	<b>PHYSIOTHERAPY (EHEA DEGREE)</b> <b>COURSE CATALOGUE</b>	<b>EUIF GIMBERNAT</b> Physiotherapy
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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>MUSCULAR CHAINS</b>		
Code	<b>200572</b>	Academic year	<b>2016-2017</b>
ECTS	<b>6</b>	Type of course unit	<b>Optional</b>
Year	<b>4</b>	Term	<b>1</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit.		
Language of instruction	<b>CATALAN/SPANISH</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Mr RICARD MONTANÉ ESCOFET</b>
e-mail	<a href="mailto:ricard.montane@eug.es">ricard.montane@eug.es</a>
Office hours	<b>To be agreed on</b>

- Team members

Name of lecturer	<b>Mr PEDRO RUBIO MONTORO</b>
e-mail	<a href="mailto:pedrorubio@cosglobal.com">pedrorubio@cosglobal.com</a>
Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Dr ENRIC SIRVENT RIBALDA</b>
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Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Mr VICENÇ PUNÇOLA ISARD</b>
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Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Ms MARTA MONTANÉ BLANCHART</b>
e-mail	<a href="mailto:marta.montane@gmail.com">marta.montane@gmail.com</a>
Office hours	<b>To be agreed on</b>

## ADMISSION REQUIREMENTS

- There are no official admission requirements but it is advisable to have done and passed “Physiotherapy in clinical specialties in the locomotor system – IV” (third year, second term).

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## THE COURSE UNIT WITHIN THE CURRICULUM

- Course contents: Deeper knowledge of physiotherapy of the locomotor system.
- This course aims to offer deeper knowledge of muscular chains used both in the patient's assessment and treatment.
- Knowing the techniques and methods used in the treatment of muscular chains is fundamental in order to give a more holistic, comprehensive perspective to the degree and the profession.

## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

<b>Competence</b>	<b>E1.</b> Demonstrate knowledge of the morphology, physiology, pathology, and conduct of both healthy and ill people in their natural and social environment.
Learning outcomes	<p><b>E1.23.</b> Describe the physiopathological mechanisms of any impairment affecting muscular chains, any movement of the nervous system itself or surrounding structures, and joints from an osteopathic perspective.</p> <p><b>Specific objectives:</b></p> <p><b>E1.23.1.</b> Relate any structural impairment to alterations in function.</p> <p><b>E1.23.2.</b> Identify any alteration of articular movement and muscular capacity and relate them to alterations of the functional connectivity system.</p>
<b>Competence</b>	<b>E3.</b> Demonstrate knowledge of the physiotherapy methods, procedures, and actions that lead to clinical therapeutics.
Learning outcomes	<p><b>E3.19.</b> Apply the different methods and techniques used in the assessment and treatment of muscular chains, in the assessment and treatment of movement of the nervous system through neurodynamic techniques, and in the assessment and treatment of joints through manual osteopathic therapies.</p> <p><b>Specific objectives:</b></p> <p><b>E3.19.1.</b> Integrate the different muscular and articular techniques according to the mechanical capacity of the structures of the locomotor system.</p> <p><b>E3.19.2.</b> Apply different methods for the treatment of trigger points.</p> <p><b>E3.19.3.</b> Apply different neuromuscular techniques for an analytical treatment of muscles.</p> <p><b>E3.19.4.</b> Apply different global postural techniques for a better posture and re-educate muscular chains.</p>

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<b>Competence</b>	<b>E5.</b> Integrate, through clinical experience, ethical and professional values, the knowledge, skills, and attitudes characteristic in physiotherapy to solve specific clinical cases in hospital, out-of-hospital, primary and community health care environments.
Learning outcomes	<b>E5.11.</b> Apply the knowledge and competences acquired in the course to manage clinical cases of impairments of the locomotor system susceptible of physiotherapy treatment using the muscular chain method, neurodynamics and manual osteopathic therapies. <b>Specific objectives:</b> <b>E5.11.1.</b> Relate local dysfunctions of the locomotor system to general body dysfunctions. <b>E5.11.2.</b> Relate any imbalance in the different muscular chains to the different functional impairments of the musculoskeletal system. <b>E5.11.3.</b> Solve clinical cases affecting the musculoskeletal system, susceptible of physiotherapy treatment, taking both an analytical and a global perspective.

<b>Competence</b>	<b>E7.</b> Assess the patient's functional state, taking into account physical, psychological, and social aspects.
Learning outcomes	<b>E7.19.</b> Describe and apply physiotherapy assessment procedures to treat any impairment of muscular chains, any movement of the nervous system itself or surrounding structures, and joints from an osteopathic perspective to determine the degree of impairment of the muscular system and its possible functional consequences. <b>Specific objectives:</b> <b>E7.19.1.</b> Identify the impact of different impairments of the locomotor system using functional scales. <b>E7.19.2.</b> Identify any imbalance of muscular chains. <b>E7.19.3.</b> Identify the main causes of imbalance of muscular chains. <b>E7.19.4.</b> Use validated assessment tools for muscular chain evaluation: goniometer, plumb-bob, dynamometer, algometer.

<b>Competence</b>	<b>E8.</b> Determine the physiotherapy diagnosis according to established norms and using internationally recognised validation instruments.
Learning outcomes	<b>E8.10.</b> Formulate a physiotherapy diagnostic hypothesis for some clinical cases using the specific muscular chain method, neurodynamics and manual osteopathic therapies applied in the treatment of impairments of the locomotor system. <b>Specific objectives:</b> <b>E8.10.1.</b> Formulate a physiotherapy diagnostic hypothesis taking account of any postural or dynamic alteration in the trunk or the limbs, from the perspective of lesion chains.

<b>Competence</b>	<b>E9.</b> Develop a physiotherapy intervention plan according to criteria of adequacy, validity, and efficiency.
Learning outcomes	<b>E9.25.</b> Define the general and specific objectives to administer a physiotherapy treatment using the specific muscular chain method, neurodynamics and manual osteopathic therapies applied in the treatment of impairments of the locomotor system. <b>Specific objectives:</b> <b>E9.25.1.</b> Identify the goals of muscular and articular rebalancing treatments using a physiotherapy diagnostic hypothesis.

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	<p><b>E9.26.</b> Describe the circumstances that determine intervention priorities in a physiotherapy treatment using the specific muscular chain method, neurodynamics and manual osteopathic therapies applied in the treatment of impairments of the locomotor system.</p> <p><b>Specific objectives:</b>  <b>E9.26.1.</b> Establish the correct timeline in the treatment of muscular chains taking the patient's condition into account.</p> <p><b>E9.27.</b> Enumerate the different types of material and apparatus to be used in a physiotherapy treatment, using the specific muscular chain method, neurodynamics and manual osteopathic therapies applied in the treatment of impairments of the locomotor system.</p> <p><b>Specific objectives:</b>  <b>E9.27.1.</b> Choose the appropriate material when assessing and treating muscular chains: dynamometer, algometer, plumb-bob, tuning fork, thermoplastic material.</p>
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### Transversal competences

<b>Competence</b>	<b>T5.</b> Problem solving.
Learning outcomes	<p><b>Specific objectives:</b>  <b>T5.1.</b> Identify the type of muscular lesion by carrying out a functional assessment of the patient.  <b>T5.2.</b> Choose the best technique to treat different muscular and articular impairments.</p>

<b>Competence</b>	<b>T9.</b> Develop critical thinking.
Learning outcomes	<p><b>Specific objectives:</b>  <b>T9.1.</b> Write the resolution to a proposed clinical case.  <b>T9.2.</b> Argue the choice of treatment for impairments of the locomotor system.</p>

### Generic competences

<b>Competence</b>	<b>G1.</b> Develop critical thinking and reasoning and know how to effectively express it both in the student's own languages and in a third language.
Learning outcomes	<p><b>Specific objectives:</b>  <b>G1.1.</b> Write the resolution to a proposed clinical case.  <b>G1.2.</b> Argue the choice of treatment for impairments of the locomotor system.</p>

<b>Competence</b>	<b>G2.</b> Develop strategies of autonomous learning.
Learning outcomes	This is a competence that is developed by working competence "T5. Problem solving" and "T9. Develop critical thinking".

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## CONTENTS

1. Consolidation of the concept of the muscular chains in the trunk, neck, and limbs.
2. Postural analysis related to muscular chains.
3. Further study of the treatments for conditions affecting the upper limbs.
4. Further study of the treatments for conditions affecting the lower limbs.

## TEACHING METHOD AND ACTIVITIES

### DIRECTED ACTIVITIES

- **Theoretical lessons** that will provide the student with the basics of assessment and treatment of muscular chains. The lessons will offer visual and computer-based support.

Estimated time: 19.5 hours.

- **Practical lessons** where the teacher will present, with the help of a model or with audiovisual support, different assessment and treatment techniques.

Estimated time: 20 hours.

- **Presentation and resolution of clinical cases.** Different clinical cases will be presented for which the student will have to suggest an appropriate treatment.

Estimated time: 7.5 hours.

### SUPERVISED ACTIVITIES

- **Practical Activity**, under the teacher's supervision, to apply the different techniques presented.

Estimated time: 15 hours.

- **Group work** where the students will have to discuss and solve some clinical cases presented by the teacher.

Estimated time: 7.5 hours.

### AUTONOMOUS ACTIVITIES

- **Information search and management** in small groups. The teacher will present some clinical cases and the students will have to find the appropriate bibliography to write a paper.

Estimated time: 15 hours.

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- Paper writing.** The students will work in small groups and will have to find appropriate bibliography, write a paper and prepare an oral presentation.  
  
 Estimated time: 22.5 hours.
- Autonomous work** of individual study to prepare exams, organise notes/material, tutorials: individually or in groups.  
  
 Estimated time: 40.75 hours.

ACTIVITY TYPE	ACTIVITY	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Directed activities	Theoretical lessons	E1, E3, E5, E7, E8, E9	19.5
	Practical lessons	E3, E7, E8	20
	Presentations and resolution of clinical cases	E3, E5, E7, E8, E9, T5, T9, G1, G2	7.5
Supervised activities	Practical activities	E3, E5, E7, E8	15
	Group work	E3, E5, E7, E8, E9, T7, T9, G1	7.5
Autonomous activities	Information search and management	E1, E3, E5, E7, E8	15
	Paper writing	E1, E3, E5, E7, E8, E9, T5, T7, T9, G1, G2	22.5
	Autonomous work	E1, E3, E5, E7, E8, E9	40.75
<b>TOTAL NUMBER OF HOURS</b>			<b>147.75</b>

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## ASSESSMENT METHOD

The assessment method will include:

- The knowledge acquired along the course will be assessed through written tests, which will amount to 35% of the final mark.
- Assessment of the manual skills necessary to apply a specific technique and of adequacy of the technique/manoeuvre used in a given situation, through oral practical tests that account for 45% of the final mark.
- The written papers presented amount to 15% of the final mark.
- Group work to solve some clinical cases accounts for 5% of the final mark.

In order to pass the course, the following conditions have to be met:

- Pass each section and part of the unit with a minimum mark of 5.
- Attendance at 100% of practical classes (justified absences will allow the student to miss up to 20% of all the practical classes).
- Get a minimum final mark of 5.

Rules concerning internal practical lessons:

Please, check the school's Rules of Internal Practical lessons.

Final evaluation period: from 01/12/2016 to 13/01/2017.

Resit examination period: from 19/12/2016 to 18/01/2017.

Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).

A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.

ASSESSED ACTIVITIES	PERCENTAGE FINAL MARK	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Written tests	35 %	E1, E3, E5, E7, E8, E9	2
Oral practical tests	45 %	E3, E5, E7, E8	0.25
Papers	15 %	E1, E3, E5, E7, E8, E9, T5, T7, T9, G1, G2	---
Group work	5 %	E3, E5, E7, E8, E9, T7, T9, G1	---
<b>TOTAL NUMBER OF HOURS</b>			<b>2.25</b>

## BIBLIOGRAPHY AND WEB PAGES /BASIC READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Rueda M.	2004	Los desequilibrios del pie	1	Barcelona	Paidotribo
V. Sanchís Alfonso	2003	Dolor anterior de rodilla e inestabilidad rotuliana en el paciente joven			Panamericana
Rockwood Ch	2006	Hombro		Barcelona	Marban
Vilar, Sureda	2005	Fisioterapia del aparato locomotor		Barcelona	McGraw Hill
Band, Paul W	1999	Clinical mechanics of the hand		St. Louis	Mosby
Evelyn J. Mackin	2002	Rehabilitation of the hand and upper extremity		St. Louis	Mosby
Myers T.	2009	Meridianos miofasciales para terapeutas manuales y del movimiento	2	Barcelona	Elsevier Masson



## BIBLIOGRAPHY AND WEB PAGES / RECOMMENDED READINGS


Books					
Author/s	Year	Title	Edition	City	Publisher
Nuñez Samper	1997	Biomecánica, medicina y cirugía del pie		Barcelona	Masson
Ballester j	2000	Desalineaciones tensionales de las extremidades inferiores. Implicaciones clinicopatológicas		Barcelona	Masson
Kapandji I	1993	Cuadernos de fisiología articular: Esquemas comentados de mecánica articular	4	Barcelona	Masson
Miralles R, Miralles I	2006	Biomecánica de los Tejidos y de las articulaciones		Barcelona	Masson
Miralles R, Miralles I	2006	Biomecánica de las patologías del aparato locomotor		Barcelona	Masson
Travel J, Simons DG	1983	Miofascial pain and dysfunction. The trigger point manual. Vol I		Baltimore	Williams and Wilkins
Travel J, Simons DG	1983	Miofascial pain and dysfunction. The trigger point manual. Vol II		Baltimore	Williams and Wilkins
Perez Sainz	2004	Fisioterapia del complejo articular del hombro		Barcelona	Masson
Puidollers JM	2000	El hombro doloroso		Barcelona	Laboratorio Andreu
Navarro, Alegre	2001	El hombro monografías medico quirúrgicas del aparato locomotor		Barcelona	Masson
Sohier R	1985	La kinesiôtherapie de l'épaule		La Louviere	Kine-Sciences
Baleman JE	1977	The shoulder and neck		Phildaelphia	W.B. Saunders
Rosemary Prosser, W.Bruce Conolly	2003	Rehabilitation of the hand and upper limb		Edinburgh	Butterworth Heinemann
Elaine Ewing Fess	2005	Hand and upper extremity splinting : principles and methods		St. Louis	Elsevier Mosby
Lede, Paul Van, Griet van Veldhoven	1998	Therapeutic hand splints : a rational approach		Antwerp (Belgium)	Provan
Wilton, Judith C	1997	Hand splinting : principles of design and fabrication		London	WB Saunders
Coppard, Brenda M, Helene Lohman	2008	Introduction to splinting : a clinical reasoning and problem-solving approach		St. Louis	Mosby/Elsevier
Hogan, Laura	1998	Pediatric splinting : selection, fabrication and clinical application of upper extremity splints		San Antonio, Texas	Therapy Skill Builders
Jacobs, MaryLynn A, Noelle M. Austin	2003	Splinting the hand and upper extremity.: principles and process		Baltimore	Lippincott Williams & Wilkins cop
Colditz, Judy C	1999	Splinting with neoprene : construction tips for custom splinting		Morgan Hill, CA	North Coast Medical, cop
Barbara G. Stanley, Susan M. Tribuzi	1992	Concepts in hand rehabilitation		Philadelphia	F.A. Davis, cop
Tubiana, Raoul, Jean-Michel Thomine, Evelyn Mackin	1996	Examination of the hand and wrist		London	Martín Dunitz
Maureen Salter and Lynn Cheshire	2000	Hand therapy : principles and practice		Oxford	Butterworth-Heinemann

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Articles						
Author	Title	Publication	Volume	Year	Pages	Description/ Comment
Pasarin Martinez A, Luca Andreu E	Estudio de la fuerza de la musculatura rotadora externa del hombro	Rehabilitación	26	1992	317-332	
Pocholle M, Codine Ph	Evaluación del balance muscular del hombro: Incidencias en reeducación	Kinésithérapie scientifique	396	2000		
Mestdagh H y col.	Influencia de l'état de la cuffie des rotateurs sur les résultats de l'arthroplastie de l'épaule	Revue de Chirurgie orthopedique	83	1997	522-530	
Meyer M.	La reeducation des prothèses d'épaule selon Hughes et Neer	Kinésithérapie scientifique	323	1993	15-23	
Medina Sanchez M y col.	Rehabilitación de las artroplastias del hombro	Rehabilitación	31	1997	189-195	
Kibler B, Mc Mullen	Shoulder rehabilitation strategies, guidelines and practice	Orthopedics clinics of North America	32	2001	527-538	
Gartsman GM y col.	Arthroscopic repair of full-thickness. Tears of the rotator cuff	The journal of bone and joint surgery	80A	1998	832-840	
Gari M y col.	What's new in shoulder surgery	Journal of bone and joint surgery	83	2001		
Dukas W, Speer P	Anatomy, pathophysiology and biomechanics of shoulder instability	Orthopedics clinics of North America	32	2001	381-391	
Turkel SJ y col.	Stabilising mechanisms preventing anterior dislocation of the glenohumeral joint	The journal of bone and joint surgery	63A	1981	1208-1216	

## PLANNING OF THE COURSE UNIT

Available on the virtual campus for all those students enrolled in this course unit.

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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>NEURODYNAMICS</b>		
Code	<b>200579</b>	Academic year	<b>2016-2017</b>
ECTS	<b>6</b>	Type of course unit	<b>Optional</b>
Year	<b>4</b>	Term	<b>1</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit.		
Language of instruction	<b>CATALAN/SPANISH</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Mr RICARD MONTANÉ ESCOFET</b>
e-mail	<a href="mailto:ricard.montane@eug.es">ricard.montane@eug.es</a>
Office hours	<b>To be agreed on</b>

- Team members

Name of lecturer	<b>Ms MARTA MONTANÉ BLANCHART</b>
e-mail	<a href="mailto:marta.montane@gmail.com">marta.montane@gmail.com</a>
Office hours	<b>To be agreed on</b>

## ADMISSION REQUIREMENTS

- There are no official admission requirements but it is advisable to have done and passed "Physiotherapy in clinical specialties in the locomotor system – IV" (third year, second term).

## THE COURSE UNIT WITHIN THE CURRICULUM

- Course contents: Deeper knowledge of physiotherapy of the locomotor system.
- This course aims to offer deeper knowledge of neurodynamics and its treatments.
- Knowing the neurodynamic assessment and treatment methods is fundamental in order to give a more holistic, comprehensive perspective to the degree and the profession.

## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

<b>Competence</b>	<b>E1.</b> Demonstrate knowledge of the morphology, physiology, pathology, and conduct of both healthy and ill people in their natural and social environment.
Learning outcomes	<p><b>E1.23.</b> Describe the physiopathological mechanisms of any impairment affecting muscular chains, any movement of the nervous system itself or surrounding structures, and joints from an osteopathic perspective.</p> <p><b>Specific objectives:</b></p> <p><b>E1.23.1.</b> Describe the functional anatomy and biomechanics of the nervous system.</p> <p><b>E1.23.2.</b> Understand the basic principles of neurodynamics and their relation with any impairment of the musculoskeletal system.</p> <p><b>E1.23.3.</b> Identify any postural alteration caused by a neurodynamic disorder.</p> <p><b>E1.23.4.</b> Identify any dynamic alteration caused by a neurodynamic disorder.</p> <p><b>E1.23.5.</b> Describe the evolution of the different pathologies related to neurodynamic disorders affecting the spine, and upper and lower limbs.</p>
<b>Competence</b>	<b>E3.</b> Demonstrate knowledge of the physiotherapy methods, procedures, and actions that lead to clinical therapeutics.
Learning outcomes	<p><b>E3.19.</b> Apply the different methods and techniques used in the assessment and treatment of muscular chains, in the assessment and treatment of movement of the nervous system through neurodynamic techniques, and in the assessment and treatment of joints through manual osteopathic therapies.</p> <p><b>Specific objectives:</b></p> <p><b>E3.19.1.</b> Apply the techniques for neural gliding, tension, and massage.</p> <p><b>E3.19.2.</b> Describe the effects that the different neurodynamic techniques have on tissues.</p>
<b>Competence</b>	<b>E5.</b> Integrate, through clinical experience, ethical and professional values, the knowledge, skills, and attitudes characteristic in physiotherapy to solve specific clinical cases in hospital, out-of-hospital, primary and community health care environments.
Learning outcomes	<p><b>E5.11.</b> Apply the knowledge and competences acquired in the course to manage clinical cases of impairments of the locomotor system susceptible of physiotherapy treatment using the muscular chain method, neurodynamics and manual osteopathic therapies.</p> <p><b>Specific objectives:</b></p> <p><b>E5.11.1.</b> Use the concepts and neurodynamic techniques in the treatment of the spine, and upper and lower limbs.</p>

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<b>Competence</b>	<b>E7.</b> Assess the patient's functional state, taking into account physical, psychological, and social aspects.
Learning outcomes	<p><b>E7.19.</b> Describe and apply physiotherapy assessment procedures to treat any impairment of muscular chains, any movement of the nervous system itself or surrounding structures, and joints from an osteopathic perspective to determine the degree of impairment of the muscular system and its possible functional consequences.</p> <p><b>Specific objectives:</b></p> <p><b>E7.19.1.</b> Describe the different neurodynamic tests of the trunk, upper and lower limbs.</p> <p><b>E7.19.2.</b> Assess the gliding capacity of neural structures of the trunk, upper and lower limb.</p> <p><b>E7.19.3.</b> Assess the degree of elasticity of neural structures of the trunk, upper and lower limb.</p> <p><b>E7.19.4.</b> Identify the different types of neurodynamic lesions.</p> <p><b>E7.19.5.</b> Use of a tuning fork and a reflex hammer for the assessment of neurodynamic disorders.</p>

<b>Competence</b>	<b>E8.</b> Determine the physiotherapy diagnosis according to established norms and using internationally recognised validation instruments.
Learning outcomes	<p><b>E8.10.</b> Formulate a physiotherapy diagnostic hypothesis for some clinical cases using the specific muscular chain method, neurodynamics and manual osteopathic therapies applied in the treatment of impairments of the locomotor system.</p> <p><b>Specific objectives:</b></p> <p><b>E8.10.1.</b> Formulate a physiotherapy diagnostic hypothesis related to neurodynamic disorders using the data gathered during the patient's functional assessment.</p>

<b>Competence</b>	<b>E9.</b> Develop a physiotherapy intervention plan according to criteria of adequacy, validity, and efficiency.
Learning outcomes	<p><b>E9.25.</b> Define the general and specific objectives to administer a physiotherapy treatment using the specific muscular chain method, neurodynamics and manual osteopathic therapies applied in the treatment of impairments of the locomotor system.</p> <p><b>Specific objectives:</b></p> <p><b>E9.25.1.</b> Identify the main goals in the treatment of the main neurodynamic disorders using a physiotherapy diagnostic hypothesis.</p> <p><b>E9.26.</b> Describe the circumstances that determine intervention priorities in a physiotherapy treatment using the specific muscular chain method, neurodynamics and manual osteopathic therapies applied in the treatment of impairments of the locomotor system.</p> <p><b>Specific objectives:</b></p> <p><b>E9.26.1.</b> Identify the priorities that need to be dealt with when treating a neurodynamic disorder according to:</p> <ul style="list-style-type: none"> <li>- restrictions on neural gliding.</li> <li>- excessive compression.</li> <li>- adhesions.</li> <li>- adverse neural tension.</li> </ul>

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	<p><b>E9.27.</b> Enumerate the different types of material and apparatus to be used in a physiotherapy treatment, using the specific muscular chain method, neurodynamics and manual osteopathic therapies applied in the treatment of impairments of the locomotor system.</p> <p><b>Specific objectives:</b>  <b>E9.27.1.</b> Choose either a tuning fork or a reflex hammer to assess neurodynamic impairments.</p>
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### Transversal competences

<b>Competence</b> T5. Problem solving.	
Learning outcomes	<p><b>Specific objectives:</b>  <b>T5.1.</b> Identify the type of neurodynamic impairment by carrying out the patient's anamnesis and functional assessment.  <b>T5.2.</b> Choose the best technique to treat different neurodynamic impairments.</p>

<b>Competence</b> T7. Team work.	
Learning outcomes	<p><b>Specific objectives:</b>  <b>T7.1.</b> Assess the attitude of team members with an assessment survey.  <b>T7.2.</b> Conform to the group norms.  <b>T7.3.</b> Carry out the work assigned within the group meeting the deadlines.</p>

<b>Competence</b> T9. Develop critical thinking.	
Learning outcomes	<p><b>Specific objectives:</b>  <b>T9.1.</b> Write the resolution to a proposed clinical case.  <b>T9.2.</b> Make a presentation of the resolution to a proposed clinical case.  <b>T9.2.</b> Argue the choice of treatment for different neurodynamic impairments.  <b>T9.4.</b> Compare the student's knowledge to the knowledge presented in the subject.</p>

### Generic competences

<b>Competence</b> G1. Develop critical thinking and reasoning and know how to effectively express it both in the student's own languages and in a third language.	
Learning outcomes	<p><b>Specific objectives:</b>  <b>G1.1.</b> Write the resolution to a proposed clinical case.  <b>G1.2.</b> Make a presentation of the resolution to a proposed clinical case.  <b>G1.3.</b> Argue the choice of treatment for different neurodynamic impairments.  <b>G1.4.</b> Compare the student's knowledge to the knowledge presented in the subject.</p>

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<b>Competence</b>	<b>G2.</b> Develop strategies of autonomous learning.
Learning outcomes	This is a competence that is developed by working competence “T5. Problem solving”, “T7. Team work” and “T9. Develop critical thinking”.

## CONTENTS

1. Concept of clinical neurodynamics.
2. Functional anatomy of the nervous system.
3. Biomechanics of the nervous system.
4. Relationship between the mechanics and physiology of the nervous system.
5. Applied pathophysiology of the nervous system.
6. Main indications and contraindications of neurodynamic techniques.
7. Assessment.
8. Treatment.

## TEACHING METHOD AND ACTIVITIES

### DIRECTED ACTIVITIES

- **Theoretical lessons** that will provide the student with the basics of neurodynamics. The lessons will offer visual and computer-based support.

Estimated time: 20 hours.

- **Practical lessons** where the teacher will present, with the help of a model or with audiovisual support, different assessment and treatment techniques.

Estimated time: 9 hours.

- **Presentation and resolution of clinical cases.** Different clinical cases will be presented for which the student will have to suggest an appropriate treatment.

Estimated time: 7.5 hours.

### SUPERVISED ACTIVITIES

- **Practical Activity**, under the teacher’s supervision, to apply the different techniques presented.

