALMAU SANTAMARIA</b>
Email	<b>Ishar.dalmau@eug.es</b>
Tutorial Schedule	<b>To be Arranged</b>


Professor's Name	<b>Sra. GEMMA PAMPALONA EXPÓSITO</b>
email	<b>gemma.pampalona@eug.es</b>
Tutorial Schedule	<b>To be Arranged</b>

Professor's Name	<b>Sra. MAIDER SÁNCHEZ PADILLA</b>
email	<b>maider.sanchez@eug.es</b>
Tutorial Schedule	<b>To be Arranged</b>

Professor's Name	<b>Dra. YOLANDA SÁNCHEZ RETAMERO</b>
email	<b>yolanda.sanchez@eug.es</b>
Tutorial Schedule	<b>To be Arranged</b>

## PREREQUISITES

- There are no official prerequisites

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## MODULE CONTEXTUALIZATION


The Research Methodology module consists in the study and updating of general clinical research concepts and the acquisition of theoretical knowledge in the design of quantitative and qualitative scientific studies in the field of physiotherapy. The module includes training in the scientific methods used in the planning and creation of clinical studies, from the analysis of existing scientific evidence to protocol design, using statistical tools for the collection, analysis and interpretation of data and the writing and presentation of conclusions.

## COMPETENCIES AND LEARNING OUTCOMES

### Specific Competencies

<b>Competency</b>	E07 Apply scientific method in the approach to and resolution of complex clinical cases in the different areas of pediatric physiotherapy intervention and research.	
Learning outcomes	E07.06 Estimate the level of evidence in a pediatric physiotherapy study.	
	E07.07 Define and conduct a bibliographical search concerning a specific topic in pediatric physiotherapy.	
	E07.08 Recognise and analyse the structure of qualitative and quantitative scientific studies through the critical reading of articles.	
	E07.09 Identify the legal and ethical aspects of a scientific investigation.	
	E07.10 Identify the influence of placebo and nocebo in the context of a treatment.	

<b>Competency</b>	E08 Use the necessary methodological bases to plan, design and develop experimental and research projects oriented toward the clinical practice of pediatric physiotherapy, health and school and social inclusion of the infant population with disabilities.	
Learning outcomes	E08.01 Establish hypotheses, objectives, variables, scenarios and qualitative and quantitative research study types around	

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	a specific topic in physiotherapy based on the theoretical framework or reflection.
	E08.02 Recognise, analyse and interpret different types of statistical variables and their analysis possibilities.
	E08.03 Distinguish the different types of statistical analysis and their application in physiotherapy research.
	E08.04 Use the analysis of statistical variables to resolve scientific problems.

### General/Transversal Competencies

<b>Competency</b>	GT02 Resolve problems that arise in professional practice and research.
Learning outcomes	GT02.04 Propose possible solutions to problems that arise during the research phase of a scientific study.
	GT02.05 Manage the resolution of statistical problems presented in the classroom.
	GT02.06 Establish self-study strategies and permanent procedures for revision and organization of information.

<b>Competency</b>	GT03 Propose work protocols by searching for information in scientific literature.
Learning outcomes	GT03.01 Propose work protocols by searching for information in scientific literature.

<b>Competency</b>	GT05 Develop sufficient autonomy to be able to participate in multidisciplinary research projects and scientific collaborations and to convey the results.
Learning outcomes	GT05.01 Search for and identify gaps in knowledge in the field of study.
	GT05.02 Design methodological process that lead to improved research results.


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## Basic Competencies

<b>Competency</b>	B06 Possess and understand knowledge that provides a basis or opportunity for originality in the development and/or application of ideas, often in a research context.
<b>Competency</b>	B08 Students should be able to integrate knowledge and tackle the complexity of making judgements based on information that may be incomplete or limited and includes reflections on the social and ethical responsibilities associated with the application of their knowledge and judgements
<b>Competency</b>	B09 Students should be able to present information, ideas, problems and solutions to specialised and non-specialised audiences.

## CONTENTS


1. Concept of science:
  - 1.1 Experimental scientific method
  - 1.2 Evidence-based physiotherapy
  - 1.3 Translational and personalised medicine
  - 1.4 Definition of biostatistics
2. Theoretical framework and contents:
  - 2.1 Structure, material and research methods
  - 2.2 Bibliographic databases (bibliographic research), search engines, key words
  - 2.3 Research equations
  - 2.4 Critical reading of scientific information.
  - 2.5 Drawing conclusions from the theoretical framework
3. Applied research methodology:
  - 3.1 Structure and design of scientific studies
  - 3.2 Legislation and bioethics in research
4. Practical framework:
  - 4.1 Design of the objectives and variables of a scientific study
  - 4.2 Descriptive statistics: types of data
  - 4.3 Data collection

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<p>4.4 Design of statistical analysis and research results: tabular display and graphic representation</p> <p>4.5 Foundations of statistical analysis: probability distributions, confidence intervals, hypothesis testing, test with a sample, test of homogeneity with two samples, Chi-Square test, simple linear regression, linear correlation</p> <p>4.6 Drawing conclusions from the practical framework</p> <p>4.7 Methods of presenting the scientific study: written and oral presentation</p> <p>5. Qualitative research methods:</p> <p>5.1 Basic characteristics of qualitative research</p> <p>5.2 Methods and designs: key decisions</p> <p>5.3 Data generation techniques (contextual, narrative and dialogic)</p> <p>5.4 Register, systematization and information analysis</p> <p>5.5 Mixed methods: applications</p> <p>5.6 Reports, rigour and ethical aspects of qualitative research</p> <p>6. Introduction to whole systems research</p> <p>7. Biological effects of belief in research results:</p> <p>7.1 Placebo and nocebo: the importance of the human factor in treatment</p> <p>7.2 Impact of expectation</p> <p>7.3 Intention of the context of a treatment</p>
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## TEACHING METHODOLOGY AND FORMATIVE ACTIVITIES