Estimated time: 15 hours.

- **Group work** where the students will have to discuss and solve some clinical cases presented by the teacher.

Estimated time: 7.5 hours.

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### AUTONOMOUS ACTIVITIES

- **Information search and management** in small groups. The teacher will present some clinical cases and the students will have to find the appropriate bibliography to write a paper.

Estimated time: 15 hours.

- **Paper writing.** The students will work in small groups and will have to find appropriate bibliography, write a paper and prepare an oral presentation.

Estimated time: 22.5 hours.

- **Autonomous work** of individual study to prepare exams, organise notes/material, tutorials: individually or in groups.

Estimated time: 51.25 hours.

ACTIVITY TYPE	ACTIVITY	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Directed activities	Theoretical lessons	E1, E3, E5, E7, E8, E9	20
	Practical lessons	E3, E7, E8	9
	Presentation and resolution of clinical cases	E3, E5, E7, E8, E9, T5, T9, G1, G2	7.5
Supervised activities	Practical activity	E3, E5, E7, E8	15
	Group work	E3, E5, E7, E8, E9, T7, T9, G1	7.5
Autonomous activities	Information search and management	E1, E3, E5, E7, E8	15
	Paper writing	E1, E3, E5, E7, E8, E9, T5, T7, T9, G1, G2	22.5
	Autonomous work	E1, E3, E5, E7, E8, E9	51.25
<b>TOTAL NUMBER OF HOURS</b>			<b>147.75</b>



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## ASSESSMENT METHOD

The assessment method will include:

- The knowledge acquired along the course will be assessed through written tests, which will amount to 35% of the final mark.
- Assessment of the manual skills necessary to apply a specific technique and of adequacy of the technique/manoeuvre used in a given situation, through oral practical tests that account for 45% of the final mark.
- The written papers presented amount to 15% of the final mark.
- Group work to solve some clinical cases accounts for 5% of the final mark.

In order to pass the course, the following conditions have to be met:

- Pass each section and part of the unit with a minimum mark of 5.
- Attendance at 100% of practical classes (justified absences will allow the student to miss up to 20% of all the practical classes).
- Get a minimum final mark of 5.

Rules concerning internal practical lessons:

Please, check the school's Rules of Internal Practical lessons.

Final evaluation period: from 01/12/2016 to 13/01/2017.

Resit examination period: from 19/12/2016 to 18/01/2017.

Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).

A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.

ASSESSED ACTIVITIES	PERCENTAGE FINAL MARK	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Written tests	35 %	E1, E3, E5, E7, E8, E9	2
Oral practical tests	45 %	E3, E5, E7, E8	0.25
Papers	15 %	E1, E3, E5, E7, E8, E9, T5, T7, T9, G1, G2	---
Group work	5 %	E3, E5, E7, E8, E9, T7, T9, G1	---
<b>TOTAL NUMBER OF HOURS</b>			<b>2.25</b>

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## BIBLIOGRAPHY AND WEB PAGES / BASIC REQUIRED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Shacklock M.	2007	Neurodinámica clínica	1	Madrid	Elsevier
Butler D.	2009	Movilizació del sistema nervios	2	Badalona	Paidotribo

## BIBLIOGRAPHY AND WEB PAGES / BASIC RECOMMENDED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Butler D.	2008	The neurodynamic techniques	2	Adelaida	Noigroup Publications
Butler D.	2006	The sensitive nervous system	2	Adelaida	Noigroup Publications
Breig A.	2010	Biomecánica del sistema nervioso	1	Zaragoza	NDS-España
Marko M.	2001	Tunnel syndromes	3	New York	CRC Press
Fuller G	2011	Exploració neurológica fácil	4	Barcelona	Elsevier
Barral J.P.	2004	Manipulations des nerfs périphériques	1	Paris	Elsevier
De Laere J.	2011	Le syndrome neurogène douloureux	1	Paris	Elsevier

## PLANNING OF THE COURSE UNIT

Available on the virtual campus for all those students enrolled in this course unit.

**DISSECTION CLASSES WILL TAKE PLACE ON SATURDAYS.**

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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>OSTEOPATHIC MANUAL THERAPY</b>		
Code	<b>200584</b>	Academic year	<b>2016-2017</b>
ECTS	<b>6</b>	Type of course unit	<b>Optional</b>
Year	<b>4</b>	Term	<b>1</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit.		
Language of instruction	<b>CATALAN/SPANISH</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Mr RICARD TUTUSAUS</b>
e-mail	<a href="mailto:ricard.tutusaus@eug.es">ricard.tutusaus@eug.es</a>
Office hours	<b>To be agreed on</b>

- Team members

Name of lecturer	<b>Mr FRANCESC ESCARMIS COSTA</b>
e-mail	<a href="mailto:francesc.escarmis@eug.es">francesc.escarmis@eug.es</a>
Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Mr CARLES SANTAPAU SALVADOR</b>
e-mail	<a href="mailto:Carlos.santapau@eug.es">Carlos.santapau@eug.es</a>
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Name of lecturer	<b>Mr ALFONSO CÁNOVAS LOPEZ</b>
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Name of lecturer	<b>Ms BEGOÑA CAPILLA</b>
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Office hours	<b>To be agreed on</b>

## ADMISSION REQUIREMENTS

- There are no official admission requirements but it is advisable to have done and passed "Physiotherapy in clinical specialties in the locomotor system – IV" (third year, second term).

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## THE COURSE UNIT WITHIN THE CURRICULUM

- Course contents: Deeper knowledge of physiotherapy of the locomotor system.
- This course aims to offer a foundation in the basics of osteopathy and basic osteopathic treatments.
- Knowing the techniques and methods used in osteopathic treatments is fundamental in order to give a more holistic, comprehensive perspective to the degree and the profession.

## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

<b>Competence</b>	<b>E1.</b> Demonstrate knowledge of the morphology, physiology, pathology, and conduct of both healthy and ill people in their natural and social environment.
Learning outcomes	<p><b>E1.23.</b> Describe the physiopathological mechanisms of any impairment affecting muscular chains, any movement of the nervous system itself or surrounding structures, and joints from an osteopathic perspective.</p> <p><b>Specific objectives:</b></p> <p><b>E1.23.1.</b> Explain the basic principles of different osteopathic lesions affecting the spine and body joints.</p> <p><b>E1.23.2.</b> Relate altered movement patterns to muscular and articular impairments.</p> <p><b>E1.23.3.</b> Relate visceral impairments to impairments of the musculoskeletal system.</p>

<b>Competence</b>	<b>E3.</b> Demonstrate knowledge of the physiotherapy methods, procedures, and actions that lead to clinical therapeutics.
Learning outcomes	<p><b>E3.19.</b> Apply the different methods and techniques used in the assessment and treatment of muscular chains, in the assessment and treatment of movement of the nervous system through neurodynamic techniques, and in the assessment and treatment of joints through manual osteopathic therapies.</p> <p><b>Specific objectives:</b></p> <p><b>E3.19.1.</b> Explain the basic principles of structural techniques.</p> <p><b>E3.19.2.</b> Apply functional and myotensive techniques for the treatment of the back.</p> <p><b>E3.19.3.</b> Apply basic visceral mobilization manoeuvres.</p> <p><b>E3.19.4.</b> Apply motor control exercises .</p> <p><b>E3.19.5.</b> Describe the modifications to the tissues when applying different osteopathic techniques.</p>

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<b>Competence</b>	<b>E5.</b> Integrate, through clinical experience, ethical and professional values, the knowledge, skills, and attitudes characteristic in physiotherapy to solve specific clinical cases in hospital, out-of-hospital, primary and community health care environments.
Learning outcomes	<b>E5.11.</b> Apply the knowledge and competences acquired in the course to manage clinical cases of impairments of the locomotor system susceptible of physiotherapy treatment using the muscular chain method, neurodynamics and manual osteopathic therapies. <b>Specific objectives:</b> <b>E5.11.1.</b> Apply the concepts and techniques used in osteopathy to solve clinical cases.

<b>Competence</b>	<b>E7.</b> Assess the patient's functional state, taking into account physical, psychological, and social aspects.
Learning outcomes	<b>E7.19.</b> Describe and apply physiotherapy assessment procedures to treat any impairment of muscular chains, any movement of the nervous system itself or surrounding structures, and joints from an osteopathic perspective to determine the degree of impairment of the muscular system and its possible functional consequences. <b>Specific objectives:</b> <b>E7.19.1.</b> Identify the different mechanical lesions affecting the spine. <b>E7.19.2.</b> Localise and interpret the cause of osteopathic lesions. <b>E7.19.3.</b> Localise and palpate the different organs inside the abdominal cavity.

<b>Competence</b>	<b>E8.</b> Determine the physiotherapy diagnosis according to established norms and using internationally recognised validation instruments.
Learning outcomes	<b>E8.10.</b> Formulate a physiotherapy diagnostic hypothesis for some clinical cases using the specific muscular chain method, neurodynamics and manual osteopathic therapies applied in the treatment of impairments of the locomotor system. <b>Specific objectives:</b> <b>E8.10.1.</b> Formulate a physiotherapy diagnostic hypothesis based on the different examination techniques within the field of osteopathy.

<b>Competence</b>	<b>E9.</b> Develop a physiotherapy intervention plan according to criteria of adequacy, validity, and efficiency.
Learning outcomes	<b>E9.25.</b> Define the general and specific objectives to administer a physiotherapy treatment using the specific muscular chain method, neurodynamics and manual osteopathic therapies applied in the treatment of impairments of the locomotor system. <b>Specific objectives:</b> <b>E9.25.1.</b> Identify the treatment goals based on the basic concepts and principles of osteopathy using a physiotherapy diagnostic hypothesis.  <b>E9.26.</b> Describe the circumstances that determine intervention priorities in a physiotherapy treatment using the specific muscular chain method, neurodynamics and manual osteopathic therapies applied in the treatment of impairments of the locomotor system. <b>Specific objectives:</b>

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	<b>E9.26.1.</b> Distinguish between primary and secondary lesions in order to establish the correct timeline in treatments.
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### Transversal competences

<b>Competence</b>	<b>T5.</b> Problem solving.
Learning outcomes	<b>Specific objectives:</b> <b>T5.1.</b> Identify the different types of osteopathic lesions by taking the history and carrying out a functional assessment of the patient. <b>T5.2.</b> Choose the best technique to treat different functional impairments related to osteopathic lesions.

### Generic competences

<b>Competence</b>	<b>G2.</b> Develop strategies of autonomous learning.
Learning outcomes	This is a competence that is developed by working competence “T5. Problem solving”.

## CONTENTS

1. History and principles of osteopathy.
2. Osteopathy and osteopathic lesions.
3. Osteopathic conceptual models.
4. Introduction to different diagnostic and treatment models.
5. The concept of mechanical lesion.
6. Osteopathic treatment techniques of the spine.
7. Fascial techniques.
8. Autonomic nervous system.
9. Metabolism and detoxification.
10. Neuro-immune-endocrine system and stress responses.
11. “The Second Brain”: Influence on the functioning of the visceral system.
12. Altered motor patterns.
13. Reeducating altered motor patterns.

## TEACHING METHOD AND ACTIVITIES

### DIRECTED ACTIVITIES

- **Theoretical lessons** that will provide the student with the basics of osteopathy. The lessons will offer visual and computer-based support.

Estimated time: 21.5 hours.

- **Practical lessons** where the teacher will present, with the help of a model or with audiovisual support, different assessment and treatment techniques. The lessons will offer visual and computer-based support.

Estimated time: 22.5 hours.

- **Presentation and resolution of clinical cases.** Different clinical cases will be presented for which the student will have to suggest and appropriate treatment.

Estimated time: 7.5 hours.

### SUPERVISED ACTIVITIES

- **Practical** activity, under the teacher's supervision, to apply the different techniques presented.

Estimated time: 15 hours.

- **Group work.** The students will work in small groups and will have to solve some clinical cases presented by the teacher

Estimated time: 7.5 hours.

### AUTONOMOUS ACTIVITIES

- **Information search and management** in small groups. The teacher will present some clinical cases and the students will have to find the appropriate bibliography to write a paper.

Estimated time: 15 hours.

- **Paper writing.** The students will work in small groups, they will have to find appropriate bibliography and write a paper.

Estimated time: 22.5 hours.

- **Autonomous work** of individual study to prepare exams, organise notes/material, tutorials: individually or in groups.

- Estimated time: 36.25 hours.

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ACTIVITY TYPE	ACTIVITY	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Directed activities	Theoretical lessons	E1, E3, E5, E7, E8, E9	21.5
	Practical lessons	E3, E7, E8	22.5
	Presentations and resolution of clinical cases	E3, E5, E7, E8, E9, T5, G2	7.5
Supervised activities	Practical activities	E3, E5, E7, E8	15
	Group work	E3, E5, E7, E8, E9	7.5
Autonomous activities	Information search and management	E1, E3, E5, E7, E8	15
	Paper writing	E1, E3, E5, E7, E8, E9, T5, G2	22.5
	Autonomous work	E1, E3, E5, E7, E8, E9	36.35
<b>TOTAL NUMBER OF HOURS</b>			<b>147.75</b>

## ASSESSMENT METHOD

The assessment method will include:

- The knowledge acquired along the course will be assessed through written tests, which will amount to 35% of the final mark.
- Assessment of the manual skills necessary to apply a specific technique and of adequacy of the technique/manoeuvre used in a given situation, through oral practical tests that account for 45% of the final mark.
- The written papers presented amount to 15% of the final mark.
- Group work to solve some clinical cases accounts for 5% of the final mark.

In order to pass the course, the following conditions have to be met:

- Pass each section and part of the unit with a minimum mark of 5.
- Attendance at 100% of practical classes (justified absences will allow the student to miss up to 20% of all the practical classes).
- Get a minimum final mark of 5.

Rules concerning internal practical lessons:

Please, check the school's Rules of Internal Practical lessons.

Final evaluation period: from 01/12/2016 to 13/01/2017.

Resit examination period: from 19/12/2016 to 18/01/2017.

Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).

A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.



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ASSESSED ACTIVITIES	PERCENTAGE FINAL MARK	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Written tests	35%	E1, E3, E5, E7, E8, E9	2
Oral practical tests	45%	E3, E5, E7, E8	0.25
Papers	15%	E1, E3, E5, E7, E8, E9, T5, G2	---
Group work	5%	E3, E5, E7, E8, E9	---
<b>TOTAL NUMBER OF HOURS</b>			<b>2.25</b>

## BIBLIOGRAPHY AND WEB PAGES / BASIC READINGS


Books					
Author/s	Year	Title	Edition	City	Publisher
Hegben Eric	2005	Osteopatía visceral, fundamentos y técnicas	2	Madrid	Mc Gaw Hill
Jon Parsons Nicholas Marcer	2007	Osteopatía: modelos de diagnóstico, tratamiento y práctica		Barcelona	Elsevier Churchill livingstone
Sahrmann S.	2006	Diagnóstico y tratamiento de las alteraciones del movimiento		Barcelona	Paidotribo
Sahrmann S.	2011	Movement system impairment syndromes of the extremities, cervical and thoracic spines			Mosby

## BIBLIOGRAPHY AND WEB PAGES / RECOMMENDED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Dereck Field	2004	Anatomía, palpación y localización superficial		Barcelona	Paidotribo
Sapalosky Robert	2008	¿Porqué las cebras no tienen úlcera?	3	Madrid	Alianza editorial
Stone Caroline	2009	Visceral and obstetric osteopathy		Philadelphia	Elsevier
Matveikova Irina	2011	Inteligencia digestiva		Madrid	Ed. La esfera de los libros
Francisco Fajardo Ruiz	2008	Cuadernos de osteopatía		Madrid	Dilema
John E. Upledger, Jon D. Vredevoogd	2007	Terapia cráneo sacra I 2ª edición		Barcelona	Paidotribo
John E. Upledger	2004	Terapia cráneo sacra II "más allá de la duramadre"		Barcelona	Paidotribo
Philipp Richter, Eric Hebgen	2010	Puntos Gatillo y cadenas musculares en osteopatía y terapia manual		Barcelona	Paidotribo
Torsten Liem	2002	La osteopatía cráneo sacra		Barcelona	Paidotribo
Jean Pierre Barral	2009	Manipulaciones viscerales 2			Elsevier Masson
Jean Pierre Barral	2009	Manipulaciones viscerales 1			Elsevier Masson
Jean Pierre Barral	2005	Comprender los mensajes de nuestro cuerpo		Barcelona	Urbano
Jean Pierre Barral	2009	Manipulaciones de los nervios craneales		Barcelona	Elsevier Masson
Francisco Colell Mitjans	2003	Osteopatía visceral		Barcelona	Morales I Torres editors
Rodrigo C. Miralles Marrero	2000	Biomecánica clínica del aparato locomotor		Barcelona	Masson
Antonio Jurado. Ivan Medina	2002	Manual de pruebas diagnósticas		Barcelona	Paidotribo
Gilles de Coux Philippe Curtil	2009	Tratado práctico de osteopatía estructural		Barcelona	Paidotribo
Leon Chaitow Sandy Fritz	2008	Lumbalgia y dolor pélvico		Barcelona	Elsevier Churchill livingstone
Serge Tixa Bernard Ebenegger	2005	Atlas de técnicas articulares osteopáticas de las extremidades		Barcelona	Masson
Donald A. Neumann	2007	Fundamentos de Rehabilitación física. Cinesiología del sistema musculoesquelético		Barcelona	Paidotribo

## PLANNING OF THE COURSE UNIT

Available on the virtual campus for all those students enrolled in this course unit.

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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>NEUROLOGICAL PATHOPHYSIOLOGY</b>		
Code	<b>200575</b>	Academic year	<b>2016-2017</b>
ECTS	<b>4</b>	Type of course unit	<b>Optional</b>
Year	<b>4</b>	Term	<b>1</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit.		
Language of instruction	<b>SPANISH</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Ms NEUS CIURANA MAYNEGRE</b>
e-mail	<a href="mailto:marianeus.ciurana@eug.es">marianeus.ciurana@eug.es</a>
Office hours	<b>To be agreed on</b>

- Team members

Name of lecturer	<b>Dr JOSÉ ÁLVAREZ SABÍN</b>
e-mail	<a href="mailto:josalvar@vhebron.net">josalvar@vhebron.net</a>
Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Mr XAVIER SALAS PUIG</b>
e-mail	<a href="mailto:xavier.salasp@eug.es">xavier.salasp@eug.es</a>
Office hours	<b>To be agreed on</b>

## ADMISSION REQUIREMENTS

- There are no official admission requirements but it is advisable to have done and passed “Physiotherapy in neurology II”, (third year, first term).

## THE COURSE UNIT WITHIN THE CURRICULUM

- Course contents: Deeper knowledge of physiotherapy in neurology.
- This course aims to offer deeper knowledge of the pathophysiological mechanisms involved in lesions of the central nervous system, both in focal pathology and neurodegeneration. It also aims to offer the necessary tools to measure any alteration in structure and function, activity

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<p>limitations, and participation restrictions secondary to these.</p> <ul style="list-style-type: none"> <li>The knowledge of the pathophysiology of these neurological processes will facilitate the physiotherapy diagnosis and the planning, application and assessment of the physiotherapy treatment, which is a basic skill to work as a physiotherapist within the field of neurology.</li> </ul>
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## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

<b>Competence</b>	<b>E1.</b> Demonstrate knowledge of the morphology, physiology, pathology, and conduct of both healthy and ill people in their natural and social environment.
Learning outcomes	<p><b>E1.24.</b> Explain the pathophysiology of neurological conditions in detail, identifying the different symptoms and signs along the development process.</p> <p><b>Specific objectives:</b></p> <p><b>E1.24.1.</b> Describe the different types of stroke, their pathophysiology and epidemiology.</p> <p><b>E1.24.2.</b> Describe the different levels of traumatic head injury, their pathophysiology and prognosis.</p> <p><b>E1.24.3.</b> Enumerate the different types of brain tumours.</p> <p><b>E1.24.4.</b> Describe the pathophysiological mechanisms underlying epilepsy.</p> <p><b>E1.24.5.</b> Describe the different types of cephalalgia.</p> <p><b>E1.24.6.</b> Enumerate the different assessment scales used in neurology.</p> <p><b>E1.24.7.</b> Describe the different types of sleep disorders and maintenance of wakefulness.</p> <p><b>E1.24.8.</b> Enumerate the different research methods used in neurorehabilitation.</p> <p><b>E1.25.</b> Enumerate the medico-surgical treatments, particularly those aspects related to physiotherapy and orthopaedics, for neurological conditions.</p> <p><b>Specific objectives:</b></p> <p><b>E1.25.1.</b> Enumerate the treatments for stroke.</p> <p><b>E1.25.2.</b> Enumerate the treatments for traumatic head injury.</p> <p><b>E1.25.3.</b> Enumerate the treatments for brain tumours.</p> <p><b>E1.25.4.</b> Enumerate the treatments for epilepsy.</p> <p><b>E1.25.5.</b> Enumerate the treatments to relieve cephalalgia.</p>

<b>Competence</b>	<b>E7.</b> Assess the patient's functional state, taking into account physical, psychological, and social aspects.
Learning outcomes	<p><b>E7.20.</b> Describe and apply advanced physiotherapy assessment procedures in order to determine the level of impairment of the nervous system and its possible functional consequences.</p> <p><b>Specific objectives:</b></p> <p><b>E7.20.1.</b> Enumerate the different neuroimaging techniques used in neurorehabilitation.</p>

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**E7.20.2.** Relate different pathologies to their neuroimages.

## CONTENTS

1. Epilepsy.
2. Sleep disorders and maintenance of wakefulness.
3. Cephalalgia.
4. Neuroimaging and its application in neurorehabilitation.
5. Cerebrovascular pathology.
6. Intracranial tumours.
7. Traumatic head injury.
8. Research in neurology for physiotherapists.

## TEACHING METHOD AND ACTIVITIES

**DIRECTED ACTIVITIES**

- **ICT-based theoretical lessons** that will provide the student with the basic, necessary theoretical knowledge to get a better understanding of the pathophysiology of neurological disorders.

Estimated time: 30 hours.

**AUTONOMOUS ACTIVITIES**


- **Information search and management** to complement the theoretical lessons taught in the course and assessed through written tests.

Estimated time: 20 hours.

- **Autonomous work** of individual study to prepare exams, organise notes/material, tutorials: individually or in groups.

Estimated time: 48 hours.

ACTIVITY TYPE	ACTIVITY	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Directed activities	Theoretical lessons	E1, E7	30
Autonomous	Information search	E1, E7	20

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activities	and management		
	Autonomous work	E1, E7	48
<b>TOTAL NUMBER OF HOURS</b>			<b>98</b>

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## ASSESSMENT METHOD

The assessment method will include:

- The knowledge acquired along the course will be assessed through written tests, which will amount to 100% of the final mark.

In order to pass the course, the following conditions have to be met:

- Pass each section and part of the unit with a minimum mark of 5.
- Get a minimum final mark of 5.

Final evaluation period: from 01/12/2016 to 13/01/2017.

Resit examination period: from 19/12/2016 to 18/01/2017.

Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).

A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.

ASSESSED ACTIVITIES	PERCENTAGE FINAL MARK	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Written tests	100 %	E1, E7	2
<b>TOTAL NUMBER OF HOURS</b>			<b>2</b>

## BIBLIOGRAPHY AND WEB PAGES / BASIC REQUIRED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Codina Puiggrós, A.	1994	Tratado de neurología.		Madrid.	Editorial Libro del Año
Pascual Gómez, J.	2008	Tratado de Neurología Clínica			Ars Médica
Zarranz, J. J.	2008	Neurología.		Madrid	Elsevier España.

## BIBLIOGRAPHY AND WEBPAGES / BASIC RECOMMENDED READINGS


Books					
Author/s	Year	Title	Edition	City	Publisher
Adams, R. D., Victor, M.	2011	Principios de neurología.		Mexico	Ed. McGraw-Hill Interamericana
Harrison.	2010	Principios de medicina interna.			McGraw-Hill

## PLANNING OF THE COURSE UNIT

Available on the virtual campus for all those students enrolled in this course unit.

**DISSECTION CLASSES WILL TAKE PLACE ON SATURDAYS.**



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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>NEUROLOGICAL ASSESSMENT AND PHYSIOTHERAPY DIAGNOSIS</b>		
Code	<b>200591</b>	Academic year	<b>2016-2017</b>
ECTS	<b>4</b>	Type of course unit	<b>Optional</b>
Year	<b>4</b>	Term	<b>1</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit		
Language of instruction	<b>CATALAN</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Ms MARTA FERNÁNDEZ LOBERA</b>
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- Team members

Name of lecturer	<b>Ms ÈLIA GONZALEZ</b>
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Office hours	<b>To be agreed on</b>

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Office hours	<b>To be agreed on</b>

## ADMISSION REQUIREMENTS

- There are no official admission requirements but it is advisable to have done and passed "Physiotherapy in neurology II", (third year, first term).