<p><b><u>DIRECTED ACTIVITIES (65 hours)</u></b></p> <ul style="list-style-type: none"> <li>• Lectures to provide students with the necessary knowledge for understanding and being able to correctly apply the methodology of scientific work and statistical processes. Estimated hours: 40</li> <li>• Resolution of exercises which discuss the methodology of scientific work and statistical processes. Estimated hours: 25</li> </ul> <p><b><u>SUPERVISED ACTIVITIES (20 hours)</u></b></p> <ul style="list-style-type: none"> <li>• Resolution and presentation of scientific work, explaining and reasoning the methodology and statistics used. Estimated hours: 17</li> <li>• Tutorials to resolve any queries that arise in class and when producing work. Estimated hours: 3</li> </ul>
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**SELF-DIRECTED ACTIVITIES (139 hours)**

- Reading of articles and reports of interest in accordance with the themes covered in the class.  
Estimated hours: 20
- Personal study to prepare for examinations, organise notes and/or materials, individual or group tutorials.  
Estimated hours: 119

TYPE OF ACTIVITY	ACTIVITY	LEARNING OUTCOMES	HOURS OF STUDENT DEDICATION
Directed activities	Lectures	E07.06, E07.07, E08.01, E08.02, GT02.04, GT03.01	40
	Classes to resolve exercises	E07.06, E07.07, E07.08, E07.09, E07.10, E08.01, E08.02, E08.03, E08.04, GT02.04, GT02.05, GT02.06, GT03.01, GT05.01, GT05.02	25
Supervised activities	Presentation and resolution of scientific work	E07.06, E07.08, E07.09, E07.10, E08.01, E08.02, E08.03, GT02.04, GT02.05, GT05.01, GT05.02, B06, B08, B09	17
	Tutorials	E07.07, E07.08, E08.02, E08.03, GT02.04, GT05.02	3
Self-directed activities	Reading of articles	E07.06, E07.07, GT05.01, CB08	20

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	Personal study	E07.06, E07.07, E08.01, GT02.05, GT03.01, GT05.01, GT05.02	119
<b>TOTAL HOURS</b>			<b>224</b>

## ASSESSMENT

Assessment will include:

- Theory tests: Written tests on the knowledge acquired over the course of the module. With an overall weighting of 40 %.
- Participation in activities suggested in class, applying acquired knowledge of methodology and statistics. With an overall weighting of 15%.
- Presentation of work, in which acquired knowledge of methodology and statistics should be applied. With an overall weighting of 45%.

The following conditions must be met in order to pass the module:

- Pass each block and corresponding sections with a minimum mark of 5.
- Attend 100% of all practical classes (absences of up to 20% will be permitted for justified causes).
- Achieve an overall module mark of 5 or above.

Internal practical work regulations:


Consult the Center's Internal Practical Work Regulations regarding the minimum requirements expected of students in the development of the practical activities involved in the module.

Final examination period: 27/05/2021 to 29/05/2021.

Final assessment resits: 10/06/2021 to 12/06/2021.

Remark procedure: consult the center's assessment policy.

Any student that does not complete the programmed assessments or any of the formative activities that are deemed compulsory will be considered "non assessable".


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ASSESSMENT ACTIVITIES	PERCENTAGE OF THE FINAL MARK	LEARNING OUTCOMES	HOURS OF STUDENT DEDICATION
Theory tests	40%	E07.06, E07.07, E08.01, E08.02, GT02.04, GT03.01	1
Participation in activities suggested in class	15%	E07.08, E07.09, E07.10, E08.03	-
Presentation of written work	45%	E07.06, E08.01, E08.02, E08.03, GT02.05, GT05.01, GT05.02, B08, B09	-
<b>TOTAL HOURS</b>			<b>1</b>

## BIBLIOGRAPHY AND WEB LINKS / BASIC SOURCES OF INFORMATION

Libros					
Autor/es	A�o	T�tulo	Edici�n	Lugar	Editorial
Esquirol Caussa J, Herrero Vila E, S�nchez Aldeguer J.	2012	Metodologia i Estad�stica per a professionals de la salut. I. Conceptes b�sics de metodologia cient�fica. Escola Universit�ria d'Infermeria i de Fisioter�pia Gimbernat. Escola Universit�ria de Fisioter�pia.		Bellaterra	Trivium 4. Servei de Publicacions Universitat Aut�noma de Barcelona.
Esquirol Caussa J, Herrero Vila E, S�nchez Aldeguer J.	2012	Metodologia i Estad�stica per a professionals de la salut. II. Bases de l'estad�stica i del disseny d'estudis cient�fics. Escola Universit�ria d'Infermeria i de Fisioter�pia Gimbernat. Escola Universit�ria de Fisioter�pia.		Bellaterra	Trivium 5. Servei de Publicacions Universitat Aut�noma de Barcelona.
Esquirol Caussa J, Herrero Vila E, S�nchez Aldeguer J.	2012	Metodologia i Estad�stica per a professionals de la salut. III. L'an�lisi estad�stica. Escola Universit�ria d'Infermeria i de Fisioter�pia Gimbernat. Escola Universit�ria de Fisioter�pia.		Bellaterra	Trivium 6. Servei de Publicacions Universitat Aut�noma de Barcelona.
Hulley SB, Cummings S	1993	Dise�o de la investigaci�n cl�nica.		Barcelona	Doyma
Laporte JR	1993	Principios b�sicos de investigaci�n cl�nica.		Madrid	Z�neca
Desantes-Guanter JM, L�pez Yepes J.	1996	Teor�a y t�cnica de la investigaci�n cient�fica.		Madrid	S�ntesis