## THE COURSE UNIT WITHIN THE CURRICULUM

- Course contents: Deeper knowledge of physiotherapy in neurology.
- This course aims to offer deeper knowledge of the physiotherapy assessment and diagnosis in advanced neurology by means of the knowledge, consolidation and learning of standardized physiotherapy scales, as well as of the most objective and replicable assessment techniques.
- This course aims to familiarise the student with the assessments carried out by other

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<p>members of the neurorehabilitation team (neuropsychologist, speech therapist, and occupational therapist) with the aim of performing an efficient multidisciplinary task.</p> <ul style="list-style-type: none"> <li>The knowledge of the contents of this unit is essential for those who want to work in the field of neurological physiotherapy. The unit will help them control the patient's advances and plan short-term and long-term treatment goals.</li> </ul>
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## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

<b>Competence</b>	E5. Integrate, through clinical experience, ethical and professional values, the knowledge, skills, and attitudes characteristic in physiotherapy to solve specific clinical cases in hospital, out-of-hospital, primary and community health care environments.
Learning outcomes	<p><b>E5.12.</b> Apply the knowledge and competences acquired in the course to manage complex clinical cases in the field of neurology.</p> <p><b>Specific objectives:</b></p> <p><b>E5.12.1.</b> Identify different neurological pathologies taking into account the assessment of abnormal muscle tone, sensitivity, and motor control in the context of real clinical cases presented in class.</p> <p><b>E5.12.2.</b> Identify the type of muscle tone in a real patient.</p> <p><b>E5.12.3.</b> Distinguish abnormalities in muscle tone from structural problems caused by conjunctive tissue alterations in the context of real clinical cases presented in class.</p> <p><b>E5.12.4.</b> Distinguish abnormalities in muscle tone: spastic hypertonia and protective hypertonicity in the context of a real clinical case presented in class.</p> <p><b>E5.12.5.</b> Distinguish alterations in sensitivity from alterations in attention in the context of a real clinical case presented in class.</p> <p><b>E5.12.6.</b> Detect any alterations in sensitivity in a patient in the context of a real clinical case presented in class.</p> <p><b>E5.12.7.</b> Describe gait alterations in the real clinical cases presented in class.</p> <p><b>E5.12.8.</b> Detect any deficits in motor control and balance in different patients in the context of real clinical cases presented in class.</p>

<b>Competence</b>	E7. Assess the patient's functional state, taking into account physical, psychological, and social aspects.
Learning outcomes	<p><b>E7.20.</b> Describe and apply advanced physiotherapy assessment procedures in order to determine the level of impairment of the nervous system and its possible functional consequences.</p> <p><b>Specific objectives:</b></p> <p><b>E7.20.1.</b> Name and describe the different assessment scales for cognitive abilities.</p> <p><b>E7.20.2.</b> Identify the most common cognitive impairments in neurological pathologies.</p>

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	<p><b>E7.20.3.</b> Name and describe different language, speech and swallowing disorders.</p> <p><b>E7.20.4.</b> Use different neurology assessment scales.</p> <p><b>E7.20.5.</b> Assess normal and pathological gait in acquired brain injury.</p> <p><b>E7.20.6.</b> Apply objective assessment methods for posture and motor dysfunctions.</p>
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<b>Competence</b>	<b>E8.</b> Determine the physiotherapy diagnosis according to established norms and using internationally recognised validation instruments.
Learning outcomes	<p><b>E8.11.</b> Formulate a physiotherapy diagnostic hypothesis based on some complex clinical cases in the field of neurological pathologies</p> <p><b>Specific objectives:</b></p> <p><b>E8.11.1.</b> Formulate a physiotherapy diagnostic hypothesis based on the assessment and diagnostic tests done in a clinical case presented in class.</p>

### Transversal competences

<b>Competence</b>	<b>T7.</b> Team work.
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>T7.1.</b> Develop communicative abilities among the members of a medical team to facilitate the discussion of clinical cases in the context of clinical sessions.</p> <p><b>T7.2.</b> Develop the ability to transmit information to the members of the multidisciplinary team.</p>

<b>Competence</b>	<b>T9.</b> Develop critical thinking.
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>T9.1.</b> Argue the choice of physiotherapy assessment scales according to the patient's problem.</p> <p><b>T9.2.</b> Debate the suitability of the different assessment tools chosen in different scientific papers presented by the teachers.</p>

### Generic competences

<b>Competence</b>	<b>G1.</b> Develop critical thinking and reasoning and know how to effectively express it both in the student's own languages and in a third language.
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>G1.1.</b> Argue the choice of physiotherapy assessment scales according to the patient's problem.</p> <p><b>G1.2.</b> Debate the suitability of the different assessment tools chosen in different scientific papers presented by the teachers.</p>

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<b>Competence</b>	<b>G2.</b> Develop strategies of autonomous learning.
Learning outcomes	This is a competence that is developed by working competence “T7. Team work” and “T9. Develop critical thinking”.

## CONTENTS

1. Assessment scales used in advanced neurological physiotherapy.
2. Assessment methods of normal and pathological gait. Biomechanical assessment.
3. Objective assessment methods for posture and motor dysfunctions.
4. Neuropsychological assessment.
5. Assessment of real clinical cases through the teachers’ tutoring.

## TEACHING METHOD AND ACTIVITIES

### DIRECTED ACTIVITIES

- **Theoretical lessons** that will provide the student with the basics of different advanced assessment methods used in neurological physiotherapy. The lessons will offer visual and computer-based support.

Estimated time: 19 hours.

- **Practical lessons** where the teacher will present, with the help of a model or with audiovisual support, different assessment and treatment techniques.

Estimated time: 3 hours.

- **Presentation and resolution of clinical cases.** Different real clinical cases will be presented for which the student will have to suggest the most appropriate assessment techniques that will be applied under the teacher's supervision.

Estimated time: 16 hours.

### SUPERVISED ACTIVITIES

- **Practical activity**, under the teacher's supervision, to apply the different assessment techniques on real patients.

Estimated time: 6 hours.

- **Group work:** assess a patient presenting with a neurological problem, study his/her medical history, and establish a diagnostic hypothesis based on observed deficits, activity limitations, and participation restrictions.

Estimated time: 15 hours.

### AUTONOMOUS ACTIVITIES

- **Information search and management:** analysis of scientific articles on different assessment scales and methods.

Estimated time: 10 hours.

- **Autonomous work** of individual study to prepare exams, organise notes/material, tutorials: individually or in groups.

Estimated time: 28.25 hours.

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ACTIVITY TYPE	ACTIVITY	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Directed activities	Theoretical lessons	E5, E7, E8	19
	Practical lessons	E5, E7, E8	3
	Presentation and resolution of clinical cases	E5, E7, E8, T9, G1, G2	16
Supervised activities	Practical activity	E5, E7, E8	6
	Group work	E5, E7, E8, T7, T9, G1	15
Autonomous activities	Information search and management	E5, E7, E8	10
	Autonomous work	E5, E7, E8	28.25
<b>TOTAL NUMBER OF HOURS</b>			<b>97.25</b>

## ASSESSMENT METHOD

The assessment method will include:

- The theoretical knowledge acquired along the course will be assessed through written tests, which amount to 30% of the final mark.
- Assessment of the manual skills necessary to apply a specific technique and of adequacy of the technique/manoeuvre used in a given situation, through oral practical tests, account for 40% of the final mark.
- Analysis of some scientific articles presented by the teachers account for 10% of the final mark.
- Group work to solve some clinical cases, which amounts to 20% of the final mark.

In order to pass the course, the following conditions have to be met:

- Pass each section and part of the unit with a minimum mark of 5.
- Attendance at 100% of practical classes (justified absences will allow the student to miss up to 20% of all the practical classes).
- Get a minimum final mark of 5.

Rules concerning internal practical lessons:

Please, check the school's Rules of Internal Practical lessons.

Final evaluation period: from 01/12/2016 to 13/01/2017.

Resit examination period: from 19/12/2016 to 18/01/2017.

Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).

A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.

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ASSESSED ACTIVITIES	PERCENTAGE FINAL MARK	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Written tests	30%	E5, E7, E8	2
Oral practical tests	40%	E5, E7, E8	0.25
Analysis of scientific articles	10%	E5, E7, E8	0.25
Group work	20%	E5, E7, E8, T7, T9, G1	0.25
<b>TOTAL NUMBER OF HOURS</b>			<b>2.75</b>

## BIBLIOGRAPHY AND WEB PAGES / BASIC REQUIRED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Wade DT	1992	Measurement in Neurological rehabilitation		Oxford	Oxford, Medical Publication
Cano de la Cuerda, Collado Vázquez.	2012	Neurorehabilitación		Madrid	Panamericana
Purves D	2001	Invitación a la neurociencia	1ª	Madrid	Panamericana
Butler, D	2002	Movilización del sistema nervioso		Barcelona	Paidotribo
Kandel E, Schuwartz J, Jessell T	2001	Principios de neurociencia		Madrid	McGraw-Hill Interamericana
Kandel E, Schwartz JH, Jessell TM		Neurociencia y Conducta	2008	Madrid	Prentice Hall

## PLANNING OF THE COURSE UNIT

Available on the virtual campus for all those students enrolled in this course unit.

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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>NEUROLOGICAL PHYSIOTHERAPY</b>		
Code	<b>200586</b>	Academic year	<b>2016-2017</b>
ECTS	<b>10</b>	Type of course unit	<b>Optional</b>
Year	<b>4</b>	Term	<b>1</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit		
Language of instruction	<b>CATALAN</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Ms SILVIA PUIG</b>
e-mail	<a href="mailto:silvia.puig@eug.es">silvia.puig@eug.es</a>
Office hours	<b>To be agreed on</b>

- Team members

Name of lecturer	<b>Ms ÈLIA GONZÀLEZ ROCH</b>
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Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Ms MARTA FERNÁNDEZ LOBERA</b>
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Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Mr VICENS PUNÇOLA</b>
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Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Dr ESTHER MUR GIMENO</b>
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Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Ms MARISA FRONTERA AVELLANA</b>
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Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Ms TERESA XIPELL PRUNÉS</b>
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Office hours	<b>To be agreed on</b>

Name of lecturer	<b>SRA. LLUÏSA PORTE CARRERA</b>
e-mail	<a href="mailto:lluïsa.porte@eug.es">lluïsa.porte@eug.es</a>



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Office hours	<b>To be agreed on</b>
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Name of lecturer	<b>SR. MARC TERRADELLAS</b>
e-mail	<a href="mailto:marc.terradelas@eug.es">marc.terradelas@eug.es</a>
Office hours	<b>To be agreed on</b>

## ADMISSION REQUIREMENTS

- There are no official admission requirements but it is advisable to have done and passed “Physiotherapy in neurology II”, (third year, first term).

## THE COURSE UNIT WITHIN THE CURRICULUM

- Course contents: Deeper knowledge of neurological physiotherapy.
- This course aims to consolidate the basics of advanced neurological physiotherapy, as well as to get a better knowledge of the complementary techniques applied in neurorehabilitation.
- Knowing and adequately applying the different techniques used in advanced neurological physiotherapy to real patients is essential to effectively train the students so that they can work within the field of neurological pathologies.

## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

<b>Competence</b>	<b>E3.</b> Demonstrate knowledge of the physiotherapy methods, procedures, and actions that lead to clinical therapeutics.
Learning outcomes	<b>E3.20.</b> Apply advanced physiotherapy methods and techniques for neurological diseases. <b>Specific objectives:</b> <b>E3.20.1.</b> Perform manoeuvres to release tension in the medullary canal. <b>E3.20.2.</b> Perform manoeuvres to liberate restrictions in the upper and lower limbs. <b>E3.20.3.</b> Perform manoeuvres to improve vascularisation in the lower limbs and decongest the abdomen. <b>E3.20.4.</b> Perform manoeuvres to improve visceral circulation. <b>E3.20.5.</b> Describe alternative treatment techniques used in neurorehabilitation. <b>E3.20.6.</b> Describe techniques that facilitate the regeneration of the peripheral nervous system.

	<p><b>E3.20.7.</b> Describe the different types of ferrules used in the treatment of disorders of the central nervous system.</p> <p><b>E3.20.8.</b> Make a positioning ferrule to prevent or reduce muscular retractions.</p> <p><b>E3.20.9.</b> Distinguish among different theories of motor control and relate them to clinical practice.</p> <p><b>E3.20.10.</b> Describe the neurophysiological bases of motor learning and relate them to clinical practice.</p> <p><b>E3.20.11.</b> Define the different mechanisms of neuroplasticity and relate them to clinical practice.</p> <p><b>E3.20.12.</b> Distinguish the different types of neuroplasticity and relate them to clinical practice.</p> <p><b>E3.20.13.</b> Recognise the different types of postural tasks and motor strategies and relate them to the neurophysiological bases of postural control.</p> <p><b>E3.20.14.</b> Recognise the existing differences between treating a neurological adult patient and a neuropaediatric patient.</p> <p><b>E3.20.15.</b> Optimise the degree of autonomy through natural ambulation in order to improve neuromotor and neuromuscular facilitation.</p> <p><b>E3.20.16</b> Describe the basic principles of basal stimulation.</p> <p><b>E3.20.17.</b> Use neurodynamic manoeuvres to treat the central and peripheral nervous system.</p>
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<b>Competence</b>	<b>E5.</b> Integrate, through clinical experience, ethical and professional values, the knowledge , skills, and attitudes characteristic in physiotherapy to solve specific clinical cases in hospital, out-of-hospital, primary and community health care environments.
Learning outcomes	<p><b>E5.12.</b> Apply the knowledge and competences acquired in the course to solve complex clinical cases in the field of neurology.</p> <p><b>Specific objectives:</b></p> <p><b>E5.12.1.</b> Apply myofascial techniques to real neurological patients under the supervision of the teacher.</p> <p><b>E5.12.2.</b> Apply neurodynamic techniques to real neurological patients under the supervision of the teacher.</p> <p><b>E5.12.3.</b> Apply techniques to facilitate postural tone to real neurological patients under the supervision of the teacher.</p> <p><b>E5.12.4.</b> Apply techniques to inhibit postural tone to real neurological patients under the supervision of the teacher.</p> <p><b>E5.12.5.</b> Apply visceral techniques to real neurological patients under the supervision of the teacher.</p> <p><b>E5.12.6.</b> Apply techniques to improve balance and postural control to real neurological patients under the supervision of the teacher.</p> <p><b>E5.12.7.</b> Apply techniques to facilitate and improve voluntary upper and lower limb movement to real neurological patients under the supervision of the teacher.</p> <p><b>E5.12.8.</b> Apply techniques to improve gait to real neurological patients under the supervision of the teacher.</p>

<b>Competence</b>	<b>E9.</b> Develop a physiotherapy intervention plan according to established norms and using internationally recognised validation instruments.
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<b>Learning outcomes</b>	<p><b>E9.28.</b> Define the general and specific goals for the administration of a treatment for neurological pathologies.</p> <p><b>Specific objectives:</b></p> <p><b>E9.28.1.</b> Establish general and specific treatment goals according to the physiotherapy assessment done to a real patient presented in class.</p> <p><b>E9.28.2.</b> Enumerate the treatment goals of hydrotherapy.</p> <p><b>E9.28.3.</b> Enumerate the treatment goals of hippotherapy.</p> <p><b>E9.29.</b> Describe the circumstances that determine the priorities in the advanced physiotherapy treatment of neurological pathologies.</p> <p><b>Specific objectives:</b></p> <p><b>E9.29.1.</b> Establish the short-term and long-term treatment goals according to the patient's personal needs and objectives in the context of real clinical cases presented in class.</p> <p><b>E9.29.2.</b> Establish the order of the different treatment activities according to the treatment goals based on the patient's assessment and personal objectives.</p> <p><b>E9.30.</b> Enumerate the different types of material and apparatus to be used in the advanced physiotherapy treatment of neurological pathologies.</p> <p><b>Specific objectives:</b></p> <p><b>E9.30.1.</b> Describe the characteristics of an adequate horse for hippotherapy.</p> <p><b>E9.30.2.</b> Describe the characteristics of adequate facilities and material for hippotherapy.</p> <p><b>E9.30.3.</b> Describe the characteristics of adequate facilities and material for hydrotherapy.</p> <p><b>E9.30.4.</b> Describe the characteristics of adequate material to make position ferrules.</p> <p><b>E9.30.5.</b> Use manual or mechanical technical aids as part of the treatment.</p> <p><b>E9.30.6.</b> Use manual or mechanical technical aids as prevention tools.</p>
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### Transversal competences

<b>Competence</b> T5. Problem solving.	
<b>Learning outcomes</b>	<p><b>Specific objectives:</b></p> <p><b>T5.1.</b> Plan the treatment of a real patient based on the data obtained in the physiotherapy assessment.</p>

<b>Competence</b> T7. Team work.	
<b>Learning outcomes</b>	<p><b>Specific objectives:</b></p> <p><b>T7.1.</b> Reach an agreement on the physiotherapy treatment methods to be used when treating a neurological patient for a limited period of time.</p> <p><b>T7.2.</b> Reach an agreement on the order of the different techniques</p>

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	of neurological physiotherapy to be used when treating a neurological patient for a limited period of time.
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<b>Competence</b>	<b>T9.</b> Develop critical thinking.
Learning outcomes	<b>Specific objectives:</b> <b>T9.2.</b> Choose the most appropriate techniques for the treatment of different clinical cases, relating and justifying any decision taken in relation to current neurophysiological and neuroscientific knowledge.

### Generic competences

<b>Competence</b>	<b>G1.</b> Develop critical thinking and reasoning and know how to effectively express it both in the student's own languages and in a third language.
Learning outcomes	<b>Objectius específics:</b> <b>G1.1</b> Choose the most appropriate techniques for the treatment of different clinical cases, relating and justifying any decision taken in relation to current neurophysiological and neuroscientific knowledge.

<b>Competence</b>	<b>G2.</b> Develop strategies of autonomous learning.
Learning outcomes	This is a competence that is developed by working competence "T5. Problem solving", "T7. Team work" and "T9. Develop critical thinking".

## CONTENTS

<ol style="list-style-type: none"> <li>1. Visceral physiotherapy techniques applied to the treatment of neurological patients.</li> <li>2. Myofascial techniques applied to the treatment of neurological patients.</li> <li>3. Complementary techniques in neurological physiotherapy.</li> <li>4. Analysis techniques and work on postural control.</li> <li>5. Neurodynamic techniques used in neurological physiotherapy.</li> <li>6. Neurophysiological basis of the treatment with neurological physiotherapy: neuroplasticity and motor learning.</li> <li>7. Regeneration of peripheral nerve lesions: treatment principles.</li> <li>8. Basic steps for making a position ferrule.</li> <li>9. Introduction to neuropaediatric physiotherapy.</li> <li>10. Neuromotor re-education and ambulation and position facilitation applied to the treatment of neurological patients.</li> <li>11. Assessment of real clinical cases through tutorials with the different teachers in the course.</li> <li>12. Treatment of real clinical cases through tutorials with the different teachers in the course.</li> </ol>
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## TEACHING METHOD AND ACTIVITIES

### DIRECTED ACTIVITIES

- **ICT-based theoretical lessons** that will provide the student with the theoretical basics of advanced treatment techniques in neurological physiotherapy

Estimated time: 20 hours.

- **Practical lessons** where the teacher will present, with the help of a model or with audiovisual support, different assessment and treatment techniques.

Estimated time: 16 hours.

- **Presentation and resolution of clinical cases.** Different real clinical cases will be presented for which the student will have to suggest a treatment that will be administered under the teacher's supervision.

Estimated time: 17.5 hours.

### SUPERVISED ACTIVITIES

- **Practical activity**, under the teacher's supervision, to apply the different techniques presented in class.

Estimated time: 34 hours.

- **Group work** to design and implement a treatment plan for a patient chosen by the students. The students will give a presentation in class.

Estimated time: 35 hours.

### AUTONOMOUS ACTIVITIES

- **Information search and management:** some research articles will be analysed.

Estimated time: 20 hours.

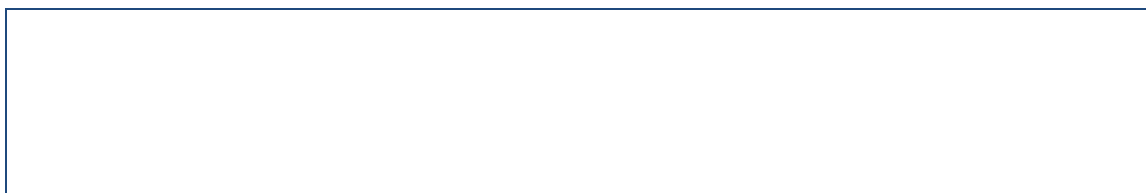
- **Write some reports** about the real clinical cases presented in class.

Estimated time: 20 hours.

- **Autonomous work** of individual study to prepare exams, organise notes/material, tutorials: individually or in groups.

Estimated time: 84.5 hours.

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ACTIVITY TYPE	ACTIVITY	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Directed activities	Theoretical lessons	E3, E5, E9	20
	Practical lessons	E3	16
	Presentations and resolution of clinical cases	E3, E5, E7, E9, T5, T9, G1, G2	17.5
Supervised activities	Practical activity	E3, E5,	34
	Group work	E3, E5, E9, T7, T9, G1	35
Autonomous activities	Information search and management	E3, E5	20
	Reports	E3, E5, E9, T5, T7, T9, G1, G2	20
	Autonomous work	E3, E5, E9	84.5
<b>TOTAL NUMBER OF HOURS</b>			<b>247</b>

## ASSESSMENT METHOD

The assessment method will include:

- The theoretical knowledge acquired along the course will be assessed through written tests, which amount to 20% of the final mark.
- Assessment of the manual skills necessary to apply a specific technique and of adequacy of the technique/manoeuvre used in a given situation, through oral practical tests, account for 60% of the final mark.
- The analysis of some scientific articles accounts for 5% of the final mark.
- The papers on the clinical cases presented in class account for 5% of the final mark.
- Group work to design and implement a real case chosen by the students amounts to 10% of the final mark.


In order to pass the course, the following conditions have to be met:

- Pass each section and part of the unit with a minimum mark of 5.
- Attendance at 100% of practical classes (justified absences will allow the student to miss up to 20% of all the practical classes).
- Get a minimum final mark of 5.

Rules concerning internal practical lessons:

Please, check the school's Rules of Internal Practical lessons.

Final evaluation period: from 01/12/2016 to 13/01/2017.

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Resit examination period: from 19/12/2016 to 18/01/2017.


Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).

A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.

ASSESSED ACTIVITIES	PERCENTAGE FINAL MARK	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Written tests	20 %	E3, E5, E9	2
Oral practical tests	60 %	E3, E5	0.25
Written papers and clinical cases presented in class	5 %	E3, E5, E9, T5, T7, T9, G1, G2	---
Analysis of scientific articles	5 %	E3, E5, E9	0.25
Group work	10 %	E3, E5, E9, T7, T9, G1	0.5
<b>TOTAL NUMBER OF HOURS</b>			<b>3</b>

## BIBLIOGRAPHY AND WEB PAGES / BASIC REQUIRED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Butler, D	2002	Movilización del sistema nervioso		Barcelona	Paidotribo
Carr J, Shepherd R.	2003	Rehabilitación de pacientes en el Ictus: pautas de ejercicios y entrenamiento para optimizar las habilidades motoras.			Elsevier
Cano de la Cuerda, Collado Vázquez.	2012	Neurorehabilitación		Madrid	Panamericana
Hebgen, E	2005	Osteopatía visceral. Fundamentos y técnicas	2ª	Madrid	McGraw-Hill Interamericana
Paeth, B	2008	Experiencias con el Concepto Bobath: fundamentos, tratamiento y casos.	2ª	Madrid	Panamericana
Pilat, A	2003	Terapias miofasciales: Inducción miofascial. Aspectos teóricos y aplicaciones clínicas.	1ª	Madrid	McGraw-Hill Interamericana
Purves D	2001	Invitación a la neurociencia	1ª	Madrid	Panamericana
Kandel E, Schwartz J, Jessell T	2001	Principios de neurociencia		Madrid	McGraw-Hill Interamericana
Kandel E, Schwartz JH, Jessell TM	2008	Neurociencia y Conducta		Madrid	Prentice Hall
Raine Sue, Meadows L, Lynch-Ellerington M.	2009	Bobath Concept: Theory and Clinical Practice in Neurological Rehabilitation		United Kingdom	Wiley-Blackwell
Ricard F	2008	Tratado de Osteopatía visceral y medicina interna: Sistema Digestivo. Tomo II		Madrid	Panamericana
Shumway-Cook A, Woollacott M.	2010	Motor Control: translating research into clinical practice.	4ª	Philadelphia	Lippincott

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					Williams&Wilkins
Stokes, M	2006	Fisioterapia en la rehabilitación neurológica		Madrid	Elsevier
Tyldesley B, Grieve J.	2002	Muscles, nerves and movement in human occupation	3ª	Oxford	Blackwell publishing
Umphred D	2007	Neurological rehabilitation		St.Louis, Missouri	Elsevier

## PLANNING OF THE COURSE UNIT

Available on the virtual campus for all those students enrolled in this course unit.



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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>PSYCHOMOTOR DEVELOPMENT OF CHILDREN AND PAEDIATRIC PATHOPHYSIOLOGY</b>		
Code	<b>200573</b>	Academic year	<b>2016-2017</b>
ECTS	<b>4</b>	Type of course unit	<b>Optional</b>
Year	<b>4</b>	Term	<b>1</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit		
Language of instruction	<b>CATALAN AND SPANISH</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Ms NURIA PASTALLÉ</b>
e-mail	<a href="mailto:nuria.pastalle@eug.es">nuria.pastalle@eug.es</a>
Office hours	<b>To be agreed on</b>

- Team members

Name of lecturer	<b>Dr MONTSERRAT BOSQUE</b>
e-mail	<a href="mailto:mbosque@tauli.cat">mbosque@tauli.cat</a>
Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Dr CARME BRUN</b>
e-mail	<a href="mailto:carme.brun@uab.cat">carme.brun@uab.cat</a>
Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Mr MARC CORONAS</b>
e-mail	<a href="mailto:marcorpui@gmail.com">marcorpui@gmail.com</a>
Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Dr CARME FONS ESTUPINA</b>
e-mail	<a href="mailto:cfons@hsjdbcn.org">cfons@hsjdbcn.org</a>
Office hours	<b>To be agreed on</b>

## ADMISSION REQUIREMENTS

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- There are no official admission requirements but it is advisable to have done and passed “Physiotherapy in neurology II” (third year, first term).

## THE COURSE UNIT WITHIN THE CURRICULUM

- Course contents: Physiotherapy in paediatrics.
- This course aims to consolidate the basics of child psychomotor development and paediatric pathophysiology.
- The knowledge of child psychomotor development and paediatric pathophysiology is fundamental in order to work as a physiotherapist in the field of paediatrics.

## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

<b>Competence</b>	<b>E1.</b> Demonstrate knowledge of the morphology, physiology, pathology, and conduct of both healthy and ill people in their natural and social environment.
Learning outcomes	<p><b>E1.26.</b> Explain the pathophysiology of paediatric conditions.</p> <p><b>Specific objectives:</b></p> <p><b>E1.26.1.</b> Describe the neurological conditions that most commonly affect children.</p> <p><b>E1.26.2.</b> Describe the neuromuscular conditions that most commonly affect children.</p> <p><b>E1.26.3.</b> Describe the musculoskeletal conditions that most commonly affect children.</p> <p><b>E1.26.4.</b> Describe the conditions affecting the respiratory system that most commonly affect children.</p> <p><b>E1.26.5.</b> Describe the rheumatic diseases that most commonly affect children.</p> <p><b>E1.26.6.</b> Describe the most common childhood conditions.</p> <p><b>E1.26.7.</b> Describe sensorimotor development of children.</p> <p><b>E1.26.8.</b> Describe the motor development of children with locomotor impairments.</p> <p><b>E1.26.9.</b> Describe the development of cognition and language in children.</p> <p><b>E1.26.10.</b> Describe premature babies and their characteristics.</p> <p><b>E1.26.11.</b> Describe pulmonary development.</p>

### Transversal competences

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<b>Competence</b> T5. Problem solving.	
<b>Learning outcomes</b>	<b>Specific objectives:</b> <b>T5.1.</b> Identify the pathology in a child in the clinical cases presented in class. <b>T5.2.</b> Identify the impairments a child can present according to his/her pathology. <b>T5.3.</b> Identify the level of motor development in a child.