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Departamento de Medicina y Psiquiatría (Universidad de Alicante).	1995	Tratado de epidemiología clínica.		Madrid	Du Phont Pharma.
Rebagliato M, Ruiz I, Arranz M.	1996	Metodología de la investigación en epidemiología.		Barcelona	Díaz de Santos,
Bakke OM, Carné X, García Alonso F.	1994	Ensayos clínicos con medicamentos.		Barcelona	Doyma
Ahlbom A, Norell S.	1992	Fundamentos de epidemiología.	3ª	Madrid	Siglo Veintiuno
Álvarez Cáceres R.	1995	El método científico en las ciencias de la salud.		Madrid	Díaz de Santos,
Matthews DE, Farewell VT.	1990	Estadística médica. Aplicación e interpretación	2ª	Barcelona	Salvat
Terrada M.L., Peris R.	1989	Lecciones de Documentación Médica.	2ª	Valencia	Instituto de Estudios Documentales e Históricos sobre la Ciencia,
Brezinski C.	1991	El oficio de investigador.		México	Siglo XXI
Carreras Panchón A.	1994	Guía práctica para la elaboración de un trabajo científico.		Bilbao	Publicaciones y Documentación Cita DL.
López Yepes J.	1995	La aventura de la investigación científica.		Madrid	Síntesis
Sánchez Aldegue J, Frutos Martínez, F. En Reuss Jm.	2000	Aspetos generales de la investigación para médicos de residencias. Medicina Geriátrica en residencias,		Madrid	Edimsa


Artículos						
Autor	Título	Revista	Volumen	Año	Páginas	Descripción / comentario
Cabezali Sánchez JM, Sánchez Aldegue J.	El cuestionario: bases metodológicas y su utilización en Fisioterapia, para lograr una mayor calidad asistencial.	Fisioterapia	19 (2)	1997	97-103	

## BIBLIOGRAPHY AND WEB LINKS / COMPLEMENTARY SOURCES OF INFORMATION

### UPDATING BIBLIOGRAPHY AND WEB LINKS

## MODULE TIMETABLE

This information will be available on the virtual campus to students enrolled on this module.

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## GENERAL INFORMATION

### MODULE INFORMATION

Module	<b>M5. Work Placement 1</b>		
Code	<b>43958</b>	Academic year	<b>2020-2021</b>
ECTS credits	<b>6</b>	Module type	<b>Compulsory</b>
Year	<b>1</b>	Term	<b>1</b>
Timetable	Available to students enrolled on this module via the Virtual Campus		
Teaching language	<b>Catalan/Spanish</b>		

### FACULTY DATA

- Module leader


Professor's Name	<b>NÚRIA PASTALLE BURRULL</b>
Email	<b>nuria.pastalle@eug.es</b>
Tutorial Schedule	<b>To be Arranged</b>

## PREREQUISITES

- There are no official prerequisites

## MODULE CONTEXTUALIZATION


The purpose of this module is to bring together and consolidate all the acquired knowledge, skills, attitudes and values around the conditions and pathologies suited to pediatric physiotherapy intervention in an ordinary or special education school setting. Giving special relevance to the child's functional aspect and schooling, the placement consists in observing treatments by colleagues and/or tutors, caring for pupils with motor disability, advising teachers and participating in meetings with educational staff, parents and tutors. The objective is to train professionals who are capable of identifying and effectively and reliably treating the main limitations in activities and restrictions in participation presented by pupils with mobility disorders, and to work together with the different components of a multidisciplinary team in a school environment.

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## COMPETENCIES AND LEARNING OUTCOMES

### Specific Competencies

<b>Competency</b>	E02 Identify the most common neurological, respiratory and locomotive pathologies in pediatrics.
Learning outcomes	E02.07 Recognise pathologies presented by pupils in ordinary or special education schools.
	E02.08 Identify the functional repercussions of pathologies presented by pupils in ordinary or special education schools.
<b>Competency</b>	E03 Use validated and proven reliable pediatric physiotherapy procedures and instruments to assess the pediatric patient, with the aim of determining their limitations with regards to posture and movement and the related functional implications.
Learning outcomes	E03.12 Conduct a physiotherapy evaluation using appropriate acquired instruments in order to determine the degree of impairment to the structure and function of the pupils assigned to the placement student.
	E03.13 Conduct a physiotherapy evaluation using appropriate acquired instruments in order to determine the degree of limitation in school activities and the restrictions in group activities faced by the pupils assigned to the placement student.
<b>Competency</b>	E04 Design an advanced pediatrics physiotherapy intervention plan adjusted to the clinic and the needs of the infant patient, taking into account age and the setting in which the physiotherapy will take place, as well as aspects relating to the patient's culture.
Learning outcomes	E04.07 Set out treatment objectives adjusted to the results of the evaluation carried out on the pupils with motor disabilities assigned to the placement student.
	E04.08 Propose age-appropriate therapeutic exercises and activities in line with the objectives drawn from the evaluation for each of the pupils assigned to the placement student.
	E04.09 Establish the frequency, type and intervention time of the physiotherapy according to the pupil's characteristics, level of schooling and the activities to be carried out.
	E04.10 Anticipate the space, material and apparatus requirements for the physiotherapy intervention in the school.
	E04.11 Select, propose and give an overview of some exercises or activities carried out during the physiotherapy sessions to other professionals at the school, non-physiotherapists and/or family members, in order to increase their application in everyday situations.
<b>Competency</b>	E05 Apply, revise and adapt different pediatric physiotherapy treatment procedures, methods and techniques.
Learning outcomes	E05.08 Carry out the physiotherapy treatment according to the pupil's evaluation, adapting it to their level of schooling and the group's activities.