### Generic competences


<b>Competence</b> G2. Develop strategies of autonomous learning.	
<b>Learning outcomes</b>	This is a competence that is developed by working competence “T5. Problem solving”.

## CONTENTS

<ol style="list-style-type: none"> <li>1. Child development:             <ol style="list-style-type: none"> <li>1.1. Motor development.</li> <li>1.2. Cognitive development.</li> <li>1.3. Language development.</li> </ol> </li> <li>2. Paediatric pathologies:             <ol style="list-style-type: none"> <li>2.1. Neurological conditions.</li> <li>2.2. Osteoarticular and muscular pathologies.</li> <li>2.3. Respiratory pathologies.</li> <li>2.4. Rheumatic diseases.</li> </ol> </li> </ol>
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## TEACHING METHOD AND ACTIVITIES

<p><b><u>DIRECTED ACTIVITIES</u></b></p> <ul style="list-style-type: none"> <li>• <b>Theoretical lessons</b> that will provide the student with the basics of child development and pathophysiology of paediatric pathologies. The lessons will offer visual and computer-based support.</li> </ul> <p>Estimated time: 21 hours.</p> <ul style="list-style-type: none"> <li>• <b>Presentation and resolution of clinical cases.</b> Different clinical cases will be presented and the students will have to apply the theoretical knowledge learnt along the course.</li> </ul> <p>Estimated time: 9 hours.</p> <p><b><u>AUTONOMOUS ACTIVITIES</u></b></p> <ul style="list-style-type: none"> <li>• <b>Information search and management</b> based on some clinical cases presented in class.</li> </ul>
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<p>Estimated time: 20 hours.</p> <ul style="list-style-type: none"> <li>• <b>Paper writing</b> based on some clinical cases presented in class.</li> </ul> <p>Estimated time: 20 hours.</p> <ul style="list-style-type: none"> <li>• <b>Autonomous work</b> of individual study to prepare exams, organise notes/material, tutorials: individually or in group.</li> </ul> <p>Estimated time: 27.5 hours.</p>
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ACTIVITY TYPE	ACTIVITY	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Directed activities	Theoretical lessons	E1	21
	Presentation and resolution of clinical cases	E1, T5, G2	9
Autonomous activities	Information search and management	E1	20
	Paper writing	E1, T5, G2	20
	Autonomous work	E1	27.5
<b>TOTAL NUMBER OF HOURS</b>			<b>97.5</b>

## ASSESSMENT METHOD

<p>The assessment method will include:</p> <ul style="list-style-type: none"> <li>• The knowledge acquired along the course will be assessed through written tests, which amount to 70% of the final mark.</li> <li>• The written papers account for 30% of the final mark.</li> </ul> <p>In order to pass the course, the following conditions have to be met:</p> <ul style="list-style-type: none"> <li>• Pass each section and part of the unit with a minimum mark of 5.</li> <li>• Get a minimum final mark of 5.</li> </ul> <p>Final evaluation period: from 01/12/2016 to 13/01/2017.</p> <p>Resit examination period: from 19/12/2016 to 18/01/2017.</p> <p>Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).</p> <p>A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.</p>
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ASSESSED ACTIVITIES	PERCENTAGE	LEARNING	TIME DEVOTED
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	FINAL MARK	OUTCOMES	BY THE STUDENT
Written tests	70%	E1	2
Written papers	30%	E1, T5, G2	0.50
<b>TOTAL NUMBER OF HOURS</b>			<b>2.5</b>

## BIBLIOGRAPHY AND WEB PAGES / BASIC REQUIRED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Macías L, Fagoaga J.	2002	Fisioterapia en pediatria	1	Madrid	MC Graw-Hill Interamericana.
Le Métayer M.	1995	Reeducación cerebromotriz del niño pequeño. Educación terapéutica	1	Barcelona	Masson
Reychler G, Roeseler J, Delguste P.	2009	Kinésithérapie respiratoire		Issy-les-Molineaux	Ed Elsevier Masson.
Postiaux G.	2001	Fisioterapia respiratoria en el niño.		Madrid.	Ed Mc Graw Hill Interamericana.
Webber BA, Pryor JA.	1993	Physiotherapy for respiratory and cardiac problems.		London	Ed Churchill Livingstone.
Redondo García, MA; Conejero Casares, JA	2012	Rehabilitación Infantil	1	Madrid	Ed. Panamericana
García Lucas, I; Pellicer, M	2010	Manual de fisioterapia: neurología, pediatría y fisioterapia respiratoria		Alcalá de Guadaíra	MAD

Articles						
Author	Title	Publication	Volume	Year	Pages	Description/ comment
Delaunay J.P.	Conférence de consensus en kinésithérapie respiratoire. Place respective des différentes techniques non instrumentales de désencombrement bronchique.	Cah. Kinésithé.	fasc.192, nº 4.	1998	14-22	
Barthe J.	Recommandations des Journées Internationales de Kinésithérapie Respiratoire Instrumentale (JIKRI).	Cah. Kinésithé	fasc. 209-210, nº3-4	2001	11-25	
Vilaró J, Gimeno E, Balañá A, Hernando C.	Noves propostes terapèutiques en fisioteràpia de les malalties respiratòries infantils.	Pediatr Catalana	67	2007	278-284	

Web pages			
Title	Description	URL	

	<b>PHYSIOTHERAPY (EHEA DEGREE)</b> <b>COURSE CATALOGUE</b>	<b>EUIF GIMBERNAT</b> Physiotherapy
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International Physiotherapy Group for Cystic Fibrosis. Physiotherapy for people with cystic fibrosis: from infant to adult. 4 ed. IPG-CF; 2009.		<a href="http://www.cfwww.org/ipg-cf/">www.cfwww.org/ipg-cf/</a>	
		<a href="http://www.aepap.org">www.aepap.org</a>	
		<a href="http://www.aeped.es/evidencias-en-pediatria">www.aeped.es/evidencias-en-pediatria</a>	
		<a href="http://www.aeped.es/documentos/protocolos-neurologia">www.aeped.es/documentos/protocolos-neurologia</a>	
		<a href="http://www.acapcat.com">www.acapcat.com</a>	

Audiovisual material			
Title	Description		
Larsen, PD and Stensaas, SS	Pediatric Neurologic Examination videos and descriptions, 2009	<a href="http://libray.med.utah.edu/pedineurologicexam/html/home_exam.html">http://libray.med.utah.edu/pedineurologicexam/html/home_exam.html</a>	

## BIBLIOGRAPHY AND WEB PAGES / BASIC RECOMMENDED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Campbell, S	1999	Decision Making in Pediatric Neurologic Physical Therapy	1	New York	Churchill Livingstone.
Campbell, S	2000	Physical Therapy for children	2	Philadelphia	Saunders
Carr J., Shepperd R.	1998	Neurological Rehabilitation. Optimizing Motor Performance.	1	Oxford	Butterworth Heinemann
Sheperd R.,	1995	Physiotherapy in Pediatrics	3	Oxford	Butterworth Heinemann
Lacan C. Ed	1991	Kinésithérapie respiratoire du tout petit.			Ed Sauramps médical.
Vinçon C, Fausser C.	1989	Kinésithérapie respiratoire en pédiatrie		Paris	Ed Masson
Swaimann, KF; Ashwal, S; Ferriero, DM	2006	Neurology. Principles and Practice	4	Philadelphia	Mosby Elsevier

Articles						
Author	Title	Publication	Volume	Year	Pages	Description/ comment
Wong I, Fok TF.	Randomized comparison of two physiotherapy regimens for correcting atelectasis in ventilated pre-term neonates.	Hong Kong Physiotherapy Journal. 2003; 21:43-50.	21	2003	43-50	
Herry S, Michel F.	Kinésithérapie respiratoire et prématurité.	Kinésithérapie scientifique.	446 (3)	2004	35-42.	
Fleming, S.; Thompson, M; Stevens, R et al.	Normal ranges of heart rate and respiratory rate in children from birth to 18 years of age: a systematic review of observational studies	Lancet	377: 1011	2011		

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Web pages			
Title	Description	URL	
	<i>Embriologia del sistema respiratori</i>	<a href="http://www.embryology.ch">www.embryology.ch</a>	
Los tres pilares del tratamiento en Fibrosis Quística.		<a href="http://www.fibrosis.org">www.fibrosis.org</a>	

Audiovisual material			
Title	Description		

Others			
Title	Description		

## PLANNING OF THE COURSE UNIT

<b>Available on the virtual campus for all those students enrolled in this course unit.</b>
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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>PAEDIATRIC ASSESSMENT AND PHYSIOTHERAPY DIAGNOSIS</b>		
CodE	<b>200592</b>	Academic year	<b>2016-2017</b>
ECTS	<b>4</b>	Type of course unit	<b>Optional</b>
Year	<b>4</b>	Term	<b>1</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit		
Language of instruction	<b>CATALAN</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Ms NÚRIA PASTALLÉ BURRULL</b>
e-mail	<a href="mailto:nuria.pastalle@eug.es">nuria.pastalle@eug.es</a>
Office hours	<b>To be agreed on</b>

- Team members

Name of lecturer	<b>Ms ENGRÀCIA CAZORLA</b>
e-mail	<a href="mailto:mecazorla@hsjdbcn.org">mecazorla@hsjdbcn.org</a>
Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Ms IMMA HOYAS</b>
e-mail	<a href="mailto:ihoyas@xtec.cat">ihoyas@xtec.cat</a>
Office hours	<b>To be agreed on</b>

## ADMISSION REQUIREMENTS

- There are no official admission requirements but it is advisable to have done and passed "Physiotherapy in neurology II" (third year, first term).

## THE COURSE UNIT WITHIN THE CURRICULUM



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- Course contents: Physiotherapy in paediatrics.
- This subject aims to consolidate the basics of paediatric assessment and physiotherapy diagnosis in paediatrics and also present the different scales used in the field, which will help in the design of a treatment plan.
- The knowledge of the most commonly used assessment scales in paediatrics is essential within the field of paediatric physiotherapy.

## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

<b>Competence</b>	<b>E5.</b> Integrate, through clinical experience, ethical and professional values, the knowledge, skills, and attitudes characteristic in physiotherapy to solve specific clinical cases in hospital, out-of-hospital, primary and community health care environments.
Learning outcomes	<p><b>E5.13.</b> Apply the knowledge and competences acquired in the course to solve clinical cases in the field of paediatric pathologies.</p> <p><b>Specific objectives:</b></p> <p><b>E5.13.1.</b> Identify the type of muscle tone when carrying out a physical examination of paediatric patients in some clinical cases.</p> <p><b>E5.13.2.</b> Identify the motor impairment level in paediatric patients as a consequence of their limitations with the use of specific assessment scales.</p> <p><b>E5.13.3.</b> Identify the part of the body affected by functional impairments in paediatric patients with the help of a specific type of examination.</p> <p><b>E5.13.4.</b> Identify any respiratory problem in paediatric patients with the help of a specific type of examination.</p> <p><b>E5.13.5.</b> Identify the different stages in child development using different clinical cases.</p> <p><b>E5.13.6.</b> Distinguish the most common pathologies affecting paediatric patients that can be treated with physiotherapy.</p>

<b>Competence</b>	<b>E7.</b> . Assess the patient's functional state, taking into account physical, psychological, and social aspects.
Learning outcomes	<p><b>E7.21.</b> Describe and apply appropriate physiotherapy assessment procedures in order to determine the level of impairment of child-related pathologies and their possible functional consequences.</p> <p><b>Specific objectives:</b></p> <p><b>E7.21.1.</b> Identify the level of participation restrictions and activity limitations in paediatric patients.</p> <p><b>E7.21.2.</b> Choose the most appropriate assessment tools for each clinical case, taking into account the patient's pathology and chronological age.</p> <p><b>E7.21.3.</b> Apply the correct protocol or assessment scale for each clinical case.</p>

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	<p><b>E7.21.4.</b> Interpret the results obtained in paediatric assessment</p> <p><b>E7.21.5.</b> Relate the results of paediatric assessment to any activity limitation or restriction.</p> <p><b>E7. 21.6.</b> Identify those emotional, psychological and/or social aspects that can interfere in the global development of children with motor impairments.</p>
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<b>Competence</b>	<b>E8.</b> Determine the physiotherapy diagnosis according to established norms and using internationally recognised validation instruments.
Learning outcomes	<p><b>E8.12.</b> Formulate a physiotherapy diagnostic hypothesis in the field of paediatric pathologies.</p> <p><b>Specific objectives:</b></p> <p><b>E8.12.1.</b> Relate any participation restriction to limited activities and any functional impairment to the affected part(s) of the body, according to assessments previously used to define diagnostic hypotheses in paediatric patients.</p>

### Transversal competences

<b>Competence</b>	<b>T5.</b> Problem solving.
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>T5.1.</b> Identify the type of muscle tone when carrying out a physical examination of paediatric patients in some clinical cases.</p> <p><b>T5.2.</b> Identify the motor impairment level in paediatric patients as a consequence of their limitations.</p> <p><b>T5.3.</b> Identify the part of the body affected by functional impairments in paediatric patients.</p> <p><b>T5.4.</b> Identify any respiratory problem in paediatric patients.</p>

<b>Competence</b>	<b>T7.</b> Team work.
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>T7.1.</b> Complete assigned tasks within a deadline.</p> <p><b>T7.2.</b> Accept team rules.</p>

<b>Competence</b>	<b>T9.</b> Develop critical thinking.
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>T9.1.</b> Assess the differences and similarities of the different assessment scales or protocols used in paediatric physiotherapy.</p> <p><b>T9.2.</b> Evaluate critically the suitability of a given scale or protocol used in paediatric assessment.</p>

### Generic competences

<b>Competence</b>	<b>G1.</b> Develop critical thinking and reasoning and know how to effectively express it both in the student's own language and in a third language.
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Learning outcomes	<b>Specific objectives:</b> <b>G1.1.</b> Express one's own opinion about the differences and similarities of the different assessment scales and protocols used in paediatric physiotherapy. <b>G1.2.</b> Evaluate critically the suitability of a given scale or protocol used in paediatric assessment.
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<b>Competence</b>	<b>G2.</b> Develop strategies of autonomous learning.
Learning outcomes	This is a competence that is developed by working competence "T5. Problem solving", "T7. Team work" and "T9. Develop critical thinking".

## CONTENTS

<ol style="list-style-type: none"> <li>1. Motor assessment.</li> <li>2. Assessment of associated disorders.</li> <li>3. Assessment of respiratory diseases.</li> <li>4. Complementary diagnostic tests.</li> <li>5. Physiotherapy diagnosis of the different pathologies assessed.</li> </ol>
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## TEACNING METHOD AND ACTIVITIES

<p><b><u>DIRECTED ACTIVITIES</u></b></p> <ul style="list-style-type: none"> <li>• <b>Theoretical lessons</b> that will provide the student with the basics of the assessment methods used in paediatric physiotherapy. The lessons will offer visual and computer-based support.  Estimated time: 9 hours.</li> <li>• <b>Practical lessons</b> where the teacher will present, with the help of a model or with audiovisual support, different specific assessment techniques. The lessons will offer visual and computer-based support.  Estimated time: 11 hours.</li> <li>• <b>Presentation and resolution of clinical cases.</b> Different clinical cases will be presented for which students will have to apply their theoretical knowledge.  Estimated time: 9 hours.</li> </ul> <p><b><u>SUPERVISED ACTIVITIES</u></b></p> <ul style="list-style-type: none"> <li>• <b>Practical activity</b>, under the teacher's supervision, to apply the different techniques presented in class.  Estimated time: 15 hours.</li> </ul>
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**Group work** to write an assessment dossier on the items presented in class (what it is assessed, how it is assessed, material, and marking system).

Estimated time: 25 hours.

**AUTONOMOUS ACTIVITIES**

- **Autonomous work** of individual study to prepare exams, organise notes/material, tutorials: individually or in groups.

Estimated time: 28 hours.

ACTIVITY TYPE	ACTIVITY	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Directed activities	Theoretical lessons	E5, E7, E8	9
	Practical lessons	E7, E8	11
	Presentation and resolution of clinical cases	E5, E7, E8, T5, T9, G1, G2	9
Supervised activities	Practical activity	E5, E7, E8	15
	Group work	E5, E7, E8, T7, T9, G1	25
Autonomous activities	Autonomous work	E5, E7, E8	28
<b>TOTAL NUMBER OF HOURS</b>			<b>97</b>

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## ASSESSMENT METHOD

The assessment method will include:

- The theoretical knowledge acquired along the course will be assessed through written tests, which will amount to 30% of the final mark.
- Assessment of the manual skills necessary to apply a specific technique or assessment scale as well as its adequacy for a given clinical case, through oral practical tests that account for 40% of the final mark.
- The clinical cases presented through the course will amount to 20% of the final mark.
- The activities done in group for the assessment dossier, which amount to 10% of the final mark.

In order to pass the course, the following conditions have to be met:

- Pass each section and part of the unit with a minimum mark of 5.
- Attendance at 100% of practical classes (justified absences will allow the student to miss up to 20% of all the practical classes).
- Get a minimum final mark of 5.

Rules concerning internal practical lessons:

Please, check the school's Rules of Internal Practical Lessons.


Final evaluation period: from 01/12/2016 to 13/01/2017.

Resit examination period: from 19/12/2016 to 18/01/2017.

Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).

A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.

ASSESSED ACTIVITIES	PERCENTAGE FINAL MARK	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Written tests	30%	E5, E7, E8	2
Oral practical tests	40%	E5, E7, E8	0.50
Clinical cases presented	20%	E5, E7, E8 T5, T7, T9, G1, G2	0.25
Group work	10%	E5, E7, E8, T7, T9, G1	0.25
<b>TOTAL NUMBER OF HOURS</b>			<b>3</b>

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## BIBLIOGRAPHY AND WEB PAGES / BASIC REQUIRED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Macías L., Fagoaga J.	2002	Fisioterapia en pediatria	1	Madrid	MC Graw-Hill Interamericana.
Le Métayer M.	1995	Reeducación cerebromotriz del niño pequeño. Educación terapéutica	1	Barcelona	Masson
Russell, D. ; Rosenbaum, P. ; Lane, M. ; Avery, L.	2002	Gross Motor Function Measure (gmfm-66 And Gmfm-88) User's Manual	1	London	Blackwell Pub
Reychler G, Roeseler J, Delguste P.	2009	Kinésithérapie respiratoire		Issy-les-Molineaux	Ed Elsevier Masson.
Postiaux G.	2001	Fisioterapia respiratoria en el niño.		Madrid.	Ed Mc Graw Hill Interamericana.
Webber BA, Pryor JA.	1993	Physiotherapy for respiratory and cardiac problems.		London	Ed Churchill Livingstone.

Articles						
Author	Title	Publication	Volume	Year	Pages	Description/ comment
Delaunay J.P.	Conférence de consensus en kinésithérapie respiratoire. Place respective des différentes techniques non instrumentales de désencombrement bronchique.	Cah. Kinésithé.	fasc.192, nº 4.	1998	14-22	
Barthe J.	Recommandations des Journées Internationales de Kinésithérapie Respiratoire Instrumentale (JIKRI).	Cah. Kinésithé	fasc. 209-210, nº3-4	2001	11-25	
Vilaró J, Gimeno E, Balañá A, Hernando C.	Noves propostes terapèutiques en fisioteràpia de les malalties respiratòries infantils.	Pediatr Catalana	67	2007	278-284	

Web pages			
Title	Description	URL	
MACS- Manual Ability Classification System	<i>Actualización del Sistema de Clasificación de la Habilidad Manual (MACS)</i>	<a href="http://www.sefip.org">www.sefip.org</a>	
Gross Motor Function Classification System. Extendida y revisada	Actualización de la expansión de la GMFCS	<a href="http://www.sefip.org">www.sefip.org</a>	

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International Physiotherapy Group for Cystic Fibrosis. Physiotherapy for people with cystic fibrosis: from infant to adult. 4 ed. IPG-CF; 2009.		<a href="http://www.cfwww.org/ipg-cf/">www.cfwww.org/ipg-cf/</a>	
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## BIBLIOGRAPHY AND WEB PAGES / BASIC RECOMMENDED READINGS


Books					
Author/s	Year	Title	Edition	City	Publisher
Shumeay- Cook , A; Woollacot, M.	2011	Motor Control. Translation Research into clinical practice	4ª	London	Lippincott Williams & Wilins
Roig-Quilis & Lindsay Pennington	2011	Oromotor Disorders in Childhood	1ª	Barcelona	Viguera Editores
Postiaux G.	2001	Fisioterapia respiratoria en el niño.		Madrid.	Ed Mc Graw Hill Interamericana.
Webber BA, Pryor JA.	1993	Physiotherapy for respiratory and cardiac problems.		London	Ed Churchill Livingstone.
Campbell, S	1999	Decision Making in Pediatric Neurologic Physical Therapy	1	New York	Churchill Livingstone.
Campbell, S	2000	Physical Therapy for children	2	Philadelphia	Saunders
Carr J., Shepperd R.	1998	Neurological Rehabilitation. Optimizing Motor Performance.	1	Oxford	Butterworth Heinemann
Sheperd R.,	1995	Phisioterapia in Paediatrics	3	Oxford	Butterworth Heinemann
Lacan C. Ed	1991	Kinésithérapie respiratoire du tout petit.			Ed Sauramps médical.
Vinçon C, Fausser C.	1989	Kinésithérapie respiratoire en pédiatrie		Paris	Ed Masson

Articles						
Author	Title	Publication	Volume	Year	Pages	Description/ commenti
Wong I, Fok TF.	Randomized comparison of two physiotherapy regimens for correcting atelectasis in ventilated pre-term neonates.	Hong Kong Physiotherapy Journal. 2003; 21:43-50.	21	2003	43-50	
Herry S, Michel F.	Kinésithérapie respiratoire et prématurité.	Kinésithérapie scientifique.	446 (3)	2004	35-42.	

Web pages			
Title	Description	URL	
	<i>Embriología del sistema respiratorio</i>	<a href="http://www.embryology.ch">www.embryology.ch</a>	

## PLANNING OF THE COURSE UNIT

Available on the virtual campus for all those students enrolled in this course unit.

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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>PHYSIOTHERAPY IN PAEDIATRICS</b>		
Code	<b>200587</b>	Academic year	<b>2016-2017</b>
ECTS	<b>10</b>	Type of course unit	<b>Optional</b>
Year	<b>4</b>	Term	<b>1</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit		
Language of instruction	<b>CATALAN</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Ms NÚRIA PASTALLÉ BURRULL</b>
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- Team members

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Name of lecturer	<b>Ms ENGRÀCIA CAZORLA</b>
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Name of lecturer	<b>Ms TERESA XIPELL PRUNÉS</b>
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Office hours	<b>To be agreed on</b>



## ADMISSION REQUIREMENTS

- There are no official admission requirements but it is advisable to have done and passed “Physiotherapy in neurology II” (third year, first term).

## THE COURSE UNIT WITHIN THE CURRICULUM

- Course contents: Physiotherapy in paediatrics.
- This subject aims to consolidate the theoretical and practical bases of physiotherapy in paediatrics.
- Knowing the different methods and strategies used in physiotherapy in paediatrics is fundamental in order to work as a physiotherapist in any speciality within the field of paediatrics.

## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

<b>Competence</b>	<b>E1.</b> Demonstrate knowledge of the morphology, physiology, pathology, and conduct of both healthy and ill people in their natural and social environment.
Learning outcomes	<p><b>E1.27.</b> Enumerate the different medico-surgical treatments, more specifically their physiotherapy and orthopaedic aspects, administered in paediatric conditions.</p> <p><b>Specific objectives:</b></p> <p><b>E1.27.1.</b> Enumerate the main medical, surgical, and orthopaedic treatments for those neurological conditions that most commonly affect children.</p> <p><b>E1.27.2.</b> Enumerate the main medical, surgical, and orthopaedic treatments for those neuromuscular conditions that most commonly affect children.</p> <p><b>E1.27.3.</b> Enumerate the main medical, surgical, and orthopaedic treatments for those musculoskeletal conditions that most commonly affect children.</p> <p><b>E1.27.4.</b> Enumerate the main medical and surgical treatments for those conditions affecting the respiratory system that most commonly affect children.</p> <p><b>E1.27.5.</b> Enumerate the main medical, surgical, and orthopaedic treatments for those rheumatic diseases that most commonly affect children.</p> <p><b>E1.27.6.</b> Enumerate the main medical treatments for pervasive developmental disorders.</p> <p><b>E1.27.7.</b> Enumerate the main medical and surgical treatments for the most common childhood diseases.</p>

<b>Competence</b>	<b>E3.</b> Demonstrate knowledge of the physiotherapy methods, procedures, and actions that lead to clinical therapeutics.
Learning outcomes	<p><b>E3.21.</b> Apply the specific methods and techniques related to paediatric pathologies.</p> <p><b>Specific objectives:</b></p> <p><b>E3.21.1.</b> Apply specific physiotherapy techniques to treat those pathologies that involve motor developmental retardation in children.</p> <p><b>E3.21.2.</b> Apply specific physiotherapy techniques to treat those pathologies that involve some kind of musculoskeletal misalignment in children.</p> <p><b>E3.21.3.</b> Apply specific physiotherapy techniques to treat respiratory pathologies in children.</p> <p><b>E3.21.4.</b> Use the different support devices and orthoses required in the treatment of different paediatric pathologies.</p> <p><b>E3.21.5.</b> Use the different assistive mobility devices for children with mobility problems.</p> <p><b>E3.21.6.</b> Use the different assistive technology devices to increase the child's autonomy in his/her everyday life.</p>

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<b>Competence</b>	<b>E5.</b> Integrate, through clinical experience, ethical and professional values, the knowledge, skills, and attitudes characteristic in physiotherapy to solve specific clinical cases in hospital, out-of-hospital, primary and community health care environments.
Learning outcomes	<p><b>E5.13.</b> Apply the knowledge and competences acquired in the course to solve clinical cases in the field of paediatric pathologies.</p> <p><b>Specific objectives:</b></p> <p><b>E5.13.1.</b> Justify the choice of therapeutic strategies to be used in a given clinical case in the field of paediatric pathologies.</p> <p><b>E5.13.2.</b> Justify the choice of the most appropriate positioning devices for each clinical case presented within the field of paediatric pathologies.</p> <p><b>E5.13.3.</b> Justify the choice of assistive mobility systems in a given clinical case in the field of paediatric pathologies.</p> <p><b>E5.13.4.</b> Justify the choice of assistive technology devices to increase autonomy in everyday life activities in a given clinical case in the field of paediatric pathologies.</p> <p><b>E5.13.5.</b> Justify the choice of orthoses in a given clinical case in the field of paediatric pathologies.</p>

<b>Competence</b>	<b>E9.</b> Develop a physiotherapy intervention plan according to established norms and using internationally recognised validation instruments.
Learning outcomes	<p><b>E9.31.</b> Define the general and specific goals for the administration of a treatment for paediatric pathologies.</p> <p><b>Specific objectives:</b></p> <p><b>E9.31.1.</b> Identify the primary goals for the treatment of the most common conditions that involve motor developmental retardation in children, using physiotherapy-based diagnostic hypotheses.</p> <p><b>E9.31.2.</b> Identify the primary goals for the treatment of the most common conditions that involve limitations in the child's motor skills, using physiotherapy-based diagnostic hypotheses.</p> <p><b>E9.31.3.</b> Identify the primary goals for the treatment of the most common conditions that involve some kind of musculoskeletal misalignment in children, using physiotherapy-based diagnostic hypotheses.</p> <p><b>E9.31.4.</b> Identify the primary goals for the treatment of the most common conditions that involve the loss of functional mobility in children, using physiotherapy-based diagnostic hypotheses.</p> <p><b>E9.31.5.</b> Identify the primary goals for the treatment of the most common conditions that involve respiratory limitations in children, using physiotherapy-based diagnostic hypotheses.</p> <p><b>E9.32.</b> Describe the circumstances that determine the priorities in the physiotherapy treatment of paediatric pathologies.</p> <p><b>Specific objectives:</b></p> <p><b>E9.32.1.</b> Establish the right treatment chronology of pathologies of the respiratory system in children according to the patient's condition.</p> <p><b>E9.32.2.</b> Establish the right treatment chronology of pathologies of the musculoskeletal system in children according to the patient's condition.</p>

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	<p><b>E9.32.3.</b> Establish the right treatment chronology of pathologies of the nervous system in children according to the patient's condition.</p> <p><b>E9.32.4.</b> Establish the right treatment chronology of rheumatic pathologies in children according to the patient's condition.</p> <p><b>E9.32.5.</b> Establish the right treatment chronology of pervasive developmental disorders in children.</p> <p><b>E9.33.</b> Enumerate the different types of material and apparatus to be used in the physiotherapy treatment of paediatric pathologies.</p> <p><b>Specific objectives:</b></p> <p><b>E9.33.1.</b> Choose the appropriate material for the treatment sessions of paediatric physiotherapy: different types of balls in different sizes, rolls, mats, etc.</p> <p><b>E9.33.2.</b> Choose the appropriate material to facilitate the adoption of a stable, aligned posture: wedges, inclined planes, standing frames ...</p> <p><b>E9.33.3.</b> Choose the appropriate device for the assistive mobility of paediatric patients: electric-powered wheelchairs, manual wheelchairs, walkers, crutches, tripods, stick, etc.</p> <p><b>E9.33.4.</b> Choose the appropriate control devices (switches, joysticks, etc) for the assistive technology used to help severely handicapped children learn, move, and communicate.</p>
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### Transversal competences

<b>Competence</b> T5. Problem solving.	
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>T5.1.</b> Choose the best technique available to treat different musculoskeletal impairments in children.</p> <p><b>T5.2.</b> Choose the best technique available to treat different neurological conditions in children.</p>

<b>Competence</b> T7. Team work.	
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>T7.1.</b> Establish a multidisciplinary paediatric team according to the clinical speciality of its members and establish the competences of each member.</p> <p><b>T7.2.</b> Assess the attitude of team members with an assessment survey.</p>

<b>Competence</b> T9. Develop critical thinking.	
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>T9.1.</b> Assess the differences and similarities of the different methods used in paediatric physiotherapy.</p> <p><b>T9.2.</b> Evaluate critically the different treatments of paediatric physiotherapy presented in class, in articles, etc.</p>

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## Generic competences

<b>Competence</b>	<b>G1.</b> Develop critical thinking and reasoning and know how to effectively express it both in the student's own languages and in a third language.	
Learning outcomes	<b>Specific objectives:</b> <b>G1.1.</b> Assess the differences and similarities of the different methods used in paediatric physiotherapy. <b>G1.2.</b> Evaluate critically the different treatments of paediatric physiotherapy presented in class, in articles, etc.	
<b>Competence</b>	<b>G2.</b> Develop strategies of autonomous learning.	
Learning outcomes	This is a competence that is developed by working competence "T5. Problem solving", "T7. Team work" and "T9. Develop critical thinking".	

## CONTENTS

1. Presentation of the different methodologies of paediatric physiotherapy.
2. Treatment to improve the child's psychomotor development.
3. Strategies and types of support to assist in musculoskeletal alignment.
4. Medical, surgical, orthopaedic, and physiotherapy treatment for pathologies with motor impairments.
5. Strategies and types of support to assist in personal autonomy.
6. Medical and physiotherapy treatment for the respiratory system.

## TEACHING METHOD AND ACTIVITIES

### DIRECTED ACTIVITIES

- **Theoretical lessons** that will provide the student with the basics of paediatric physiotherapy. The lessons will offer visual and computer-based support.

Estimated time: 20 hours.

- **Practical lessons** where the teacher will present, with the help of a model or with audiovisual support, different assessment and treatment techniques. The lessons will offer visual and computer-based support.

Estimated time: 25 hours.

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- **Presentation and resolution of clinical cases.** Different clinical cases will be presented for which the student will have to suggest an appropriate treatment.

Estimated time: 17.5 hours.

#### SUPERVISED ACTIVITIES

- **Practical activity**, under the teacher's supervision, to apply the different techniques presented.

Estimated time: 25 hours.

- **Group work** to suggest the best treatment options for the clinical cases presented in class.

Estimated time: 25 hours.

#### AUTONOMOUS ACTIVITIES

- **Information search and management** on paediatric physiotherapy treatments to complement the theoretical lessons taught in the course.

Estimated time: 25 hours.

- **Paper writing** on treatment chronology, support systems to help in musculoskeletal realignment, position, mobility, and personal autonomy. The paper will be based on appropriate bibliography and will be done individually or in groups.

Estimated time: 25 hours.

- **Autonomous work** of individual study to prepare exams, organise notes/material, tutorials: individually or in groups.

Estimated time: 84.5 hours.

ACTIVITY TYPE	ACTIVITY	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Directed activities	Theoretical lessons	E1, E3, E5, E9	20
	Practical lessons	E3	25
	Presentation and resolution of clinical cases	E3, E5, E9, T5, T9, G1, G2	17.5
Supervised activities	Practical activity	E3, E5	25
	Group work	E3, E5, E9, T7, T9, G1	25
Autonomous activities	Information search and management	E1, E3, E5	25
	Paper writing	E1, E3, E5, E9, T5, T7, T9, G1, G2	25
	Autonomous work	E1, E3, E5, E9	84.5
<b>TOTAL NUMBER OF HOURS</b>			<b>247</b>

	<b>PHYSIOTHERAPY (EHEA DEGREE)</b> <b>COURSE CATALOGUE</b>	<b>EUIF GIMBERNAT</b> Physiotherapy
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## ASSESSMENT METHOD

The assessment method will include:

- The knowledge acquired along the course will be assessed through written tests, which will amount to 25% of the final mark.
- Assessment of the manual skills necessary to apply a specific technique and of adequacy of the technique/manoeuvre used in a given situation, through oral practical tests that account for 55% of the final mark.
- The written papers and the clinical cases presented through the course amount to 15% of the final mark.
- Group work to solve some clinical cases accounts for 5% of the final mark.

In order to pass the course, the following conditions have to be met:

- Pass each section and part of the unit with a minimum mark of 5.
- Attendance at 100% of practical classes (justified absences will allow the student to miss up to 20% of all the practical classes).
- Get a minimum final mark of 5.

Rules concerning internal practical lessons:

- Please, check the school's Rules of Internal Practical lessons.

Final evaluation period: from 01/12/2016 to 13/01/2017.

Resit examination period: from 19/12/2016 to 18/01/2017.

Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).

A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.

ASSESSED ACTIVITIES	PERCENTAGE FINAL MARK	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Written tests	25%	E1, E3, E5, E9	2
Oral practical tests	55%	E3, E5	0.50
Written papers and clinical cases presented	15%	E1, E3, E5, E9, T5, T7, T9, G1, G2	0.25
Group work	5%	E1, E3, E5, E9, T7, T9, G1	0.25
<b>TOTAL NUMBER OF HOURS</b>			<b>3</b>


	<b>PHYSIOTHERAPY (EHEA DEGREE)</b> <b>COURSE CATALOGUE</b>	<b>EUIF GIMBERNAT</b> Physiotherapy
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## BIBLIOGRAPHY AND WEB PAGES / BASIC REQUIRED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Macías L., Fagoaga J.	2002	Fisioterapia en pediatria	1	Madrid	MC Graw-Hill Interamericana.
Le Métayer M.	1995	Reeducación cerebromotriz del niño pequeño. Educación terapéutica	1	Barcelona	Masson
Reychler G, Roeseler J, Delguste P.	2009	Kinésithérapie respiratoire		Issy-les-Molineaux	Ed Elsevier Masson.
Postiaux G.	2001	Fisioterapia respiratoria en el niño.		Madrid.	Ed Mc Graw Hill Interamericana.
Webber BA, Pryor JA.	1993	Physiotherapy for respiratory and cardiac problems.		London	Ed Churchill Livingstone.
Ruiz Extremera, A	2004	Niños de riesgo: programas de atención temprana		Madrid	Capitel ed
Vázquez Vilá, MA; Collado Vázquez, S	2006	Fisioterapia en neonatología: Tratamiento fisioterápico y orientaciones a los padres.		Madrid	Dykison SL

Articles						
Author	Title	Publication	Volume	Year	Pages	Description/comment
Delaunay J.P.	Conférence de consensus en kinésithérapie respiratoire. Place respective des différentes techniques non instrumentales de désencombrement bronchique.	Cah. Kinésithé.	fasc.192, nº 4.	1998	14-22	
Barthe J.	Recommandations des Journées Internationales de Kinésithérapie Respiratoire Instrumentale (JIKRI).	Cah. Kinésithé	fasc. 209-210, nº3-4	2001	11-25	
Vilaró J, Gimeno E, Balañá A, Hernando C.	Noves propostes terapèutiques en fisioteràpia de les malalties respiratòries infantils.	Pediatr Catalana	67	2007	278-284	




 <p>escoles universitàries gimbernat i Tomàs Cerdà ADSCRITA A LA UPB</p>	<b>PHYSIOTHERAPY (EHEA DEGREE)</b> <b>COURSE CATALOGUE</b>	<b>EUIF GIMBERNAT</b> Physiotherapy
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## BIBLIOGRAPHY AND WEB PAGES / BASIC RECOMMENDED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Campbell, S	1999	Decision Making in Pediatric Neurologic Physical Therapy	1	New York	Churchill Livingstone.
Campbell, S	2000	Physical Therapy for children	2	Philadelphia	Saunders
Carr J., Shepperd R.	1998	Neurological Rehabilitation. Optimizing Motor Performance.	1	Oxford	Butterworth Heinemann
Sheperd R.,	1995	Physiotherapy in Paediatrics	3	Oxford	Butterworth Heinemann
Shumeay- Cook , A; Woollacot, M.	2011	Motor Control. Translation Research into clinical practice	4ª	London	Lippincott Williams & Wilins
Roig-Quilis & Lindsay Pennington	2011	Oromotor Disorders in Childhood	1ª	Barcelona	Viguera Editores
Lacan, C	1991	Kinésithérapie respiratoire du tout petit			Sauramps médical
Vinçon, C; Fausse, C	1989	Kinésithérapie respiratoire en pédiatrie		Paris	Masson
Paeth, B	2007	Experiencias con el concepto Bobath	2ª		Médica Panamericana
Bobath, K	1982	Base neurofisiológica para el tratamiento de la Parálisis Cerebral			Médica Panamericana
Vernon B.	1986	The Neural Basis of Motor Control		Oxford	Oxford University Press

Articles						
Author	Title	Publication	Volume	Year	Pages	Description/ comment
Wong, I; Fok, TF	Randomized comparison of two physiotherapy regimens for correcting atelectasis in ventilated pre-term neonates	Hong Kong Physiotherapy Journal		2003	21:43-50	
Herry, S; Michel, F	Kinésithérapie respiratoire et prématurité	Kinésithérapie scientifique	3	2004	446: 35-42	
Herry, S	Técnicas insuflatores de levée d'atélectasie (TILA) en réanimation néonatale	Kinesither Rev		2007	65: 30-4	
Herry, S	Techniques Kinésithérapiques spécifiques aux prématurés	Kinésithérapie scientifique		2008	484: 33-45	
Lannefors, L; Button, BM; McIlwaine, M	Physiotherapy in infants and young children with cystic fibrosis: current practice and future developments	JR Soc med		2004	97 (Suppl. 44): 8-25	
Oberwaldner, B	Physiotherapy for airway clearance in paediatrics	Eur Respir J		2000	15: 196-204	
Prasad, S-A; Tannenbaum, E-L; Michelsons, ch	Physiotherapy in cusic fibrosis	J R Soc med		2000	93 (Suppl. 38): 27-36	

 <p>escoles universitàries gimbernàt i Tomàs Cerdà ADSCRITA A LA UPM</p>	<b>PHYSIOTHERAPY (EHEA DEGREE)</b> <b>COURSE CATALOGUE</b>	<b>EUIF GIMBERNAT</b> Physiotherapy
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Web pages			
Title	Description	URL	
Los tres pilares del tratamiento en Fibrosis Quística.		<a href="http://www.fibrosis.org">www.fibrosis.org</a>	

## PLANNING OF THE COURSE UNIT

Available on the virtual campus for all those students enrolled in this course unit.

	<b>PHYSIOTHERAPY (EHEA DEGREE)</b> <b>COURSE CATALOGUE</b>	<b>EUIF GIMBERNAT</b> Physiotherapy
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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>BIOMECHANICS, KINESIOLOGY, AND PATHOPHYSIOLOGY OF THE THORAX</b>		
Code	<b>200571</b>	Academic year	<b>2016-2017</b>
ECTS	<b>4</b>	Type of course unit	<b>Optional</b>
Year	<b>4</b>	Term	<b>1</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit		
Language of instruction	<b>CATALAN</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Dr JOSEP LLUIS HEREDIA</b>
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Office hours	<b>To be agreed on</b>

- Team members

Name of lecturer	<b>Ms NEUS CIURANA</b>
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Office hours	<b>To be agreed on</b>

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Office hours	<b>To be agreed on</b>

## ADMISSION REQUIREMENTS

- There are no official admission requirements but it is advisable to have done and passed “Cardiorespiratory physiotherapy” (third year, second term).

## THE COURSE UNIT WITHIN THE CURRICULUM

- Course contents: Deeper knowledge of thoracic physiotherapy.
- This course aims to offer deeper knowledge of thoracic biomechanics, kinesiology, and pathophysiology, both in adults and children.
- The knowledge of thoracic biomechanics, kinesiology, and pathophysiology is essential for the physiotherapy treatment of cardiorespiratory conditions and particularly since the incidence of these pathologies has increased so much in the population.

## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

<b>Competence</b>	<b>E1.</b> Demonstrate knowledge of the morphology, physiology, pathology, and conduct of both healthy and ill people in their natural and social environment.
Learning outcomes	<p><b>E1.28.</b> Explain the pathophysiology of thoracic conditions in detail.</p> <p><b>Specific objectives:</b></p> <p><b>E1.28.1.</b> Explain extensively pulmonary physiology and pathophysiology.</p> <p><b>E1.28.2.</b> Describe the main respiratory pathological processes in detail.</p> <p><b>E1.28.3.</b> Identify arterial gasometry values in a cardiorespiratory patient.</p> <p><b>E1.28.4.</b> Distinguish between thoracic biomechanics and kinesiology in adults and children.</p> <p><b>E1.28.5.</b> Explain thoracic pathologies in children.</p> <p><b>E1.28.6.</b> Explain extensively ischaemic cardiopathy and cardiac failure in adults.</p>

	<p><b>E1.29.</b> Enumerate the medico-surgical treatments, particularly those aspects related to physiotherapy and orthopaedics, for thoracic conditions.</p> <p><b>Specific objectives:</b></p> <p><b>E1.29.1.</b> Explain the techniques used in pneumology and thoracic surgery and their incidence in respiratory physiotherapy.</p> <p><b>E1.29.2.</b> Explain the techniques used in abdominal surgery and their incidence in respiratory physiotherapy.</p> <p><b>E1.29.3.</b> Explain the techniques used in cardiac surgery and their incidence in respiratory physiotherapy.</p> <p><b>E1.29.4.</b> Identify the need of oxygen therapy in the treatment of hypoxemic adult patients.</p> <p><b>E1.29.5.</b> Describe the different ventilatory methods for the treatment of acute and chronic respiratory failure.</p>
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### Transversal competences

<b>Competence</b>	<b>T9.</b> Develop critical thinking.
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>T9.1.</b> Do critical readings of scientific articles on pathologies and cardiorespiratory physiotherapy treatments.</p>

### Generic competences

<b>Competence</b>	<b>G1.</b> Develop critical thinking and reasoning and know how to effectively express it both in the student's own languages and in a third language.
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>G1.1.</b> Do critical readings of scientific articles on pathologies and cardiorespiratory physiotherapy treatments.</p>

<b>Competence</b>	<b>G2.</b> Develop strategies of autonomous learning.
Learning outcomes	This is a competence that is developed by working competence "T9. Develop critical thinking".

## CONTENTS

1. Introduction
2. Thoracic biomechanics and kinesiology in adults.
3. Thoracic biomechanics and kinesiology in children.
4. Thoracic pathophysiology in adults.
5. Thoracic pathophysiology in children.
6. Thoracic, abdominal, and cardiac surgery.
7. Ischaemic cardiopathy and cardiac failure.

## TEACHING METHOD AND ACTIVITIES

### DIRECTED ACTIVITIES

- **Theoretical lessons** that will present the aforementioned contents. The lessons will offer visual and computer-based support.

Estimated time: 38 hours.

- **Practical lessons** where the teacher will present different techniques, with the help of a model or with audiovisual support.

Estimated time: 4.5 hours.

### SUPERVISED ACTIVITIES

- **Practical activity**, under the teacher's supervision, to apply the different techniques presented in class.

Estimated time: 2 hours.

### AUTONOMOUS ACTIVITIES

- **Information search and management** to complement the theoretical lessons taught in the course and assessed through written tests.

Estimated time: 10 hours.

- **3 papers** on 3 articles about cardiorespiratory pathologies: 2 articles about the main pathologies in adults and 1, in children.

Estimated time: 10 hours.

- **Autonomous work** of individual study to prepare exams, organise notes/material, tutorials: individually or in groups.

Estimated time: 33.5 hours.

ACTIVITY TYPE	ACTIVITY	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Directed activities	Theoretical lessons	E1	38
	Practical lessons	E1	4.5
Supervised activities	Practical activity	E1	2
Autonomous activities	Information search and management	E1	10
	Paper writing	E1, T9, G1, G2	10
	Autonomous work	E1	33.5
<b>TOTAL NUMBER OF HOURS</b>			<b>98</b>

## ASSESSMENT METHOD

The assessment method will include:

- The theoretical knowledge acquired along the course will be assessed through written tests, which will amount to 70% of the final mark.
- The written papers presented will amount to 30% of the final mark.

In order to pass the course, the following conditions have to be met:

- Pass each section and part of the unit with a minimum mark of 5.
- Attendance at 100% of practical classes (justified absences will allow the student to miss up to 20% of all the practical classes).
- Get a minimum final mark of 5.

Rules concerning internal practical lessons:

Please, check the school's Rules of Internal Practical lessons.

Final evaluation period: from 01/12/2016 to 13/01/2017.

Resit examination period: from 19/12/2016 to 18/01/2017.

Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).

A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.

ASSESSED ACTIVITIES	PERCENTAGE FINAL MARK	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Written tests	70 %	E1	2
Written papers	30 %	E1, T9, G1, G2	---
<b>TOTAL NUMBER OF HOURS</b>			<b>2</b>

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## BIBLIOGRAPHY AND WEB PAGES / BASIC REQUIRED READINGS

Books						
Author/s	Year	Title	Edition	City	Publisher	
Agustí A., Picado C.	1986	Neumología Básica		Madrid	IDEPSA	
Netter F	2000	Sistema Respiratorio	1ª, reimpres 8ª	Barcelona	Masson	
Marschall S, Runge E	2006	Netter Cardiología		Barcelona	Masson	
West J	2005	Respiratory physiology the essentials	7ª	USA	Panamericana	
Kapandji	2007	El tórax y la respiración	6ª	Madrid	Panamericana	

Articles						
Author	Title	Publication	Volume	Year	Pages	Description/comment
Orozco Levi	El diafragma	Arch bronconeumol	33	1997	399-411	

## BIBLIOGRAPHY AND WEB PAGES / BASIC RECOMMENDED READINGS

Books						
Author/s	Year	Title	Edition	City	Publisher	
Jefferies A	2001	Lo esencial en aparato respiratorio	1ª	Madrid	Harcourt Brace, D.L.	
Sunthareswaran R.	1999	Lo esencial en sistema cardiovascular		Madrid	Harcourt Brace, D.L.	
Von Domarus, A.	1995	Medicina Interna	13ª	Barcelona	Mosby-Doyma, 1995	
	2010	Cardiología basada en la evidencia y la experiencia de la Fundación Favoloro Branco Mautner		Buenos Aires	Mediterráneo	

Articles						
Author	Title	Publication	Volume	Year	Pages	Description/comment
Weibel ER	How to make an alvéolus	Eur Respir J	31	2008	483-85	

## PLANNING OF THE COURSE UNIT

Available on the virtual campus for all those students enrolled in this course unit.

**DISSECTION CLASSES WILL TAKE PLACE ON SATURDAYS.**



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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>ASSESSMENT OF CARDIORESPIRATORY FUNCTION AND PHYSIOTHERAPY DIAGNOSIS</b>		
Code	<b>200589</b>	Academic year	<b>2016-2017</b>
ECTS	<b>4</b>	Type of course unit	<b>Optional</b>
Year	<b>4</b>	Term	<b>1</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit		
Language of instruction	<b>CATALAN</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Ms GINA MATEU</b>
e-mail	<a href="mailto:georgina.mateu@eug.es">georgina.mateu@eug.es</a>
Office hours	<b>To be agreed on</b>

- Team members

Name of lecturer	<b>Dr JOSEP LLUIS HEREDIA</b>
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Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Ms. MARTA SABATÉ LÒPEZ</b>
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Name of lecturer	<b>Mr JOSE ANGEL DE MARCOS</b>
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Name of lecturer	<b>Ms ANNA GARCIA SEGURA</b>
e-mail	<a href="mailto:annagarseg@hotmail.com">annagarseg@hotmail.com</a>
Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Ms NOELIA CARRASCO</b>
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Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Mr MARC TERRADELLAS</b>
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Office hours	<b>To be agreed on</b>

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## ADMISSION REQUIREMENTS

- There are no official admission requirements but it is advisable to have done and passed “Cardiorespiratory physiotherapy” (third year, second term).

## THE COURSE UNIT WITHIN THE CURRICULUM

- Course contents: Deeper knowledge of physiotherapy for chest conditions.
- This course aims to offer deeper knowledge of the assessment of cardiorespiratory function and physiotherapy diagnosis of cardiorespiratory conditions in adults and children.
- Being able to assess cardiorespiratory function and to make an accurate physiotherapy diagnosis is essential for the treatment of cardiorespiratory conditions in adults and children.

## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

<b>Competence</b>	<b>E5.</b> Integrate, through clinical experience, ethical and professional values, the knowledge, skills, and attitudes characteristic in physiotherapy to solve specific clinical cases in hospital, out-of-hospital, primary and community health care environments.
Learning outcomes	<b>E5.14.</b> Apply the knowledge and competences acquired in the course to manage clinical cases in the field of thoracic pathologies. <b>Specific objectives:</b> <b>E5.14.1.</b> Interpret spirometry and diagnostic imaging results based on clinical cases. <b>E5.14.2.</b> Interpret gasometry results based on clinical cases.

<b>Competence</b>	<b>E7.</b> Assess the patient’s functional state, taking into account physical, psychological, and social aspects.
Learning outcomes	<b>E7.22.</b> Describe and apply advanced procedures of physiotherapy assessment to determine the degree of impairment of the chest and its possible functional consequences. <b>Specific objectives:</b> <b>E7.22.1.</b> Identify the symptoms and signs of the cardiorespiratory patient and write a medical history. <b>E7.22.2.</b> Assess an adult patient using dyspnoea scales,

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	<p>questionnaires on quality of life, and a test for physical condition.</p> <p><b>E7.22.3.</b> Assess children performing observation, examination, and auscultation.</p> <p><b>E7.22.4.</b> Evaluate the limitations of adult assessment tools when used for children.</p> <p><b>E7.22.5.</b> Use and interpret the respiratory distress test for babies and children.</p>
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<b>Competence</b>	<b>E8.</b> Determine the physiotherapy diagnosis according to established norms and using internationally recognised validation instruments.
Learning outcomes	<p><b>E8.13.</b> Formulate a physiotherapy diagnostic hypothesis in relation to chest conditions.</p> <p><b>Specific objectives:</b></p> <p><b>E8.13.1.</b> Formulate a physiotherapy diagnostic hypothesis based on the patient's assessment and the results of different diagnostic tests.</p>

### Transversal competences

<b>Competence</b>	<b>T5.</b> Problem solving.
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>T5.1.</b> Identify the causes and factors associated with cardiorespiratory pathologies when carrying out the cardiorespiratory assessment of the adult and infant patient, based on clinical cases.</p>

<b>Competence</b>	<b>T7.</b> Team work.
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>T7.1.</b> Carry out the work assigned work meeting the deadlines.</p>

### Generic competences

<b>Competence</b>	<b>G2.</b> Develop strategies of autonomous learning.
Learning outcomes	This is a competence that is developed by working competence "T5. Problem solving" and "T7. Team work".

## CONTENTS

1. Cardiorespiratory assessment of the adult patient.
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2. Cardiorespiratory assessment of the infant patient.
3. Respiratory function tests.
4. Diagnostic imaging.
5. Assessing dyspnoea, quality of life and exercise tolerance.

## TEACHING METHOD AND ACTIVITIES

### DIRECTED ACTIVITIES

- **Theoretical lessons** that will present the aforementioned contents. The lessons will offer visual and computer-based support.

Estimated time: 21 hours.