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	E05.09 Evaluate the results in terms of function, level of achievement of activities and participation in the educational group, and their relationship with the outlined objectives.
	E05.10 Modify the physiotherapy treatment in line with the observed clinical changes in function, during activities and participation.
	E05.11 Communicate with other professionals at the school.

<b>Competency</b>	E06 Indicate the most effective measures for disease prevention in each clinical situation according to the area of pediatric physiotherapy intervention.
Learning outcomes	E06.05 Indicate support measures at school and at home in order to prevent any musculoskeletal deformities arising from the pupil with motor disability's main lesion.
	E06.06 Indicate therapeutic measures that can be carried out at school and/or in the home environment to prevent any future health complications that may impact on the pupil with motor disability's quality of life.


<b>Competency</b>	E07 Apply scientific method in the approach to and resolution of complex clinical cases in the different areas of pediatric physiotherapy intervention and research.
Learning outcomes	E07.11 Apply evaluation and treatment protocols based on the systematic revision of available literature related to physiotherapy in the school setting.

### General/Transversal Competencies

<b>Competency</b>	GT01 Apply critical thinking in order to analyse, synthesise and make decisions regarding different pediatric physiotherapy interventions.
Learning outcomes	GT01.05 Select appropriate intervention techniques for application in a school.

<b>Competency</b>	GT02 Resolve problems that arise in professional practice and research.
Learning outcomes	GT02.07 Evaluate and modify the physiotherapy intervention at the school in line with the objectives, proposing solutions to any event that may arise.

<b>Competency</b>	GT04 Students should take and demonstrate responsibility for their own professional development in their therapeutic intervention.
Learning outcomes	GT04.01 Respect the physiotherapy code of conduct specific to the school setting.
	GT04.02 Development personal resources in order to overcome any obstacles and personal limitations that may arise in the professional practice at the school.

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## Basic Competencies

<b>Competency</b>	B06 Possess and understand knowledge that provides a basis or opportunity for originality in the development and/or application of ideas, often in a research context.
<b>Competency</b>	B07 Students should know how to apply acquired knowledge and their problem-solving ability in new or relatively unknown environments within broader (or multidisciplinary) contexts related to their area of study.
<b>Competency</b>	B08 Students should be able to integrate knowledge and tackle the complexity of making judgements based on information that may be incomplete or limited and includes reflections on the social and ethical responsibilities associated with the application of their knowledge and judgements.
<b>Competency</b>	B09 Students should be able to present information, ideas, problems and solutions to specialised and non-specialised audiences.
<b>Competency</b>	B10 Students should possess the learning skills that enable them to continue studying in a manner that is largely self-guided or autonomous.

## CONTENTS

### Module contents:

1. Observation of an intervention by the assigned tutor:
  - 1.1. Observation of the assessment
  - 1.2. Observation of the treatment
2. Participation in an intervention with a pupil with a motor disability:
  - 2.1. Participation in the assessment
  - 2.2. Participation in the treatment
  - 2.3. Participation in school activities
3. Bibliographical searches regarding physiotherapy interventions for different pathologies
4. Participation in advisory sessions
5. Participation in team meetings
6. Production of a placement report

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## TEACHING METHODOLOGY AND FORMATIVE ACTIVITIES


### **SUPERVISED ACTIVITIES:**

- Clinical placement: Observation and participation in the physiotherapy sessions at the placement educational centers.  
Estimated hours: 128
- Tutorials: Resolution of concerns regarding the production of the placement report.  
Estimated hours: 2

### **SELF-DIRECTED ACTIVITIES:**

- Production of a placement report reflecting on the activities carried out during the placement at the school.  
Estimated hours: 20

TYPE OF ACTIVITY	ACTIVITY	LEARNING OUTCOMES	HOURS OF STUDENT DEDICATION
Supervised activities	Clinical placement	E02.07, E02.08, E03.12, E03.13, E04.07, E04.08, E04.11, E05.08, E05.09, E05.10, E05.11, E06.05, E06.06, GT01.05, GT02.07, GT04.01, GT04.02, B07, B08, B09, B10	128
	Tutorials	E02.08, E04.09, E04.11, E05.11, E07.11	2
Self-directed activities	Production of a placement report	E02.08, E04.09, E04.10, E05.10, E06.05, E06.06, E07.11, GT01.05, GT02.07, GT04.01, B06	20
<b>TOTAL HOURS</b>			<b>150</b>

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## ASSESSMENT

Assessment will include:

- Tutor evaluation: The tutor will evaluate the students application of theoretical and practical knowledge in their everyday work, their personal relationship with the child, other members of the team and the family, as well as their willingness to learn.  
With an overall weighting of 75%.
- Production of a placement report reflecting on the activities carried out during the placement at the school.  
With an overall weighting of 25%.