- **Practical lessons** where the teacher will present, with the help of a model or with audiovisual support, different assessment and treatment techniques.

Estimated time: 13 hours.

- **Presentation and resolution of clinical cases:** Different clinical cases will be presented which the student will have to interpret based on the data given.

Estimated time: 4.5 hours.

### SUPERVISED ACTIVITIES

- **Practical activity**, under the teacher's supervision, to apply the different techniques presented.

Estimated time: 14 hours.

- **Group work** where the students will have to discuss and solve a clinical case of cardiorespiratory physiotherapy.

Estimated time: 27 hours.

### AUTONOMOUS ACTIVITIES

- **Autonomous work** of individual study to prepare exams, organise notes/material, tutorials: individually or in groups.

Estimated time: 17.25 hours.

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ACTIVITY TYPE	ACTIVITY	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Directed activities	Theoretical lessons	E5, E7, E8	21
	Practical lessons	E7, E8	13
	Presentation and resolution of clinical cases	E5, E7, E8, T5, G2	4.5
Supervised activities	Practical activity	E5, E7, E8	14
	Group work	E5, E7, E8, T7	27
Autonomous activities	Autonomous work	E5, E7, E8	17.25
<b>TOTAL NUMBER OF HOURS</b>			<b>96.75</b>

## ASSESSMENT METHOD

The assessment method will include:

- The theoretical knowledge acquired along the course will be assessed through written tests, which will amount to 40% of the final mark.
- Assessment of the manual skills necessary to apply a specific technique and of adequacy of the technique/manoeuvre used in a given situation, through oral practical tests that account for 10% of the final mark.
- The clinical cases presented amount to 25% of the final mark.
- Group work to solve some clinical cases accounts for 25% of the final mark.

In order to pass the course, the following conditions have to be met:

- Pass each section and part of the unit with a minimum mark of 5.
- Attendance at 100% of practical classes (justified absences will allow the student to miss up to 20% of all the practical classes).
- Get a minimum final mark of 5.

Rules concerning internal practical lessons:

Please, check the school's Rules of Internal Practical lessons.

Final evaluation period: from 01/12/2016 to 13/01/2017.

Resit examination period: from 19/12/2016 to 18/01/2017.

Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).

A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.

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ASSESSED ACTIVITIES	PERCENTAGE FINAL MARK	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Written tests	40 %	E5, E7, E8	2
Oral practical tests	10 %	E5, E7, E8	0.25
Clinical cases	25 %	E5, E7, E8, T5, G2	0.5
Group work	25 %	E5, E7, E8, T5, T7	0.5
<b>TOTAL NUMBER OF HOURS</b>			<b>3.25</b>

## BIBLIOGRAPHY AND WEB PAGES / BASIC REQUIRED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
REYCHLER, G., ROESLER, J., DELGUSTE, P.	2009	Kinésithérapie respiratoire		Issy-les - Molineaux	Elsevier Masson
POSTIAUX, G.	2001	Fisioterapia respiratoria en el niño		Madrid	Mc. Graw Hill Interamericana
International Physiotherapy Group for Cystic Fibrosis	2009	Physiotherapy for people with cystic fibrosis: from infant to adult	4 <sup>a</sup>		IPG-CF
SHAPIRO, HARRISON, WALTON		Manejo clínico de los gases sanguíneos			Ediciones Médicas Panamericana
VIDAL, A., PICADO, A		Neumología básica			Idepsa
FARRERAS-ROZMAN		Medicina interna	12 <sup>a</sup>		Doyma
WEBBER BA, PRYOR JA.	1993	Physiotherapy for respiratory and ardiac problems		London	Churchill Livingstone

## PLANNING OF THE COURSE UNIT

Available on the virtual campus for all those students enrolled in this course unit.

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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>THORACIC PHYSIOTHERAPY TREATMENT</b>		
Code	<b>200589</b>	Academic year	<b>2016-2017</b>
ECTS	<b>10</b>	Type of course unit	<b>Optional</b>
Year	<b>4</b>	Term	<b>1</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit		
Language of instruction	<b>CATALAN</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Ms ANNA GARCIA SEGURA</b>
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Office hours	<b>To be agreed on</b>

- Team members

Name of lecturer	<b>Ms GINA MATEU</b>
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Name of lecturer	<b>Ms NÚRIA LÓPEZ</b>
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Name of lecturer	<b>Ms NOELIA CARRASCO</b>
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Office hours	<b>To be agreed on</b>
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## ADMISSION REQUIREMENTS

- There are no official admission requirements but it is advisable to have done and passed “Cardiorespiratory physiotherapy” (third year, second term).

## THE COURSE UNIT WITHIN THE CURRICULUM

- Course contents: Deeper knowledge of physiotherapy for chest conditions.
- This course aims to provide the student with the theoretical knowledge and practical skills necessary to administer scientific evidence-based treatments and good clinical practice in the field of cardiorespiratory physiotherapy.
- The knowledge of specific physiotherapy techniques for the treatment of chest conditions is essential due to the high incidence of these conditions in the adult and child population.

## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

<b>Competence</b>	E3. Demonstrate knowledge of the physiotherapy methods, procedures, and actions that lead to clinical therapeutics.
Learning outcomes	<p><b>E3.22.</b> Apply specific methods and techniques for the treatment of chest conditions.</p> <p><b>Specific objectives:</b></p> <p><b>E3.22.1.</b> Apply ventilatory techniques.</p> <p><b>E3.22.2.</b> Apply techniques to reduce pulmonary hyperinsufflation.</p> <p><b>E3.22.3.</b> Apply techniques of airway permeabilization.</p> <p><b>E3.22.4.</b> Apply basic physiotherapy procedures for thoracic, abdominal and cardiac surgery.</p> <p><b>E3.22.5.</b> Apply basic physiotherapy procedures in inhalation therapies and oxygen therapy.</p> <p><b>E3.22.6.</b> Apply basic physiotherapy procedures for the control of dyspnoea and exertion training in adults.</p> <p><b>E3.22.7.</b> Do physical activities with children affected by cardiorespiratory conditions.</p> <p><b>E3.22.8.</b> Apply re-education techniques for the mobility and stretching of the chest.</p> <p><b>E3.22.9.</b> Apply specific relaxation techniques to children affected by</p>



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	cardiorespiratory diseases. <b>E3.22.10.</b> Apply different mechanical ventilatory methods as a support for the physiotherapy techniques used in the treatment of chronic and acute pathologies. <b>E3.22.11.</b> Be aware of the importance of a good diet and nutrition in the treatment of respiratory diseases. <b>E3.22.12.</b> Describe the main characteristics of the patient's nutritional state and its assessment. <b>E3.22.13.</b> Describe the main nutritional interventions. <b>E3.22.14.</b> Enumerate the main characteristics of artificial nutritional support.
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<b>Competence</b>	<b>E5.</b> Integrate, through clinical experience, ethical and professional values, the knowledge, skills, and attitudes characteristic in physiotherapy to solve specific clinical cases in hospital, out-of-hospital, primary and community health care environments.
Learning outcomes	<b>E5.14.</b> Apply the knowledge and competences acquired in the course to manage clinical cases in the field of thoracic pathologies. <b>Specific objectives:</b> <b>E5.14.1.</b> Choose the most appropriate physiotherapy procedures in the management of specific clinical cases within the field of cardiorespiratory physiotherapy in adults and children suffering from chronic and acute conditions. <b>E5.14.2.</b> Identify, based on some clinical cases, decisive and fostering agents in the family and social environment for the treatment of children.

<b>Competence</b>	<b>E9.</b> Develop a physiotherapy intervention plan according to criteria of adequacy, validity, and efficiency.
Learning outcomes	<b>E9.34.</b> Define the general and specific objectives to administer a physiotherapy treatment for chest conditions. <b>Specific objectives:</b> <b>E9.34.1</b> Identify the main goals in the treatment of the most common cardiorespiratory conditions using a physiotherapy diagnostic hypothesis.  <b>E9.35.</b> Describe the circumstances that determine intervention priorities in a physiotherapy treatment for chest conditions. <b>Specific objectives:</b> <b>E9.35.1.</b> Identify the priorities that need to be dealt with when treating cardiorespiratory alterations according to: <ul style="list-style-type: none"> <li>- whether the condition is acute or chronic,</li> <li>- severity of obstruction,</li> <li>- ventilation,</li> <li>- dyspnoea,</li> <li>- tolerance to exertion,</li> <li>- collaboration and state of consciousness,</li> <li>- family and social environment in children,</li> <li>- type of surgery.</li> </ul> <b>E9.36.</b> Enumerate the different types of material and apparatus to be used in a physiotherapy treatment for thoracic pathologies <b>Specific objectives:</b>

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	<p><b>E9.36.1.</b> Choose and use support tools for ventilatory techniques.</p> <p><b>E9.36.2.</b> Choose and use support tools for the drainage of bronchial secretions.</p> <p><b>E9.36.3.</b> Devise games and tools that help in the physiotherapy treatment administered to children with respiratory problems.</p> <p><b>E9.36.4.</b> Choose the appropriate parameters needed in the treatment with mechanical ventilation.</p> <p><b>E9.36.5.</b> Teach the cardiorespiratory patient how to properly use treatment tools, taking into account the patient's collaboration and understanding.</p>
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### Transversal competences

<b>Competence</b> T7. Team work.	
Learning outcomes	<b>Specific objectives:</b> <b>T7.1.</b> Establish a multidisciplinary team of respiratory care and establish team roles. <b>T7.2.</b> Perform the tasks set by the team within a deadline.

<b>Competence</b> T9. Develop critical thinking.	
Learning outcomes	<b>Specific objectives:</b> <b>T9.2.</b> Justify any decision taken based on the cardiorespiratory patient's problems.

### Generic competences

<b>Competence</b> G1. Develop critical thinking and reasoning and know how to effectively express it both in the student's own languages and in a third language.	
Learning outcomes	<b>Specific objectives:</b> <b>G1.1.</b> Justify any decision taken based on the cardiorespiratory patient's problems.

<b>Competence</b> G2. Develop strategies of autonomous learning.	
Learning outcomes	This is a competence that is developed by working competences "T7. Team work" and "T9. Develop critical thinking".

## CONTENTS

1. Techniques of respiratory re-education in adults.
2. Techniques of respiratory re-education in children.
3. Techniques for the drainage of secretions. Airway permeabilization in adults.
4. Techniques for the drainage of secretions. Airway permeabilization in children.
5. Medication, oxygen therapy.
6. Inhalation therapies.
7. Exertion training. Pulmonary and cardiac rehabilitation.
8. Sport and children with chronic diseases.
9. Mechanical ventilation.
10. Physiotherapy for critically ill patients.
11. Diet and nutrition for respiratory diseases.

## TEACHING METHOD AND ACTIVITIES

### DIRECTED ACTIVITIES

- **Theoretical lessons** that will present the aforementioned contents. The lessons will offer visual and computer-based support.

Estimated time: 19 hours.

- **Practical lessons** where the teacher will present different techniques, both for the assessment and the treatment of the condition, with the help of a model or with audiovisual material.

Estimated time: 15.5 hours.

- **Presentation and resolution of clinical cases.** Different clinical cases will be presented for which the student will have to interpret the data provided and design a treatment of cardiorespiratory physiotherapy.

Estimated time: 6 hours.

### SUPERVISED ACTIVITIES

- **Practical activity**, under the teacher's supervision, to apply the different techniques presented in class.

Estimated time: 19.5 hours.

- **Group work** to design a cardiorespiratory rehabilitation program.

Estimated time: 27.5 hours.

### AUTONOMOUS ACTIVITIES

- **Information search and management** to complement the theoretical lessons taught in the course and assessed through written tests.

Estimated time: 25 hours.

- **Paper writing** based on some articles on cardiorespiratory physiotherapy treatments for adults and children.

Estimated time: 25 hours.

- **Autonomous work** of individual study to prepare exams, organise notes/material, tutorials: individually or in groups.

Estimated time: 109 hours.

ACTIVITY TYPE	ACTIVITY	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Directed activities	Theoretical lessons	E3, E5, E9	19
	Practical lessons	E3	15.5
	Presentation and resolutions of clinical cases	E3, E5, E9, T9, G1, G2	6
Supervised activities	Practical activity	E3, E5	19.5
	Group work	E3, E5, E9, T7	27.5
Autonomous activities	Information search and management	E3, E5	25
	Paper writing	E3, E5, E9, T7, G2	25
	Autonomous work	E3, E5, E9	109
<b>TOTAL NUMBER OF HOURS</b>			<b>246.5</b>

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## ASSESSMENT METHOD

The assessment method will include:

- The theoretical knowledge acquired along the course will be assessed through written tests, which will amount to 20% of the final mark.
- Assessment of the manual skills necessary to apply a specific technique and of adequacy of the technique/manoeuvre used in a given situation, through oral practical tests that account for 60% of the final mark.
- The written papers and clinical cases presented amount to 10% of the final mark.
- Group work to solve some clinical cases accounts for 10% of the final mark.

In order to pass the course, the following conditions have to be met:

- Pass each section and part of the unit with a minimum mark of 5.
- Attendance at 100% of practical classes (justified absences will allow the student to miss up to 20% of all the practical classes).
- Get a minimum final mark of 5.

Rules concerning internal practical lessons:

Please, check the school's Rules of Internal Practical lessons.


Final evaluation period: from 01/12/2016 to 13/01/2017.

Resit examination period: from 19/12/2016 to 18/01/2017.

Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).

A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.


ASSESSED ACTIVITIES	PERCENTAGE FINAL MARK	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Written tests	20 %	E3, E5, E9	2
Oral practical tests	60 %	E3, E5	0.5
Written papers and clinical cases presented	10 %	E3, E5, E9, T7, T9, G1, G2	0.5
Group work	10 %	E3, E5, E9, T7, T9, G1	0.5
<b>TOTAL NUMBER OF HOURS</b>			<b>3.5</b>

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## BIBLIOGRAPHY AND WEB PAGES / BASIC REQUIRED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
CRISTANCHO, W.	2008	Fundamentos de fisioterapia respiratoria y ventilación mecánica	2ª	Bogotá	Manual Moderno
PRYOR, J.A.		Cuidados respiratorios			Ediciones científicas y técnicas, S.A.
DELPLANQUE, D., ANTONELLO, M.	2002	Fisioterapia respiratoria: del diagnóstico al proyecto terapéutico		Barcelona	Masson
DELPLANQUE, D., ANTONELLO, M.	1997	Fisioterapia y reanimación respiratoria: desde la reanimación hasta el regreso al domicilio		Barcelona	Masson
SHAPIRO, BA	1991	Clinical application of respiratory care		Missouri	Mosby year Book
FROWNELTER, D., DEAN, E.	1996	Principles and practice of cardiopulmonary physical therapy	3ª	St. Louis	Mosby year Book
NET, A., BENITO, S.	1998	Ventilación Mecánica	3ª	Barcelona	Springer-Verlag Iberica
NET, A., MANCEBO, J., BENITO, S.	1995	Retirada de la ventilación mecánica		Barcelona	Springer-Verlag Iberica
DELAUNAY J.P.	1998	Conférence de consensus en kinésithérapie respiratoire. Place respective des différentes techniques non instrumentales de désencombrement bronchique			Cah. Kinésithé. Fasc. 192. N°4, 14-22
BARTHE J	2001	Recommandations des Journées Internationales de Kinésithérapie Respiratoire Instrumentale (JIKRI)			Cah. Kinésithé. Fasc. 209-210. N°3-4, 11-25
VILARÓ J., GIMENO, E., BALAÑÁ, A., HERNANDO, C.	2007	Noves propostes terapèutiques en fisioteràpia de les malalties respiratòries infantils.			Pediatría Catalana, 67: 278-284

Articles						
Author	Title	Publication	Volume	Year	Pages	Description/ comment
LIPPINCOTT, WILLIAMS, WILKINS	Incredible easy	Respiratory care		2005		
BARROT, E., SÁNCHEZ, E.	Ventilación mecánica no invasiva	Respira		2008		

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## BIBLIOGRAPHY AND WEB PAGES / BASIC RECOMMENDED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
DIAZ, E.	2008	Enfermería cardiovascular		Bogotá	Distriburna
	2007	Los tres pilares del tratamiento en Fibrosis Quística		Valencia	Federación Española contra la Fibrosis Quística
LACAN, C.	1991	Kinésithérapie respiratoire du tout petit			Sauramps médical
VINÇON C, FAUSSER, C.	1989	Kinésithérapie respiratoire en pédiatrie		Paris	Masson

Articles						
Author	Title	Publication	Volume	Year	Pages	Description/ comment
WONG, I., FOC, TF.	Randomized comparison of two physiotherapy regimens for correcting atelectasis in ventilated pre-term neonates.	Hong Kong Physiotherapy Journal	21	2003	43-50	
HERRY,S., MICHEL, F.	Kinésithérapie respiratoire et prématurité.	Kinésithérapie scientifique	446 (3)	2004	35-42	
HERRY, S.	Techniques kinésithérapiques spécifiques aux prématurés	Kinésithérapie scientifique	484	2008	33-45	
HERRY, S	Téchnique insufflatoire de levée d'atélectasie (TILA) en réanimation néonatal.	Kinésithérapie revue	65	2007	30-40	
LANNEFORS, L., BUTTON, BM., Mc ILWAINE, M.	Physiotherapy in infants and young children with cystic fibrosis: current practice and future developments	J R Soc Med.	97 (supl.44)	2004	8-25	
OBERWALDNER, B.	Physiotherapy for airway clearance in pediatrics	Eur. Respir J	15	2000	196-204	

Web pages		
Title	Description	URL
	Fibrosi Quística	<a href="http://www.fibrosis.org">www.fibrosis.org</a>
	Curs on-line sobre embriologia desenvolupat per universitats de Suïssa. Per entendre gènesis òrgans	<a href="http://www.embryology.ch">www.embryology.ch</a>

## PLANNING OF THE COURSE UNIT

Available on the virtual campus for all those students enrolled in this course unit.

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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>PATHOPHYSIOLOGY OF SPORTS INJURIES, PHYSIOLOGY OF EFFORT, AND THEORY OF TRAINING.</b>		
Code	<b>200574</b>	Academic year	<b>2016-2017</b>
ECTS	<b>5</b>	Type of course unit	<b>Optional</b>
Year	<b>4</b>	Term	<b>1</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit		
Language of instruction	<b>CATALAN</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Ms ESTHER SALA I BARAT</b>
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- Team members

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Name of lecturer	<b>Ms CLAUDI PONS XANDRÍ</b>
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Office hours	<b>To be agreed on</b>

## ADMISSION REQUIREMENTS

- There are no official admission requirements but it is advisable to have done and passed "Physiotherapy in clinical specialties in the locomotor system –IV" (third year, second term).



## THE COURSE UNIT WITHIN THE CURRICULUM

- Course contents: Sports physiotherapy.
- This course aims to consolidate the knowledge that will allow the student to better understand the pathophysiology of sports injuries and their mechanisms, the physiology of effort, and the theory of training.
- The knowledge of the different physiological mechanisms that contribute to the maintenance of human homeostasis in relation to sports, the understanding of the pathophysiology of sports injuries and the theory of training are basic and essential within the studies in physiotherapy and the field of sports physiotherapy.

## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

<b>Competence</b>	<b>E1.</b> Demonstrate knowledge of the morphology, physiology, pathology, and conduct of both healthy and ill people in their natural and social environment.
Learning outcomes	<p><b>E1.30.</b> Explain the pathophysiology of sports injuries.</p> <p><b>Specific objectives:</b></p> <p><b>E1.30.1.</b> Describe the physiological and structural changes that can be caused in the different body systems as a consequence of an injury process.</p> <p><b>E1.30.2.</b> Identify the different injuries caused by sports practice.</p> <p><b>E1.30.3.</b> Enumerate the mechanisms that cause injuries for each sports discipline.</p> <p><b>E1.30.4.</b> Distinguish between muscular problems, tendinopathies, and lesions due to overexertion.</p> <p><b>E1.30.5.</b> Describe the cardiovascular, respiratory, and muscular adaptations of the human body to sport.</p> <p><b>E1.20.6.</b> Explain the influence of functional capacity and fatigue on sports performance.</p> <p><b>E1.30.7.</b> Describe the energy sources linked to sports practice.</p> <p><b>E1.30.8.</b> Relate physical exercise to environmental stress.</p> <p><b>E1.30.9.</b> Relate physical exercise to different age ranges.</p> <p><b>E1.31.</b> Enumerate the medico-surgical treatments, particularly those aspects related to physiotherapy and orthopaedics, for sports injuries.</p> <p><b>Specific objectives:</b></p> <p><b>E1.31.4.</b> Describe the different medico-surgical treatments for the most common sports injuries.</p>

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<b>Competence</b>	<b>E3.</b> Demonstrate knowledge of the physiotherapy methods, procedures, and actions that lead to clinical therapeutics.	
Learning outcomes	<p><b>E3.23.</b> Apply specific methods and techniques for the treatment of sports injuries.</p> <p><b>Specific objectives:</b></p> <p><b>E3.23.1.</b> Enumerate the basic principles of training.</p> <p><b>E3.23.2.</b> Define the basic concepts of sports training: planning, training principles and the components of training load</p> <p><b>E3.23.3.</b> Explain the morpho-functional and structural changes in the human body as a consequence of training.</p> <p><b>E3.23.4.</b> Distinguish the different training types and methods.</p> <p><b>E3.23.5.</b> Describe basic physical and coordinative abilities.</p> <p><b>E3.23.6.</b> Apply basic physical and coordinative abilities to training planning.</p> <p><b>E3.23.7.</b> Adapt training to specific populations: children, elderly people, recovery from sports injuries...</p> <p><b>E3.23.8.</b> Establish the base for planning sports training according to different goals.</p> <p><b>E3.23.9.</b> Apply basic warm-up and compensatory exercises to sports practice.</p>	

<b>Competence</b>	<b>E4.</b> Demonstrate knowledge of the physiotherapy methods, procedures, and actions that contribute to health promotion and maintenance.	
Learning outcomes	<p><b>E4.7.</b> Apply specific physiotherapy methods to prevent any possible sports injuries.</p> <p><b>Specific objectives:</b></p> <p><b>E4.7.1.</b> Explain the risk factors of sport resulting in the appearance of injuries.</p>	

### Transversal competences

<b>Competence</b>	<b>T5.</b> Problem solving.	
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>T5.1.</b> Develop an intervention plan for the re-adaptation to effort after a sports injury.</p>	

### Generic competences

<b>Competence</b>	<b>G2.</b> Develop strategies of autonomous learning.	
Learning outcomes	This is a competence that is developed by working competence "T5. Problem solving".	

## CONTENTS

1. Pathophysiology of sports injuries
  - 1.1. Muscular pathologies.
  - 1.2. Tendinopathies.
  - 1.3. Overexertion injuries.
  - 1.4. Pathology of the shoulder.
  - 1.5. Pathology of the elbow.
  - 1.6. Pathology of the hand.
  - 1.7. Pathology of the knee.
  - 1.8. Pathology of the ankle.
2. Physiology of effort
  - 2.1. Cardiovascular adaptation to sport.
  - 2.2. Respiratory adaptation to sport.
  - 2.3. Muscular adaptation to sport.
  - 2.4. Functional capacity and sports performance.
  - 2.5. Energy sources.
  - 2.6. Fatigue and sports performance.
  - 2.7. Environmental stress and physical exercise.
  - 2.8. Age and physical exercise.
3. Theory of training
  - 3.1. Sports training.
  - 3.2. Basic physical and coordinative abilities.
  - 3.3. Re-adaptation to sports training after some common injuries.

## TEACHING METHOD AND ACTIVITIES

### DIRECTED ACTIVITIES

- **Theoretical lessons** that will provide the student with the knowledge to understand the pathophysiological and physiological mechanisms that contribute to the maintenance of human homeostasis in relation to sports and the different theories of training. The lessons will offer visual and computer-based support.

Estimated time: 34.5 hours.

- **Practical lessons** where the teacher will present, with the help of a model or with audiovisual support, different techniques.

Estimated time: 3 hours.

### AUTONOMOUS ACTIVITIES

- **Information search and management** to complement the theoretical lessons taught in the course to design the planning of re-adaptation to effort.

Estimated time: 15 hours.


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- **Design a weekly planner** of re-adaptation to effort after a sports injury based on a specific case.  
Estimated time: 15 hours.
- **Autonomous work** of individual study to prepare exams, organise notes/material, tutorials: individually or in groups.  
  
Estimated time: 55.25 hours.

ACTIVITY TYPE	ACTIVITY	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Directed activities	Theoretical lessons	E1, E3, E4	34.5
	Practical lessons	E1, E3, E4	3
Autonomous activities	Information search and management	E1, E3, E4	15
	Paper writing	E1, E3, E4, T5, G2	15
	Autonomous work	E1, E3, E4	55.25
<b>TOTAL NUMBER OF HOURS</b>			<b>122.75</b>

## ASSESSMENT METHOD

- The assessment method will include:
- The theoretical knowledge acquired along the course will be assessed through written tests, which will amount to 70% of the final mark.
  - The written papers amount to 30% of the final mark.
- In order to pass the course, the following conditions have to be met:
- Pass each section and part of the unit with a minimum mark of 5.
  - Attendance at 100% of practical classes (justified absences will allow the student to miss up to 20% of all the practical classes).
  - Get a minimum final mark of 5.
- Rules concerning internal practical lessons:  
Please, check the school's Rules of Internal Practical lessons.
- Final evaluation period: from 01/12/2016 to 13/01/2017.
- Resit examination period: from 19/12/2016 to 18/01/2017.
- Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).
- A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.