The following conditions must be met in order to pass the module:

- Pass each block and corresponding sections with a minimum mark of 5.
- Attend 100% of all practical classes (absences of up 20% will be permitted for justified causes).
- Achieve an overall module mark of 5 or above.


Final assessment examination period: 31/10/2020 to 10/01/2021

Final assessment resits: 10/01/2021 to 03/02/2021

Remark procedure: consult the center's assessment policy.

Any student that does not complete the programmed assessments or any of the formative activities that are deemed compulsory will be considered "non assessable".

ASSESSMENT ACTIVITIES	PERCENTAGE OF THE FINAL MARK	LEARNING OUTCOMES	HOURS OF STUDENT DEDICATION
Tutor evaluation	75%	E02.07, E02.08, E03.12, E03.13, E04.07, E04.08, E04.11, E05.08, E05.09, E05.10, E05.11, E06.05, E06.06, GT01.05, GT02.07, GT04.01, GT04.02, B07, B08, B09, B10	-

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Production of a placement report	25%	E02.08, E04.09, E04.10, E05.10, E06.05, E06.06, E07.11, GT01.05, GT02.07, GT04.01, B06	-
<b>TOTAL HOURS</b>			-

## BIBLIOGRAPHY AND WEB LINKS / BASIC SOURCES OF INFORMATION


## BIBLIOGRAPHY AND WEB LINKS / COMPLEMENTARY SOURCES OF INFORMATION

### UPDATING BIBLIOGRAPHY AND WEB LINKS

## MODULE TIMETABLE

This information will be available on the virtual campus to students enrolled on this module.



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## GENERAL INFORMATION

### MODULE INFORMATION

Module	<b>M6. Work Placement 2</b>		
Code	<b>43961</b>	Academic year	<b>2020-2021</b>
ECTS credits	<b>6</b>	Module type	<b>Compulsory</b>
Year	<b>1</b>	Term	<b>2</b>
Timetable	Available to students enrolled on this module via the Virtual Campus		
Teaching language	<b>Catalan/Spanish</b>		

### FACULTY DATA

- Module leader


Professor's Name	<b>NÚRIA PASTALLE BURRULL</b>
email	<b>nuria.pastalle@eug.es</b>
Tutorial Schedule	<b>To be Arranged</b>

## PREREQUISITES

- There are no official prerequisites

## MODULE CONTEXTUALIZATION


The purpose of this module is to bring together and consolidate all the acquired knowledge, skills, attitudes and values around the conditions and pathologies suited to pediatric physiotherapy intervention. Giving special relevance to the clinical aspect, the placement consists in the observation of treatments by colleagues and/or tutors, personal care of infant patients aged 0 to 3 in early intervention centers, hospitals or specific pediatric rehabilitation centers, as well as the participation in clinical sessions. The objective is to train professionals capable of identifying and reliably and effectively treating the main health problems in pediatric patients, offering support to family members and working integrally with the different components of a multidisciplinary team in a health setting.

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## COMPETENCIES AND LEARNING OUTCOMES

### Specific Competencies

<b>Competency</b>	E02 Identify the most common neurological, respiratory and locomotive pathologies in pediatrics.
Learning outcomes	<p>E02.09 Recognise the pathologies presented by the pediatric patients assigned to the placement student.</p> <p>E02.10 Identify the functional repercussions of the pathologies presented by the pediatric patients assigned to the placement student.</p>
<b>Competency</b>	E03 Use validated and proven reliable pediatric physiotherapy procedures and instruments to assess the pediatric patient, with the aim of determining their limitations with regards to posture and movement and the related functional implications.
Learning outcomes	<p>E03.14 Conduct a physiotherapy evaluation using appropriate acquired instruments in order to determine the degree of impairment to the structure and function of the pediatric patients assigned to the placement student.</p> <p>E03.15 Conduct a physiotherapy evaluation using appropriate acquired instruments in order to determine the degree of limitation in activities and the restrictions in participation faced by the pediatric patients assigned to the placement student.</p>
<b>Competency</b>	E04 Design an advanced pediatrics physiotherapy intervention plan adjusted to the clinic and the needs of the infant patient, taking into account age and the setting in which the physiotherapy will take place, as well as aspects relating to the patient's culture.
Learning outcomes	<p>E04.12 Set out treatment objectives adjusted to the results of the evaluation carried out on the pediatric patients assigned to the placement student.</p> <p>E04.13 Propose therapeutic exercises and activities appropriate to the patient's age and context of the intervention in line with the objectives drawn from the evaluation, for each of the pediatric patients assigned to the placement student.</p> <p>E04.14 Establish the frequency, type and intervention time of the physiotherapy, according to the nature of the center.</p> <p>E04.15 Anticipate the space, material and apparatus requirements for the physiotherapy intervention, according to the nature of the center where the intervention will take place.</p> <p>E04.16 Select, propose and give an overview of some of the exercises or activities carried out during the physiotherapy sessions to family members, in order to increase their application in everyday situations.</p>
<b>Competency</b>	E05 Apply, revise and adapt different pediatric physiotherapy treatment procedures, methods and techniques.
Learning outcomes	<p>E05.12 Conduct a physiotherapy treatment in a health setting based on the evaluation carried out.</p> <p>E05.13 Evaluate function results and their relationship with the outlined objectives.</p>

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	<p>E05.14 Modify the physiotherapy treatment during application in line with the observed clinical changes and functional impact.</p> <p>E05.15 Communicate with other professionals on the healthcare team.</p>
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<b>Competency</b>	E06 Indicate the most effective measures for disease prevention in each clinical situation according to the area of pediatric physiotherapy intervention.
Learning outcomes	<p>E06.07 Indicate the support measures to be carried out in the home setting in order to prevent musculoskeletal deformities arising as a result of the lesion.</p> <p>E06.08 Indicate therapeutic measures to be carried out in the home setting in order to prevent future health complications that may interfere with the pediatric patient's and their family's quality of life.</p>

<b>Competency</b>	E07 Apply scientific method in the approach to and resolution of complex clinical cases , in the different areas of pediatric physiotherapy intervention and research.
Learning outcomes	E07.12 Select physiotherapy assessment and treatment protocols in pediatric respiratory physiotherapy, based on systematic revision of available literature.

### General/Transversal Competencies


<b>Competency</b>	GT01 Apply critical thinking in order to analyse, synthesise and make decisions regarding different pediatric physiotherapy interventions.
Learning outcomes	GT01.06 Choose appropriate intervention techniques, justifying the decisions with reference to knowledge of the different areas of intervention in physiotherapy.

<b>Competency</b>	GT02 Resolve problems that arise in professional practice and research.
Learning outcomes	GT02.08 Evaluate and modify the physiotherapy intervention in line with the objectives, proposing solutions to any event that may arise.

<b>Competency</b>	GT04 Students should take and demonstrate responsibility for their own professional development in their therapeutic intervention.
Learning outcomes	<p>GT04.03 Respect the physiotherapy code of conduct in the health setting.</p> <p>GT04.04 Operate effectively, achieving outlined objectives in time-pressured situations or times of disagreement, opposition or adversity.</p> <p>GT04.05 Development personal resources in order to overcome any obstacles and personal limitations that may arise in professional practice.</p>

### Basic Competencies


<b>Competency</b>	B06 Possess and understand knowledge that provides a basis or opportunity for originality in the development and/or application of ideas, often in a research context.
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<b>Competency</b>	B07 Students should know how to apply acquired knowledge and their problem-solving ability in new or relatively unknown environments within broader (or multidisciplinary) contexts related to their area of study.
<b>Competency</b>	B08 Students should be able to integrate knowledge and tackle the complexity of making judgements based on information that may be incomplete or limited and includes reflections on the social and ethical responsibilities associated with the application of their knowledge and judgements.
<b>Competency</b>	B09 Students should be able to present information, ideas, problems and solutions to specialised and non-specialised audiences.
<b>Competency</b>	B10 Students should possess the learning skills that enable them to continue studying in a manner that is largely self-guided or autonomous.

## CONTENTS

<p>Module contents:</p> <ol style="list-style-type: none"> <li>1. Observation of an intervention by the assigned tutor: <ol style="list-style-type: none"> <li>1.1. Observation of the assessment</li> <li>1.2. Observation of the treatment</li> </ol> </li> <li>2. Participation in an intervention with a patient with a motor disability: <ol style="list-style-type: none"> <li>2.1. Participation in the assessment</li> <li>2.2. Participation in the treatment</li> <li>2.3. Participation in school activities</li> </ol> </li> <li>3. Bibliographical searches regarding physiotherapy interventions for different pathologies</li> <li>4. Participation in clinical sessions</li> <li>5. Participation in meetings with the multidisciplinary team</li> <li>6. Family support</li> </ol>
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## TEACHING METHODOLOGY AND FORMATIVE ACTIVITIES


### **SUPERVISED ACTIVITIES:**

- Clinical placement: Observation and participation in the physiotherapy sessions at the placement social health centers.  
Estimated hours: 128
- Tutorials: Resolution of concerns regarding the production of the placement report.  
Estimated hours: 2

### **SELF-DIRECTED ACTIVITIES:**

- Production of a placement report reflecting on the activities carried out during the placement at the center.  
Estimated hours: 20

TYPE OF ACTIVITY	ACTIVITY	LEARNING OUTCOMES	HOURS OF STUDENT DEDICATION
Supervised activities	Clinical placement	E02.09, E02.10, E03.14, E03.15, E04.12, E04.13, E04.16, E05.12, E05.13, E05.14, E05.15, E06.07, E06.08, GT01.06, GT02.08, GT04.03, GT04.04, GT04.05, B07, B08, B09, B10	128
	Tutorials	E02.09, E04.14, E04.16, E05.15, E07.12	2
Self-directed activities	Production of a placement report	E02.09, E04.13, E04.15, E05.14, E06.07, E06.08, E07.12, GT01.06, GT02.08, GT04.03, B06	20
<b>TOTAL HOURS</b>			<b>150</b>

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## ASSESSMENT

Assessment will include:

- Tutor evaluation: The tutor will evaluate the students application of theoretical and practical knowledge in their everyday work, their personal relationship with the child, other members of the team and the family, as well as their willingness to learn.  
With an overall weighting of 75%.
- Production of a placement report reflecting on the activities carried out during the placement at the school.  
With an overall weighting of 25%.

The following conditions must be met in order to pass the module:

- Pass each block and corresponding sections with a minimum mark of 5.
- Attend 100% of all practical classes (absences of up to 20% will be permitted for justified causes).
- Achieve an overall module mark of 5 or above.