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ASSESSED ACTIVITIES	PERCENTAGE FINAL MARK	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Written tests	70%	E1, E3, E4	2
Written papers	30%	E1, E3, E4, T5, G2	0.25
<b>TOTAL NUMBER OF HOURS</b>			<b>2.25</b>

## BIBLIOGRAPHY AND WEB PAGES / BASIC REQUIRED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Jens Freeese	2006	Fitness terapèutic. Criterios para la recuperación de las lesiones.	1ª	Barcelona	Ed paidotribo
Bob Anderson	1995	Estar en forma. Programa de ejercicios más eficaz para ganar fuerza, flexibilidad y resistencia.		Barcelona	Ed Burke y Bill Pearl. Ed Paidotribo
López Chicharro & Fernández Vaquero	2006	Fisiología del Ejercicio	3ª	Madrid	Editorial Médica Panamericana
Chad Starkey S.	2012	Patología ortopédica y lesiones deportivas.	2ª	Madrid	Médica Panamericana
Brukner P.	2009	Clinical sports medicine	3ª	Madrid	Lange Medical Books
Greene W B.	2006	Netter Ortopedia	1ª	Barcelona	Elsevier
Balius Matas R, Rius Vilarrubia M, Combalia Aleu A	2005	Ecografía muscular de la extremidad inferior: sistemática de exploración y lesiones en el deporte	1ª	Barcelona	Masson


## BIBLIOGRAPHY AND WEB PAGES / BASIC RECOMMENDED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Fox Stuart	2008	Fisiología Humana	7ª	Madrid	McGraw-Hill
Nordin, M.; Frankel, V.	2004	Biomecánica básica del sistema musculoesquelético	3ª	Madrid	McGraw-Hill Interamericana
Pocock G.	2010	Fisiología Humana. La base de la Medicina	2ª	Barcelona	Masson
Netter, F.H.	2007	Atlas de anatomía humana	4a	New Jersey	Masson
Guyton&Hall	2009	Compendio de Fisiología	11ª	Madrid	Elsevier
Gonzalez Gallego, J. Sánchez Collado P. Mataix Verdú, J.	2006	Nutrición en el deporte. Ayudas ergogénicas y dopaje.	1ª	Madrid	Díaz de Santos
Bahr	2007	Lesiones deportivas: diagnóstico, tratamiento y rehabilitación.	1ª	Madrid	Médica Panamericana

Web pages			
Title	Description	URL	
Apunts de medicina de l'esport		<a href="http://www.apunts.org/">http://www.apunts.org/</a>	

## PLANNING OF THE COURSE UNIT

Available on the virtual campus for all those students enrolled in this course unit.

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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>ASSESSMENT OF SPORTS INJURIES AND PHYSIOTHERAPY DIAGNOSIS</b>		
Code	<b>200590</b>	Academic year	<b>2016-2017</b>
ECTS	<b>3</b>	Type of course unit	<b>Optional</b>
Year	<b>4</b>	Term	<b>1</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit		
Language of instruction	<b>CATALAN</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Mr MIQUEL ÀNGEL COS I MORERA</b>
e-mail	<a href="mailto:mcos@car.edu">mcos@car.edu</a>
Office hours	<b>To be agreed on</b>

- Team members

Name of lecturer	<b>Mr ALFONS MASCARÓ I VILELLA</b>
e-mail	<a href="mailto:alfons.mascaro@eug.es">alfons.mascaro@eug.es</a>
Office hours	<b>To be agreed on</b>

## ADMISSION REQUIREMENTS

- There are no official admission requirements but it is advisable to have done and passed "Physiotherapy in clinical specialties in the locomotor system –IV" (third year, second term).

## THE COURSE UNIT WITHIN THE CURRICULUM

- Course contents: Sports physiotherapy.
- This course aims to provide the student with the necessary tools to assess sports injuries and the functional status of sportspeople and make a correct diagnosis within the field of sports physiotherapy.
- Knowing how to assess sports injuries and how to make an accurate physiotherapy diagnosis is basic and essential for those who would like to specialise in sports physiotherapy.

## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

<b>Competence</b>	<b>E5.</b> Integrate, through clinical experience, ethical and professional values, the knowledge, skills, and attitudes characteristic in physiotherapy to solve specific clinical cases in hospital, out-of-hospital, primary and community health care environments.
Learning outcomes	<p><b>E5.15.</b> Apply the knowledge and competences acquired in the course to manage clinical cases of patients with sports-related injuries.</p> <p><b>Specific objectives:</b></p> <p><b>E5.15.1.</b> Apply the physiological and pathophysiological knowledge to the practice of physiotherapy in order to assess and diagnose sports injuries based on some clinical cases.</p> <p><b>E5.15.2.</b> Design a specific assessment protocol for some clinical cases.</p> <p><b>E5.15.3.</b> Choose the most appropriate assessment tools used in sports physiotherapy in order to measure a specific disorder within the framework of the clinical cases presented in class.</p>

<b>Competence</b>	<b>E7.</b> Assess the patient's functional state, taking into account physical, psychological, and social aspects.
Learning outcomes	<p><b>E7.23.</b> Describe and apply procedures of physiotherapy assessment to any disorder caused by sports-related injuries and their possible functional consequences.</p> <p><b>Specific objectives:</b></p> <p><b>E7.23.1.</b> Make a complete physiotherapy medical history including anamnesis and physical examination in the field of sports physiotherapy.</p> <p><b>E7.23.2.</b> Make a complete physical and functional examination in the field of sports physiotherapy.</p> <p><b>E7.23.3.</b> Describe the different complementary tests necessary to make a medical diagnosis in the field of sports medicine.</p> <p><b>E7.23.4.</b> Identify the root causes of a sports injury.</p> <p><b>E7.23.5.</b> Identify any postural and dynamic alterations of the trunk and limbs that can lead to a sports injury.</p> <p><b>E7.23.6.</b> Use adequately assessment tests to make a diagnosis in sports physiotherapy.</p>

<b>Competence</b>	<b>E8.</b> Determine the physiotherapy diagnosis according to established norms and using internationally recognised validation instruments.
Learning outcomes	<p><b>E8.14.</b> Formulate a physiotherapy diagnostic hypothesis in relation to patients with sports-related injuries.</p> <p><b>Specific objectives:</b></p> <p><b>E8.14.1.</b> Identify local, regional or global deficiencies in patients with sports injuries in order to be able to make a functional diagnostic hypothesis.</p>



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### Transversal competences

<b>Competence</b> T5. Problem solving.	
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>T5.1.</b> Formulate explicative hypotheses that can connect three parameters: structural and functional alterations, activity limitations, and participation restrictions.</p> <p><b>T5.2.</b> Choose the most appropriate assessment technique to diagnose different muscular and articular alterations in sportspeople, based on some clinical cases.</p>

<b>Competence</b> T7. Team work.	
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>T7.1.</b> Accept and comply with the team norms. Collaborate in the definition, organisation, and distribution of bibliographic research of the diagnosis and assessment of a sports-related injury to be presented and debated in class.</p> <p><b>T7.2.</b> Assess the attitude of the members of the group using an assessment questionnaire.</p> <p><b>T7.3.</b> Perform the tasks set by the team within a deadline.</p>

<b>Competence</b> T9. Develop critical thinking.	
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>T9.1.</b> Revise, in the bibliography, those issues that can contribute critical elements to the physiotherapy examination of the locomotor system.</p> <p><b>T9.2.</b> Assess the differences and similarities of the different assessment and examination methods for sports injuries used in physiotherapy.</p> <p><b>T9.3.</b> Choose the most appropriate techniques for the physiotherapy diagnosis of different clinical cases, justifying any decision taken in relation to state-of-the art knowledge in neurophysiology and neuroscience.</p>

### Generic competences

<b>Competence</b> G1. Develop critical thinking and reasoning and know how to effectively express it both in the student's own languages and in a third language.	
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>G1.1.</b> Revise, in the bibliography, those issues that can contribute critical elements to the physiotherapy examination of the locomotor system.</p> <p><b>G1.2.</b> Assess the differences and similarities of the different assessment and examination methods for sports injuries used in physiotherapy.</p> <p><b>G1.3.</b> Choose the most appropriate techniques for the physiotherapy diagnosis of different clinical cases, justifying any decision taken in relation to state-of-the art knowledge in neurophysiology and neuroscience.</p>

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<b>Competence</b>	<b>G2.</b> Develop strategies of autonomous learning.
Learning outcomes	This is a competence that is developed by working competence “T5. Problem solving”, “T7. Team work” and “T9. Develop critical thinking”.

## CONTENTS

1. Assessment of biomechanical disorders of the musculoskeletal system.
2. Origin and evolution of manual manipulative therapies.
3. Concept of neurophysiological lesions.
4. Concept of vertebral lesion.
5. Assessment test for the spine, pelvis and sacrum.
6. Interpretation of the lesional chain of the lower limbs.
7. Analytical and holistic assessment of biomechanical alterations in the limbs.
8. The shoulder.

## TEACHING METHOD AND ACTIVITIES

### DIRECTED ACTIVITIES

- **Theoretical lessons** that will provide the student with the basics of physiotherapy diagnosis and assessment of biomechanical disorders of the musculoskeletal system of sportspeople. The lessons will offer visual and computer-based support.

Estimated time: 6 hours.

- **Practical lessons** where the teacher will present, with the help of a model or with audiovisual support, different assessment and treatment techniques.

Estimated time: 6 hours.

- **Presentation and resolution of clinical cases.** Different clinical cases will be presented for which the student will make a report on the physiotherapy diagnosis and give an oral presentation on a clinical case of a biomechanical disorder of the musculoskeletal system.

Estimated time: 7.5 hours.

### SUPERVISED ACTIVITIES

- **Practical activity** under the teacher’s supervision, to apply the different techniques presented.

Estimated time: 12 hours.

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- **Group work** to write about the different clinical cases that will be orally presented by all the members of the group.

Estimated time: 18 hours.

#### **AUTONOMOUS ACTIVITIES**

- **Autonomous work** of individual study to prepare exams, organise notes/material, tutorials: individually or in groups.

Estimated time: 22.75 hours.

ACTIVITY TYPE	ACTIVITY	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Directed activities	Theoretical lessons	E5, E7, E8	6
	Practical lessons	E7, E8	6
	Presentation and resolution of clinical cases	E5, E7, E8, T5, T9, G1, G2	7.5
Supervised activities	Practical activity	E5, E7, E8	12
	Group work	E5, E7, E8, T7, T9, G1	18
Autonomous activities	Autonomous work	E5, E7, E8	22.75
<b>TOTAL NUMBER OF HOURS</b>			<b>72.25</b>

## ASSESSMENT METHOD

The assessment method will include:

- The theoretical knowledge acquired along the course will be assessed through written tests, which will amount to 30% of the final mark.
- Assessment of the manual skills necessary to apply a specific technique and of adequacy of the technique/manoeuvre used in a given situation, through oral practical tests that account for 50% of the final mark.
- Group work to solve some clinical cases accounts for 20% of the final mark.

In order to pass the course, the following conditions have to be met:

- Pass each section and part of the unit with a minimum mark of 5.
- Attendance at 100% of practical classes (justified absences will allow the student to miss up to 20% of all the practical classes).
- Get a minimum final mark of 5.

Rules concerning internal practical lessons:

Please, check the school's Rules of Internal Practical lessons.


Final evaluation period: from 01/12/2016 to 13/01/2017.

Resit examination period: from 19/12/2016 to 18/01/2017.

Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).

A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.

ASSESSED ACTIVITIES	PERCENTAGE FINAL MARK	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Written tests	30 %	E5, E7, E8	2
Oral practical tests	50 %	E5, E7, E8	0.5
Group work	20 %	E5, E7, E8, T7, T9, G1	0.25
<b>TOTAL NUMBER OF HOURS</b>			<b>2.75</b>


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## BIBLIOGRAPHY AND WEB PAGES / BASIC REQUIRED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Irvin Korr	2004	Bases fisiològiques de la osteopàtia	1ª	Madrid	Mandala
Serge Tixa	2012	Atlas de tècniques articulares osteopàtiques de las extremidades	1ª	Barcelona	Masson
Philip E. Greenman	2005	Principios y práctica de la medicina manual.	3ª	Madrid	Panamericana
Joshua Cleland	2006	Netter. Exploración clínica en ortopedia	1ª	Barcelona	Elsevier-Masson
Hoppenfeld, S.	1979	Exploración física de la columna vertebral y las extremidades.	18a	Mèxic	Manual Moderno
Lederman E.	2010	Neuromuscular Rehabilitation in Manual and Physical Therapies: Principles to Practice	1ª	Edinburgh	Churchill Livingstone
Brukner P, Khan K.	2010	Clinical Sports Medicine	3ª	Sydney	McGraw-Hill
Myers TW.	2009	Anatomy Trains: Myofascial Meridians for Manual and Movement Therapists	2ª	United Kingdom	Churchill Livingstone
Boyle M.	2004	Functional Training for Sports	1ª	Champaign	Human Kinetics
Rockwood Ch	2006	Hombro	1ª	Barcelona	Marban
François Ricard	2008	Tratado de Osteopatía visceral y medicina interna, sistema digestivo.	1ª	Madrid	Panamericana

## BIBLIOGRAPHY AND WEB PAGES / BASIC RECOMMENDED READINGS


Books					
Author/s	Year	Title	Edition	City	Publisher
Shneider, W.; Dvôrák, J.; Tristchler, T.	1993	Medicina manual. Diagnóstico	2ª	Barcelona	Scriba
Tixa, S.	2006	Atlas de anatomía palpatoria de la extremidad inferior. Investigación manual de superficie	2a	Barcelona	Masson
James T.S Meadows, BScPT	2000	Diagnóstico diferencial en fisioterapia	1ª	Madrid	Interamericana
Ballester J	2000	Desalineaciones torsionales de las extremidades inferiores. Implicaciones clinicopatológicas	1ª	Barcelona	Masson
Martinez JL	2006	Lesiones en el hombro y fisioterapia	1ª	Madrid	Aran
Hebgen, Eric	2005	Osteopatía Visceral, fundamentos y técnicas	2ª	Madrid	Mc Graw Hill
Balius Matas R.	2004	Patología muscular en el deporte: diagnóstico, tratamiento y recuperación funcional.	1ª	Barcelona	Masson
Rafael Torres Cueco	2008	La Columna cervical. Tomo 1 - Evaluación Clínica y	1ª	Madrid	Panamericana

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Rafael Torres Cueco	2008	Aproximaciones Terapéuticas La Columna cervical. Tomo 2 - Síndromes Clínicos y su Tratamiento Manipulativo	1ª	Madrid	Panamericana
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## PLANNING OF THE COURSE UNIT

Available on the virtual campus for all those students enrolled in this course unit.

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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>TREATMENT AND PREVENTION OF SPORTS INJURIES</b>		
Code	<b>200588</b>	Academic year	<b>2016-2017</b>
ECTS	<b>10</b>	Type of course unit	<b>Optional</b>
Year	<b>4</b>	Term	<b>1</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit.		
Language of instruction	<b>CATALAN</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Mr MIQUEL ÀNGEL COS I MORERA</b>
e-mail	<a href="mailto:mcos@car.edu">mcos@car.edu</a>
Office hours	<b>To be agreed on</b>

- Team members

Name of lecturer	<b>Mr JOSÉ ANTONIO BOVÉ PÉREZ</b>
e-mail	<a href="mailto:tbove@tonibove.net">tbove@tonibove.net</a>
Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Mr ALFONS MASCARÓ I VILELLA</b>
e-mail	<a href="mailto:alfons.mascaro@eug.es">alfons.mascaro@eug.es</a>
Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Ms PATRÍCIA MORALES ALONSO</b>
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Name of lecturer	<b>Mr ANTONI MORRAL FERNÁNDEZ</b>
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Name of lecturer	<b>Ms TERESA XIPELL I PRUNES</b>
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Name of lecturer	<b>Dr JOSEP MEDINA</b>
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Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Mr DIEGO ALONSO</b>
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Office hours	<b>To be agreed on</b>

	<b>PHYSIOTHERAPY (EHEA DEGREE)</b> <b>COURSE CATALOGUE</b>	<b>EUIF GIMBERNAT</b> Physiotherapy
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## ADMISSION REQUIREMENTS

- There are no official admission requirements but it is advisable to have done and passed “Physiotherapy in clinical specialties in the locomotor system –IV” (third year, second term).

## THE COURSE UNIT WITHIN THE CURRICULUM

- Course contents: Sports physiotherapy.
- The increase in life expectancy is one of the main goals in our society and, no doubt, sport is one of the main activities aiming to this goal. Sport is practised at all ages and at all levels, encouraging good health. Unfortunately, physical exercise involves some risk of lesion, which requires specialised treatment in order to solve the problem satisfactorily. Sports physiotherapists have to be able to design prevention and therapeutic programmes for the most common sports-related injuries at a professional, amateur or leisure level. The knowledge of different physiotherapy methods applied to sports injuries is essential to work as a sports physiotherapist.

## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

<b>Competence</b>	<b>E3.</b> Demonstrate knowledge of the physiotherapy methods, procedures, and actions that lead to clinical therapeutics.
Learning outcomes	<p><b>E3.23.</b> Apply specific methods and techniques for the treatment of sports injuries.</p> <p><b>Specific objectives:</b></p> <p><b>E3.23.1.</b> Apply manual therapies to the practice of sport.</p> <p><b>E3.23.2.</b> Use functional bandages in the treatment of different sports injuries.</p> <p><b>E3.23.3.</b> Use proprioception as a method of neuromotor reprogramming in the field of sport.</p> <p><b>E3.23.4.</b> Use electrotherapy and dynamic electrostimulation in the treatment of sports injuries as a principal or complementary method.</p> <p><b>E3.23.5.</b> Describe the functioning of the different physical therapies used within the field of sports using the necessary physics concepts.</p> <p><b>E3.23.6.</b> Describe the physiological effects of the application of different physical therapies on the human body.</p> <p><b>E3.23.7.</b> Enumerate the indications, contraindications and precautions of the different physical therapies used in sports medicine.</p>



	<p><b>E3.23.8.</b> Describe the scientific evidences that support the different physical therapies used in sports physiotherapy.</p> <p><b>E3.23.9.</b> Explain the mechanisms of pain and nociception derived from the practice of sport, using the necessary concepts in neuroscience.</p> <p><b>E3.23.10.</b> Apply the different techniques of muscular stretching to sports.</p> <p><b>E3.23.11.</b> Use concentric and eccentric isometric muscular work taking into account the muscular and tendinous injuries of the sportsperson.</p> <p><b>E3.23.12.</b> Explain and treat the biomechanical disorders associated with sports injuries.</p> <p><b>E3.23.13.</b> Explain and treat the biomechanical disorders associated with chronic lumbar and cervical pain in sportspeople.</p> <p><b>E3.23.14.</b> Apply the different myotensive techniques for the spine and pelvis in the treatment of sports injuries.</p> <p><b>E3.23.15.</b> Normalise function with the use of neuromuscular active training.</p> <p><b>E3.23.16.</b> Apply basic life support measures and/or automated external defibrillation in situations in which these are required.</p>
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<b>Competence</b>	<b>E4.</b> Demonstrate knowledge of the physiotherapy methods, procedures, and actions that contribute to health promotion and maintenance.
Learning outcomes	<p><b>E4.7.</b> Apply specific physiotherapy methods to prevent any possible sports injuries.</p> <p><b>Specific objectives:</b></p> <p><b>E4.7.1.</b> Apply different strategies to do fieldwork that completes the recovery from a lesion and minimises the risk of lesion relapses by designing prevention programmes for sports injuries.</p> <p><b>E4.7.2.</b> Apply strategies to face long-term lesions or lesions that do not develop normally and do not correlate with an established prognosis.</p> <p><b>E4.7.3.</b> Apply specific action programmes for health maintenance and promotion and prevention of sports injuries.</p> <p><b>E4.7.4.</b> Explain physical and sports activities for the disabled, including adapted sport, its modalities, tendencies and resources.</p> <p><b>E4.7.5.</b> Describe the basic principles of hippotherapy.</p> <p><b>E4.7.6.</b> Explain the process that takes the patient from hippotherapy, going through therapeutic riding, to horse riding as a form of sport and competition.</p>

<b>Competence</b>	<b>E5.</b> Integrate, through clinical experience, ethical and professional values, the knowledge, skills, and attitudes characteristic in physiotherapy to solve specific clinical cases in hospital, out-of-hospital, primary and community health care environments.
Learning outcomes	<p><b>E5.15.</b> Apply the knowledge and competences acquired in the course to manage clinical cases of patients with sports-related injuries.</p> <p><b>Specific objectives:</b></p> <p><b>E5.15.1.</b> Choose specific treatment protocols for different clinical cases in the field of sports.</p>

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<b>Competence</b>	<b>E9.</b> Develop a physiotherapy intervention plan according to criteria of adequacy, validity, and efficiency.
Learning outcomes	<p><b>E9.37.</b> Define the general and specific goals of the physiotherapy treatment for sports-related injuries.  <b>Specific objectives:</b>  <b>E9.37.1.</b> Develop a physiotherapy intervention plan in the field of sports and define its treatment goals.</p> <p><b>E9.38.</b> Describe the factors that affect the intervention priorities of a physiotherapy treatment for sports-related injuries.  <b>Specific objectives:</b>  <b>E9.38.1.</b> Identify the priorities that need to be dealt with when treating sports-related injuries based on the type of injury, its severity, the presence of pain, whether it is acute or chronic, the type of surgery required, and the specific sport discipline.</p> <p><b>E9.39.</b> Enumerate the different types of material and equipment used in the physiotherapy treatment of sports-related injuries.  <b>Specific objectives:</b>  <b>E9.39.1.</b> Choose the most appropriate material and equipment for the physiotherapy treatment of sports-related injuries: type of bandage, electrotherapy machines, and proprioception material.</p>

### Transversal competences

<b>Competence</b>	<b>T5.</b> Problem solving.
Learning outcomes	<p><b>Specific objectives:</b>  <b>T5.1.</b> Plan the treatment of a clinical case based on the data obtained during the physiotherapy assessment.  <b>T5.2.</b> Choose the most appropriate technique in the treatment of different muscular and articular alterations in sportspeople, based on some clinical cases.</p>

<b>Competence</b>	<b>T7.</b> Team work.
Learning outcomes	<p><b>Specific objectives:</b>  <b>T7.1.</b> Accept and comply with the team norms. Collaborate in the definition, organisation, and distribution of bibliographic research of a sports-related injury to be presented and debated in class.  <b>T7.2.</b> Explain the competences of the members that form the multidisciplinary team in the field of sports medicine.  <b>T7.3.</b> Perform the tasks set by the team within a deadline.</p>

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<b>Competence</b> T9. Develop critical thinking.	
<b>Learning outcomes</b>	<b>Specific objectives:</b> <b>T9.1.</b> Justify any decision taken when facing basic problems of sport-related injuries, based on some clinical cases. <b>T9.2.</b> Assess the differences and similarities of the different physiotherapy methods for sports injuries. <b>T9.3.</b> Evaluate the sport physiotherapy treatments presented in class, articles, etc. <b>T9.4.</b> Choose the most appropriate techniques for the treatment of different clinical cases, justifying and relating any decision taken to current neurophysiological and neuroscientific knowledge.

### Generic competences

<b>Competence</b> G1. Develop critical thinking and reasoning and know how to effectively express it both in the student's own languages and in a third language.	
<b>Learning outcomes</b>	<b>Specific objectives:</b> <b>G1.1.</b> Justify any decision taken when facing basic problems of sport-related injuries, based on some clinical cases. <b>G1.2.</b> Assess the differences and similarities of the different physiotherapy methods for sports injuries. <b>G1.3.</b> Evaluate the sport physiotherapy treatments presented in class, articles, etc. <b>G1.4.</b> Choose the most appropriate techniques for the treatment of different clinical cases, justifying and relating any decision taken to current neurophysiological and neuroscientific knowledge.

<b>Competence</b> G2. Develop strategies of autonomous learning.	
<b>Learning outcomes</b>	This is a competence that is developed by working competence "T5. Problem solving", "T7. Team work" and "T9. Develop critical thinking".

## CONTENTS

1. Structural and myotensive techniques of the musculoskeletal system.
2. Muscular pathologies. Soft tissue regeneration.
3. Tendinous pathologies. Soft tissue regeneration.
4. Treatment and prevention of sports injuries using physical agents (based on scientific evidence).
5. Chronic lumbar pain: lumbo-pelvic-coxofemoral stabilization. Chronic cervical pain: cervical stabilization.
6. The tasks of the team/on-field physiotherapist.
7. Functional bandages / neuromuscular bandages.
8. Hippotherapy.
9. Basic principles of sport and disabilities.
10. Basic life support measures.

## TEACHING METHOD AND ACTIVITIES

### DIRECTED ACTIVITIES

- **Theoretical lessons** that will provide the student with the basics of the process of the physiotherapy treatment, prevention of sports injuries and readaptation to physical activity and sport.

Estimated time: 19.5 hours.

- **Practical lessons** where the teacher will present, with the help of a model or with audiovisual support, different assessment and treatment techniques.

Estimated time: 22.5 hours.

- **Presentation and resolution of clinical cases.** Different clinical cases will be presented for which the student will have to make a physiotherapy diagnostic report including an appropriate treatment, follow-up plans, and plans of readaptation to sport. The reports will be based on a biomechanical disorder of the musculoskeletal system.

Estimated time: 13.5 hours.

### SUPERVISED ACTIVITIES

- **Practical Activity**, under the teacher's supervision, to apply the different techniques presented.

Estimated time: 30 hours.

- **Group work** to write different papers related to the treatment and prevention of sports-related injuries.

Estimated time: 30 hours.

### AUTONOMOUS ACTIVITIES

- **Information search and management** to complement the theoretical lessons taught in the course to write a paper in groups and a report on some clinical cases.

Estimated time: 25 hours.

- Based on a clinical case, the student will make a **physiotherapy diagnostic report** including an appropriate treatment, follow-up plans, and plans of readaptation to sport. The report will be based on a biomechanical disorder of the musculoskeletal system.

Estimated time: 25 hours.

- **Autonomous work** of individual study to prepare exams, organise notes/material, tutorials: individually or in groups.

Estimated time: 80.75 hours.

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ACTIVITY TYPE	ACTIVITY	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Directed activities	Theoretical lessons	E3, E4, E5, E9	19.5
	Practical lessons	E3, E4	22.5
	Presentation and resolution of clinical	E3, E4, E5, E9, T5, T9, G1, G2	13.5
Supervised activities	Practical activity	E3, E4, E5	30
	Group work	E3, E4, E5, E9, T7, T9, G1	30
Autonomous activities	Information search and management	E3, E4, E5	25
	Diagnostic report	E3, E4, E5, E9, T5, T7, T9, G1, G2	25
	Autonomous work	E3, E4, E5, E9	80.75
<b>TOTAL NUMBER OF HOURS</b>			<b>246.25</b>

## ASSESSMENT METHOD

The assessment method will include:

- The knowledge acquired along the course will be assessed through written tests, which will amount to 25% of the final mark.
- Assessment of the manual skills necessary to apply a specific technique and of adequacy of the technique/manoeuvre used in a given situation, through oral practical tests that account for 55% of the final mark.
- The written papers and clinical cases presented amount to 15% of the final mark.
- Group work to solve some clinical cases accounts for 5% of the final mark.

In order to pass the course, the following conditions have to be met:

- Pass each section and part of the unit with a minimum mark of 5.
- Attendance at 100% of practical classes (justified absences will allow the student to miss up to 20% of all the practical classes).
- Get a minimum final mark of 5.

Rules concerning internal practical lessons:

Please, check the school's Rules of Internal Practical lessons.