Final assessment examination period: 22/03/2021 to 24/06/2021

Final assessment resits: 25/06/2021 to 30/06/2021

Remark procedure: consult the center's assessment policy.

Any student that does not complete the programmed assessments or any of the formative activities that are deemed compulsory will be considered "non assessable".

ASSESSMENT ACTIVITIES	PERCENTAGE OF THE FINAL MARK	LEARNING OUTCOMES	HOURS OF STUDENT DEDICATION
Tutor evaluation	75%	E02.09, E02.10, E03.14, E03.15, E04.12, E04.13, E04.16, E05.12, E05.13, E05.14, E05.15, E06.07, E06.08, GT01.06, GT02.08, GT04.03, GT04.04, GT04.05, B07, B08, B09, B10	-
Production of a placement report	25%	E02.09, E04.13, E04.15, E05.14, E06.07, E06.08,	-

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		E07.12, GT01.06, GT02.08, GT04.03, B06	
<b>TOTAL HOURS</b>			-


**BIBLIOGRAPHY AND WEB LINKS / BASIC SOURCES OF INFORMATION**

**BIBLIOGRAPHY AND WEB LINKS / COMPLEMENTARY SOURCES OF INFORMATION**

**UPDATING BIBLIOGRAPHY AND WEB LINKS**

**MODULE TIMETABLE**

This information will be available on the virtual campus to students enrolled on this module.

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## GENERAL INFORMATION

### MODULE INFORMATION

Module	<b>M7. Master's Dissertation</b>		
Code	<b>43959</b>	Academic year	<b>2020-2021</b>
ECTS credits	<b>9</b>	Module type	<b>Compulsory</b>
Year	<b>1</b>	Term	<b>Annual</b>
Timetable	Available to students enrolled on this module via the virtual campus		
Teaching language			

### FACULTY DATA

- Module leader

Professor's Name	<b>DR JORDI ESQUIROL GAUSSÀ</b>
Email	<b>jordi.esqurol@eug.es</b>
Tutorial Schedule	<b>To be Arranged</b>

- Other faculty data

Professor's Name	<b>VANESA BAYO TALLÓN</b>
Email	<b>vanesa.bayo@eug.es</b>
Tutorial Schedule	<b>To be Arranged</b>

Professor's Name	<b>DR JOSEP SÀNCHEZ ALDEGUER</b>
Email	<b>josep.sanchez@eug.es</b>
Tutorial Schedule	<b>To be Arranged</b>

## PREREQUISITES

- There are no official prerequisites


## MODULE CONTEXTUALIZATION

This module involves the individual development of a complete piece of research work, as agreed with the lecturer/tutor, specific to one area of intervention in pediatric physiotherapy, based on clinical needs and interdisciplinary methodology

The student will produce a piece of work based on a common framework that should bring together all the requirements as outlined in the Research Methodology module, including:

- study approach
- related theoretical framework
- design of the intervention plan
- collection and analysis of data




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- elaboration of the argument
  - writing of conclusions
  - bibliographical references
  - annexes
- Students will briefly present the merits of their work before the assessment committee.

## COMPETENCIES AND LEARNING OUTCOMES

### Specific Competencies

<b>Competency</b>	E02 Precisely identify the most common neurological, respiratory and locomotive pathologies in pediatrics.
Learning outcomes	E02.11 Select patients according to the pathology characteristics outlined in the dissertation.
<b>Competency</b>	E03 Use validated and proven reliable pediatric physiotherapy procedures and instruments to assess the pediatric patient, with the aim of determining their limitations with regards to posture and movement and the related functional implications.
Learning outcomes	E03.16 Identify people who meet the criteria for inclusion and exclusion for participation in the dissertation study. E03.17 List the evaluation instruments used on patients participating in the dissertation study.
<b>Competency</b>	E04 Design an advanced pediatrics physiotherapy intervention plan adjusted to the clinic and the needs of the infant patient, taking into account age and the setting in which the physiotherapy will take place, as well as aspects relating to the patient's culture.
Learning outcomes	E04.17 List the methods and/or techniques used on patients participating in the dissertation study. E04.18 Design evaluation and treatment protocols based on the systematic revision of available literature.
<b>Competency</b>	E07 Apply scientific method in the approach to and resolution of complex clinical cases in the different areas of pediatric physiotherapy intervention and research.
Learning outcomes	E07.13 Conduct a bibliographical search concerning a specific topic in physiotherapy of. E07.14 Apply the structure of scientific studies to the production of the work.
<b>Competency</b>	E08 Use the necessary methodological bases to plan, design and develop experimental and research projects oriented toward the clinical practice of pediatric physiotherapy, health and school and social inclusion of the infant population with disabilities.
Learning outcomes	E08.05 Design and conduct a pilot test using scientific method. E08.06 Identify and select relevant variables for a scientific study.

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	E08.07 Organise and analyse data collected during the research process.
	E08.08 Apply statistical techniques in the analysis of the study results.
	E08.09 Formulate the argument and conclusions of the scientific study based on the statistical results.

### General/Transversal Competencies

<b>Competency</b>	GT02 Resolve problems that arise in professional practice and research.
Learning outcomes	GT02.09 Propose possible solutions to problems that arise during the research phase of a scientific study.

<b>Competency</b>	GT03 Propose work protocols by searching for information in scientific literature.
Learning outcomes	GT03.02 Apply the critical reading of articles on pathology and treatment to pediatric physiotherapy.

<b>Competency</b>	GT04 Students should take and demonstrate responsibility for their own professional development in their therapeutic intervention.
Learning outcomes	GT04.06 Meet the legal and ethical requirements in the development of a research protocol.

<b>Competency</b>	GT05 Develop sufficient autonomy to be able to participate in multidisciplinary research projects and scientific collaborations and to convey the results.
Learning outcomes	GT05.03 Apply methodological processes that lead to better research results.
	GT05.04 Recognise the role of each professional in a multidisciplinary cooperation context.
	GT05.05 Communicate and support the research results.


### Basic Competencies

<b>Competency</b>	B06 Possess and understand knowledge that provides a basis or opportunity for originality in the development and/or application of ideas, often in a research context.
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<b>Competency</b>	B08 Students should be able to integrate knowledge and tackle the complexity of making judgements based on information that may be incomplete or limited and includes reflections on the social and ethical responsibilities associated with the application of their knowledge and judgements
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<b>Competency</b>	B09 Students should be able to present information, ideas, problems and solutions to specialised and non-specialised audiences
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<b>Competency</b>	B10 Students should possess the learning skills that enable them to continue studying in a manner that is largely self-guided or autonomous.
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## CONTENTS

Module contents:

1. Production of a piece of work based on a common framework
2. Presentation and defence of the research work

## TEACHING METHODOLOGY AND FORMATIVE ACTIVITIES

### **DIRECTED ACTIVITIES (3 hours)**


- Lectures: to provide students with the knowledge that will enable them to follow the common framework for the master's dissertation.  
Estimated hours: 3

### **SUPERVISED ACTIVITIES (37 hours: face-to-face 18.5 hours)**


- Elaboration of the master's dissertation:  
Estimated hours: 22
- Tutorials: to resolve any concerns that may arise during the production of the master's dissertation.  
Estimated hours: 5
- Oral presentation of work: related to sections of the master's dissertation.  
Estimated hours: 10

### **SELF-DIRECTED ACTIVITIES (184 hours)**

- Reading of articles/reports of interest in accordance with the themes covered in the class  
Estimated hours: 25
- Autonomous work for the preparation and presentation of the master's dissertation.  
Estimated hours: 159

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TYPE OF ACTIVITY	ACTIVITY	LEARNING OUTCOMES	HOURS OF STUDENT DEDICATION
Directed activities	Lectures	E03.17, E04.17, E04.18, E07.14, GT01.07, GT01.08, B06, B08, B10	3
Supervised activities	Elaboration of the master's dissertation	E02.11, E03.16, E03.17, E04.18, E07.13, E07.14, E08.05, E08.06, E08.07, E08.08, E08.09, GT01.08, GT01.09, GT02.09, GT03.02, GT04.06, GT05.03, GT05.05, B06, B08	22
	Tutorials	E03.16, E03.17, E04.17, E04.18, E07.14, E08.08, GT01.09	5
	Oral presentation of work	GT01.07, GT01.08, GT01.09, GT05.04, GT05.05, B09	10
Self-directed activities	Reading of articles	E02.11, E03.17, E04.17, E03.17, GT01.08, GT01.09, GT03.02, B06, B10	15
	Autonomous work	E02.11, E03.16, E03.17, E04.17, E04.18, E07.13, E07.14, E08.05, E08.06, E08.07, E08.08, E08.09, GT01.07, GT01.08, GT01.09, GT02.09, GT03.02, GT05.03, GT05.05, B06, B08, B09	159
	Personal study	E03.16, E03.17, E04.17, E04.18, E07.13, GT01.07, GT01.08, GT03.02.	10
<b>TOTAL HOURS</b>			<b>224</b>

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## ASSESSMENT

Assessment will include:

- Submission of the master's dissertation in electronic format.  
With an overall weighting of 80%
- Oral Defence of the Dissertation before a jury.  
With an overall weighting of 20%

The following conditions must be met in order to pass the module:

- Pass each block and corresponding sections with a minimum mark of 5.
- Attend 100% of all practical classes (absences of up to 20% will be permitted for justified causes).
- Achieve an overall module mark of 5 or above.

Submission period for the master's dissertation: 27/05/2021 to 31/05/2021


Oral defence of the master's dissertation: 02/07/2021

Resubmission of the master's dissertation and oral defence resit period: 01/09/2021 to 09/09/2021

Remark procedure: consult the center's assessment policy.

Any student that does not complete the programmed assessments or any of the formative activities that are deemed compulsory will be considered "non assessable".

ASSESSMENT ACTIVITIES	PERCENTAGE OF THE FINAL MARK	LEARNING OUTCOMES	HOURS OF STUDENT DEDICATION
Master's dissertation	80%	E02.11, E03.16, E03.17, E04.17, E04.18, E07.13, E07.14, E08.05, E08.06, E08.07, E08.08, E08.09, GT01.07, GT01.08, GT01.09, GT02.09, GT03.02, GT04.06, GT05.03, GT05.05, B06, B08, B09, B10	

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Oral Defence of the Dissertation	20%	GT01.07, GT01.08, GT01.09, GT05.04, GT05.05, B09	30
<b>TOTAL HOURS</b>			<b>30</b>

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## BIBLIOGRAPHY AND WEB LINKS / COMPLEMENTARY SOURCES OF INFORMATION

### UPDATING BIBLIOGRAPHY AND WEB LINKS

## MODULE TIMETABLE

This information will be available on the virtual campus to students enrolled on this module.