Final evaluation period: from 01/12/2016 to 13/01/2017.

Resit examination period: from 19/12/2016 to 18/01/2017.

Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).

A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.

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ASSESSED ACTIVITIES	PERCENTAGE FINAL MARK	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Written tests	25 %	E3, E4, E5, E9	2
Oral practical tests	55 %	E3, E4, E5	1.25
Diagnostic report about a clinical case	5%	E3, E4, E5 E9, T5, T7, T9, G1, G2	0.25
Group work	15%	E3, E4, E5, E9, T7, T9, G1	0.25
<b>TOTAL NUMBER OF HOURS</b>			<b>3.75</b>

## BIBLIOGRAPHY AND WEB PAGES / BASIC REQUIRES READINGS


Books					
Author/s	Year	Title	Edition	City	Publisher
Cameron MH	2009	Agentes físicos en rehabilitación, de la investigación a la práctica.	3ª	Barcelona	Saunders & Elsevier
McGill S	2007	Low Back Disorders: Evidence-Based Prevention and Rehabilitation.	2ª	USA	Human Kinetics
Jull G, Sterling M, Falla D	2008	Whiplash, headache and neck pain: research-based directions for physical therapies.	1ª	Austràlia	Churchill Livingstone/Elsevier
Richardson C, Hodges PW, Hides J.	2004	Therapeutic exercise for lumbopelvic stabilization: a motor control approach for the treatment and prevention of low back pain	2ª	London	Churchill Livingstone
Clermont Simard, Fernand Caron, Kristina Skrotzky	2003	Actividad física adaptada.	1ª	Barcelona	Inde
J. Larry Durstine, Geoffrey Moore, Patricia Painter, Scott Roberts	2009	ACSM'S Exercise management for persons with chronic diseases and disabilities 3 <sup>rd</sup> . edition	3ª	USA	American College of Sports Medicine
Toni Bové	2000	El vendaje funcional	3ª	Barcelona	Harcourt
Serge Tixa	2012	Atlas de técnicas articulares osteopáticas de las extremidades	1ª	Barcelona	Masson
Philip E. Greenman	2005	Principios y práctica de la medicina manual.	3ª	Madrid	Panamericana
Balius Matas R.	2004	Patología muscular en el deporte: diagnóstico, tratamiento y recuperación funcional.	1ª	Barcelona	Masson
Johanna Sharples	2010	Guías ecuestres ilustradas	1ª	Barcelona	Hispano Europea

## BIBLIOGRAPHY AND WEB PAGES / BASIC RECOMMENDED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Tixa, S.	2006	Atlas de anatomía palpatoria de la extremidad inferior. Investigación manual de superficie	2a	Barcelona	Masson
Kaltenborn, F.M.	2004	Fisioterapia manual.	2a	Madrid	McGraw-Hill
Shneider, W.; Dvůrák, J.; Dvůrák, V.; Tristchler, T.	1994	Medicina manual. Terapéutica	2ª	Barcelona	Scriba
Goodman C.C.	2003	Patología médica para fisioterapeutas	3ª	Madrid	Mc. Graw Hill
Travell y Simons	2004	Dolor y disfunción miofascial. Vol 1	2ª	Madrid	Panamericana
Travell y Simons	2004	Dolor y disfunción miofascial . Vol 2	2ª	Madrid	Panamericana
VVAA	2004	El deporte y la actividad física en el aparato locomotor	1ª	Barcelona	Masson
Therapeutic Riding Association	1991	Hippotherapy. Ontario		Stuttgart	Hippokrates Verlag

## PLANNING OF THE COURSE UNIT

Available on the virtual campus for all those students enrolled in this course unit.

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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>PRACTICUM - V</b>		
Code	<b>200568</b>	Academic year	<b>2016-2017</b>
ECTS	<b>6</b>	Type of course unit	<b>Compulsory</b>
year	<b>4</b>	Term	<b>1</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit		
Language of instruction	<b>CATALAN</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Ms YOLANDA SÁNCHEZ</b>
e-mail	<a href="mailto:yolanda.sanchez@eug.es">yolanda.sanchez@eug.es</a>
Office hours	<b>To be agreed on</b>

- Team members

Name of lecturer	<b>Ms MELANIA MASÓ</b>
e-mail	<a href="mailto:melania.maso@eug.es">melania.maso@eug.es</a>
Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Ms DIANA MUÑOZ</b>
e-mail	<a href="mailto:diana.munoz@eug.es">diana.munoz@eug.es</a>
Office hours	<b>To be agreed on</b>

## ADMISSION REQUIREMENTS

- BASIC PHYSIOTHERAPY OF THE LOCOMOTOR SYSTEM – I
- BASIC PHYSIOTHERAPY OF THE LOCOMOTOR SYSTEM – II

## THE COURSE UNIT WITHIN THE CURRICULUM

- Contents: Guided training.



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- This course unit aims to consolidate and integrate all the knowledge, abilities, skills, attitudes, and values acquired and related to any clinical specialty, under the guidance of qualified physiotherapists. All those professional competences necessary to prepare the student to give effective, specialist physiotherapy care to patients/users will be developed.

## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

<b>Competence</b>	<b>E4.</b> Demonstrate knowledge of the physiotherapy methods, procedures, and actions that contribute to health promotion and maintenance.
Learning outcomes	<b>E4.1.</b> Design, teach, and advise about the different prevention methods for functional impairments and particularly those related to postural hygiene, mobility loss, and algid acute stages. <b>Specific objectives:</b> <b>E4.1.1.</b> Recommend prevention guidelines for any specialty. <b>E4.1.2.</b> Explain, in a clear and structured way, recommended prevention guidelines developed for any specialty.
<b>Competence</b>	<b>E5.</b> Integrate, through clinical experience, ethical and professional values, the knowledge, skills, and attitudes characteristic in physiotherapy to solve specific clinical cases in hospital, out-of-hospital, primary and community health care environments.
Learning outcomes	<b>E5.5.</b> Solve clinical cases susceptible of physiotherapy treatment in any clinical specialty. <b>Specific objectives:</b> <b>E5.5.1.</b> Solve a clinical case presented in the training program, applied to any clinical specialty, and write a progress report.
<b>Competence</b>	<b>E6.</b> Write and fill in physiotherapy registers.
Learning outcomes	<b>E6.3.</b> Record all the steps taken from the moment the patient/user is admitted to the moment he/she is discharged in an adequate and effective way according to each clinical specialty. <b>Specific objectives:</b> <b>E6.3.1.</b> Write accurate physiotherapy records, applied to any clinical specialty, about the treatment given and the results obtained.
<b>Competence</b>	<b>E7.</b> Assess the patient's functional state, taking into account physical, psychological, and social aspects.
Learning outcomes	<b>E7.12.</b> Follow the adequate physiotherapy validation procedures in order to determine the level of affection and its possible functional impact for the patients/users the student takes care of during the training. <b>Specific objectives:</b> <b>E7.12.1.</b> Use appropriately the specific assessment tools for any pathology in any clinical specialty.
<b>Competence</b>	<b>E8.</b> Make the physiotherapy diagnosis according to established norms and internationally recognised validation instruments.

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Learning outcomes	<p><b>E8.9.</b> Establish a physiotherapy diagnostic hypothesis.</p> <p><b>Specific objectives:</b></p> <p><b>E8.9.1.</b> Identify the deficiencies, limitations in everyday activities, participation restrictions, and contextual factors of patients with conditions within any clinical speciality.</p> <p><b>E8.9.2.</b> Interrelate the deficiencies, limitations in everyday activities, and participation restrictions of the patient applied to any clinical speciality.</p>
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<b>Competence</b>	<b>E9.</b> Develop a physiotherapy intervention plan according to criteria of adequacy, validity, and efficiency.
Learning outcomes	<p><b>E9.17.</b> Define the general and specific objectives for the application of the physiotherapy treatment.</p> <p><b>Specific objectives:</b></p> <p><b>E9.17.1.</b> Plan and propose the treatment objectives of specific pathologies within any clinical speciality.</p> <p><b>E9.18.</b> Establish treatment priorities according to the problems detected.</p> <p><b>Specific objectives:</b></p> <p><b>E9.18.1.</b> Classify the short-term and long-term goals applied to any clinical speciality.</p> <p><b>E9.18.2.</b> Prioritise problems according to their importance and/or emergency, applied to any clinical speciality.</p> <p><b>E9.19.</b> Establish the periodicity for a physiotherapy treatment.</p> <p><b>Specific objectives:</b></p> <p><b>E9.19.1.</b> Establish follow-up sessions for the treatment of any clinical condition.</p>

<b>Competence</b>	<b>E10.</b> Implement, run, and coordinate a physiotherapy intervention plan using physiotherapy methods and taking the patient's individuality into account.
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>E10.1.</b> Devise a physiotherapy intervention plan.</p>

<b>Competence</b>	<b>E11.</b> Assess the evolution of the results obtained in the treatment in relation to the final goals.
Learning outcomes	<p><b>E11.1.</b> Assess the results and their link with the final goals, through real cases in the different clinical specialties.</p> <p><b>Specific objectives:</b></p> <p><b>E11.1.1.</b> Compare the results and the predetermined goals in any clinical speciality.</p>

<b>Competence</b>	<b>E12.</b> Write discharge reports when the objectives have been achieved.
Learning outcomes	<p><b>E12.2.</b> Make a physiotherapy report that includes all the necessary information so that it is a valid communication tool for users and/or professionals.</p> <p><b>Specific objectives:</b></p> <p><b>E12.2.1.</b> Write clear and correct physiotherapy reports on any clinical condition.</p>

<b>Competence</b>	<b>E13.</b> Provide the patient with effective physiotherapy care and offer comprehensive care.
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Learning outcomes	<p><b>E13.9.</b> Guide any course of action in relation to the patient/user, non-medical staff, and junior employees.</p> <p><b>Specific objectives:</b></p> <p><b>E13.9.1.</b> Organize and integrate any action and procedure into the multidisciplinary team.</p> <p><b>E13.10.</b> Refer the patient, when necessary, to another health professional.</p> <p><b>Specific objectives:</b></p> <p><b>E13.10.1.</b> Be aware of one's own competences and refer the patient, when necessary, to another health professional.</p>
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<b>Competence</b>	<b>E15.</b> Work in professional teams, collaborating effectively with the whole multidisciplinary team.
Learning outcomes	<p><b>E15.5.</b> Reach an agreement among the members of the multidisciplinary team, if necessary, on the main goals to integrate any actions and medical assistance.</p> <p><b>Specific objectives:</b></p> <p><b>E15.5.1.</b> Cooperate with the members of the multidisciplinary team.</p>

<b>Competence</b>	<b>E17.</b> Participate in the making of health care protocols of scientific evidence-based physiotherapy, promoting professional activities that foster research in physiotherapy.
Learning outcomes	<p><b>E17.5.</b> Apply health care protocols of scientific evidence-based physiotherapy.</p> <p><b>Specific objectives:</b></p> <p><b>E17.5.1.</b> Apply validated and/or agreed health care protocols to any clinical specialty.</p>

<b>Competence</b>	<b>E19.</b> Develop planning, management, and control activities in healthcare units providing physiotherapy care and their relationship with other health services.
Learning outcomes	<p><b>E19.4.</b> Analyse and assess different management and control systems of physiotherapy services.</p> <p><b>Specific objectives:</b></p> <p><b>E19.4.1.</b> Analyse and assess the management and control systems in the training centre.</p>

<b>Competence</b>	<b>E20.</b> Apply the quality guarantee mechanisms in the practice of physiotherapy, according to recognised and validated criteria.
Learning outcomes	<p><b>E20.9.</b> Analyse the quality guarantee mechanisms in the care provided by the physiotherapy services in the training centre, using the assessment methods learnt in other course units.</p> <p><b>Specific objectives:</b></p> <p><b>E20.9.1.</b> Describe the quality control processes of the training centre.</p>

<b>Competence</b>	<b>E22.</b> Carry out any physiotherapy action from a comprehensive care approach involved in multidisciplinary cooperation, process integration, and continuity of care.
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>E22.1.</b> Integrate the different physiotherapy interventions in a multidisciplinary cooperative context.</p> <p><b>E22.2.</b> Ensure continuity of care.</p>

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### Transversal competences

<b>Competence</b> T6. Take the most adequate decisions in a specific situation.	
<b>Learning outcomes</b>	<b>Specific objectives:</b> <b>T6.1.</b> Take informed decisions. <b>T6.2.</b> Take firm decisions.

<b>Competence</b> T9. Develop critical thinking.	
<b>Learning outcomes</b>	<b>Specific objectives:</b> <b>T9.1.</b> Distinguish facts from opinions, interpretations, and assessments when discussing with team members. <b>T9.2.</b> Contribute elements that can improve our colleagues' and our own actions. <b>T9.3.</b> Make one's own judgments and assessments.

<b>Competence</b> T10. Identify, analyse, and solve ethical problems in complex situations.	
<b>Learning outcomes</b>	<b>Specific objectives:</b> <b>T10.1.</b> Identify any possible ethical problems in specific situations. <b>T10.2.</b> Identify the patient's will, respecting his/her personal and cultural values. <b>T10.3.</b> Respect privacy and professional secrecy.

<b>Competence</b> T11. Show initiative and resourcefulness.	
<b>Learning outcomes</b>	<b>Specific objectives:</b> <b>T11.1.</b> Use one's own initiative in day-to-day situations. Work on one's own, without being constantly supervised. <b>T11.2.</b> Present new ideas and projects that help in your own development. <b>T11.3.</b> Act effectively in situations that require firm action due to their level of difficulty.

### Generic competences

<b>Competence</b> G2. Develop strategies of autonomous learning.	
<b>Learning outcomes</b>	This competence is developed by working competences "T9. Develop critical thinking" and "T11. Show initiative and resourcefulness".

## CONTENTS

- The Practicum aims to integrate all the knowledge, abilities, skills, attitudes, and values acquired in and related to any clinical specialty, under the guidance of qualified physiotherapists. All those professional competences necessary to prepare the student to give effective physiotherapy care and comprehensive care to patients/users will be developed.

## TEACHING METHOD

### TRAINING

- The student will assess the patients, make the physiotherapy diagnosis, create a plan of action and apply it, and evaluate the results.  
Estimated time: 105 hours.

### INFORMATIVE SESSIONS

- The student will be informed about how to do the different training activities.  
Estimated time: 7.5 hours.

### PAPER WRITING

- Write a report about the management of one or several patients.  
Estimated time: 30 hours.

### SELF-EVALUATION

- Write a self-evaluation report.  
Estimated time: 4.5 hours.

### EVALUATION BY THE CENTRE AND TUTOR

- Fill in an evaluation form about the centre and tutor.  
Estimated time: 3 hours.

ACTIVITY TYPE	ACTIVITY	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Directed activities	Informative sessions	7.5	
Supervised activities	Training	105	E4, E5, E6.3, E7, E8.9, E9.17, E9.18, E9.19, E10, E11, E12, E13.9, E13.10, E15.5, E17, E19, E20.9, E22, T6,T9, T10, T11, G2
Autonomous activities	Write a report about the management of one or several patients	30	E4, E5, E6.3, E7, E8.9, E9.17, E9.18, E9.19, E11, T9
	Write a self-evaluation report	4.5	T9
	Fill in an evaluation form about the centre and tutor	3	T9
<b>TOTAL NUMBER OF HOURS</b>			<b>150</b>

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## ASSESSMENT METHOD

The Practicum commission will take the following into account:

- The report presented by the tutor. This will account for 49% of the final mark.
- The student's self-evaluation report. This will account for 1% of the final mark.
- The patients' follow-up reports. This will account for 50% of the final mark.

In order to pass the course, the following conditions have to be met:

- Pass each section and part of the unit with a minimum mark of 5.
- Get a minimum final mark of 5.


Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).

A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.

ASSESSED ACTIVITIES	PERCENTAGE FINAL MARK	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
The report presented by the tutor	49%	E4, E5, E6.3, E7, E8.9, E9.17, E9.18, E9.19, E10, E11, E12, E13.9, E13.10, E15.5, E17, E19, E20.9, E22, T6, T9, T10, T11, G2	--
The student's self-evaluation report	1%	T9	--
The patients' follow-up reports	50%	E4, E5, E6.3, E7, E8.9, E9.17, E9.18, E9.19, E11, T9	--
<b>TOTAL NUMBER OF HOURS</b>			<b>0</b>

## BIBLIOGRAPHY AND WEB PAGES / BASIC READINGS

Web pages			
Title	Description	URL	
EscalesFisioterapia.pdf	Escales de valoració i qüestionaris més emprats a Fisioteràpia	Intranet de l'assignatura	

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## PLANNING OF THE COURSE UNIT

Available on the virtual campus for all those students enrolled in this course unit.

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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>COMPLEMENTARY TECHNIQUES</b>		
Code	<b>200583</b>	Academic year	<b>2016-2017</b>
ECTS	<b>6</b>	Type of course unit	<b>Optional</b>
Year	<b>4</b>	Term	<b>2</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit		
Language of instruction	<b>CATALAN</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Ms ESTHER BERGEL PETIT</b>
e-mail	<a href="mailto:esther.bergel@eug.es">esther.bergel@eug.es</a>
Office hours	<b>To be agreed on</b>

- Team members

Name of lecturer	<b>Dr ISHAR DALMAU</b>
e-mail	<a href="mailto:ishar.dalmau@eug.es">ishar.dalmau@eug.es</a>
Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Ms SÒNIA FERRÉS PUIGDEVALL</b>
e-mail	<a href="mailto:sonia.ferres@eug.es">sonia.ferres@eug.es</a>
Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Dr ESTHER MUR GIMENO</b>
e-mail	<a href="mailto:esther.mur@eug.es">esther.mur@eug.es</a>
Office hours	<b>To be agreed on</b>

## ASMISSION REQUIREMENTS

- None



## CONTEXTUALITZACIÓ DE L'ASSIGNATURA

- Course contents: Complementary techniques.
- This course is divided into 3 parts. The first part provides the student with the basic, necessary knowledge to get to know and analyse, taking biomedical scientific evidence into account, the basis, mechanisms of action and therapeutic efficiency of complementary therapies (nonconventional medicine).
- The second part aims to get a better body knowledge. Knowing how body movement is organised is one of the competences within the degree and it is an essential part of the profession. This will allow the student to be more aware of his/her own movements and work with the patient more easily.  
This will be achieved with the help of Tai-Chi sessions and Feldenkrais lessons.
- In the third part, there will be an introduction to aquatic physiotherapy, which will present the student with the different possibilities of doing physiotherapy in the water when treating different pathologies and different patients.

## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

<b>Competence</b>	<b>E3.</b> Demonstrate knowledge of the physiotherapy methods, procedures, and actions that lead to clinical therapeutics.
Learning outcomes	<p><b>E3.24.</b> Apply different complementary techniques in the field of physiotherapy related to: relaxation, harmonious movement, raising of awareness of one's own body, tension release and stress reduction.</p> <p><b>Specific objectives:</b></p> <p><b>E3.24.1.</b> Explain the foundations and classification of complementary therapies.</p> <p><b>E3.24.2.</b> Explain the scientific basis of complementary therapies.</p> <p><b>E3.24.3.</b> Explain the methodological differences between complementary therapies and biomedicine.</p> <p><b>E3.24.4.</b> Identify the main variables needed to do a research study on complementary therapies.</p> <p><b>E3.24.5.</b> Examine and organise the movements of the human body using the Feldenkrais method.</p> <p><b>E3.24.6.</b> Develop body awareness through movement using the Feldenkrais method.</p> <p><b>E3.24.7.</b> Identify the connection between the organization of movement and possible symptoms such as discomfort, pain or lesions in our everyday life using the Feldenkrais method.</p> <p><b>E3.24.8.</b> Choose, among the different movement options, the most appropriate one and adapt it to any situation through the Feldenkrais method.</p> <p><b>E3.24.9.</b> Compare our everyday movements to Tai-Chi forms.</p>

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	<p><b>E3.24.10.</b> Identify our initial body image and analyse it from the point of view of Tai-Chi.</p> <p><b>E3.24.11.</b> Use Tai-Chi in the field of prevention, healthcare and physiotherapy: gerontology, schools, pregnancy groups, business companies, etc.</p> <p><b>E3.24.12.</b> Explain the properties of water.</p> <p><b>E3.24.13.</b> Explain how the body behaves in the water.</p> <p><b>E3.24.14.</b> Describe the basics of aquatic physiotherapy.</p> <p><b>E3.24.15.</b> Describe the complementary techniques of hydrotherapy and balneotherapy.</p> <p><b>E3.24.16.</b> Design basic aquatic physiotherapy treatments.</p>
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<b>Competence</b>	<b>E4.</b> Demonstrate knowledge of the physiotherapy methods, procedures, and actions that contribute to health promotion and maintenance.
Learning outcomes	<p><b>E4.8.</b> Organise group session of the complementary techniques worked throughout the course.</p> <p><b>Specific objectives:</b></p> <p><b>E4.8.1.</b> Organise group sessions based on the pathologies to be treated or the patient's social needs using Tai-Chi and the Feldenkrais method.</p>

<b>Competence</b>	<b>E21.</b> Communicate effectively and clearly, both orally and in writing, with users of the health care service as well as with other health professionals.
Learning outcomes	<p><b>E21.9.</b> Run group sessions of the complementary techniques worked throughout the course.</p> <p><b>Specific objectives:</b></p> <p><b>E21.9.1.</b> Design the contents of a group session (opening, interventions, and closing) taking into account different elements: goals, activities, timing,...</p> <p><b>E21.9.2.</b> Observe the reaction of the people in the group in order to adapt group work dynamics.</p> <p><b>E21.9.3.</b> Use the specific language for each complementary technique worked throughout the course, adapting it to the people in the group.</p>

### Transversal competences

<b>Competence</b>	<b>T1.</b> Analyse and summarise.
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>T1.1.</b> Distinguish the different parts of the body and their interrelation.</p> <p><b>T1.2.</b> Recognise new body movement options using Tai-Chi and the Feldenkrais method.</p>

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<b>Competence</b>	<b>T3.</b> Be able to communicate in a fluent, coherent, and adequate way according to established norms, both orally and in writing.
Learning outcomes	<b>Specific objectives:</b> <b>T3.1.</b> Run a directed group activity based on a pre-established plan using different communicative strategies. <b>T3.2.</b> Adapt your language and nonverbal expression to the needs of the group.

## CONTENTS

1. Scientific basis of complementary therapies.
  - 1.1. Introduction to complementary therapies.
  - 1.2. Classification of complementary therapies.
  - 1.3. Methodological difference between complementary therapies and biomedicine.
  - 1.4. Basic and clinical research on complementary therapies.
  - 1.5. Mechanisms of action of complementary therapies.
2. The Feldenkrais method:
  - 2.1. Characteristics and practical development of the method.
  - 2.2. Adaptation of the method to different patients /users.
3. Tai-Chi.
  - 3.1. Characteristics and practical development of Tai-Chi.
  - 3.2. Adaptation of Tai-Chi to different patients/users.
4. Hydrotherapy/Hydrokinesitherapy.
  - 4.1. Basis of the techniques.
  - 4.2. Assessing the patient and the facilities.
  - 4.3. Treatment plan according to type of patient.
  - 4.4. Awareness of body movement out of water in order to apply it in water.

## TEACHING METHOD AND ACTIVITIES

### DIRECTED ACTIVITIES

- **Theoretical lessons** that will provide the student with the theoretical foundations of each technique. The lessons will offer visual and computer-based support.

Estimated time: 15 hours.

- **Practical lessons** where the teacher will present, with the help of a model or with audiovisual support, different specific assessment techniques. The lessons will offer visual and computer-based support.

Estimated time: 22.5 hours.

### SUPERVISED ACTIVITIES

- **Practical activity**, under the teacher's supervision, to apply the different techniques presented in class.

Estimated time: 22.5 hours.

### AUTONOMOUS ACTIVITIES

- **Paper writing:**
  - The students will work in groups and write a paper on the scientific evidence of a specific complementary therapy.
  - The students will work in groups and write a paper on the resolution of a clinical case treated with aquatic physiotherapy.

Estimated time: 20 hours.

- **Organise a short exercise session** that will be run in class.

Throughout the course, the session programme will progressively be designed as well as the planning of a specific session that will be implemented in the last class.

The design of the session is part of the goals and contents of the session programme and will be addressed to a particular group of patients. The techniques used in the design of the session will have to include those presented in class.

The preparation of the session will be assessed based on its implementation and a report about the design process.

Estimated time: 20 hours.

- **Autonomous work** of individual study to prepare exams, organise notes/material, tutorials: individually or in groups.

Estimated time: 46.75 hours.

ACTIVITY TYPE	ACTIVITY	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Directed activities	Theoretical lessons	E3, E4	15
	Practical lessons	E3, E4	22.5
Supervised activities	Practical activity	E3, E4	22.5
Autonomous activities	Paper writing	E3, T1, T3	20
	Design a short exercise session	E3, E4, E21, T3	20
	Autonomous work	E3, E4	46.75
<b>TOTAL NUMBER OF HOURS</b>			<b>146.75</b>

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## ASSESSMENT METHOD

The assessment method will include:

- The knowledge acquired in each part of the course will be assessed through written tests, which will amount to 20% of the final mark.
- Assessment of the manual skills necessary to apply the different techniques and their adequacy for a given clinical case, through oral practical tests that account for 50% of the final mark.
- The written papers will account for 20% of the final mark.
- The exercise session will amount to 10% of the final mark.

In order to pass the course, the following conditions have to be met:

- Pass each section and part of the unit with a minimum mark of 5.
- Attendance at 100% of practical classes (justified absences will allow the student to miss up to 20% of all the practical classes).
- Get a minimum final mark of 5.

Rules concerning internal practical lessons:

Please, check the school's Rules of Internal Practical Lessons.

Final evaluation period: from 22/05/2017 to 09/06/2017.

Resit examination period: from 26/05/2017 to 16/06/2017.

Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).

A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.

ASSESSED ACTIVITIES	PERCENTAGE FINAL MARK	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Written tests	20 %	E3, E4	2
Oral practical tests	50 %	E3, E4	0.75
Written papers	20 %	E3, T1, T3	---
Exercise session	10 %	E3, E4, E21, T3	0.5
<b>TOTAL NUMBER OF HOURS</b>			<b>3.25</b>

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## BIBLIOGRAPHY AND WEB PAGES / BASIC REQUIRED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
<b>Feldenkrais</b>					
Feldenkrais, M	2009	Autoconciencia por el movimiento	1ª edición	BCN	Paidós. Vida y salud.
Feldenkrais, M	2006	El poder del yo	1ª edición	BCN	Paidós. Vida y salud.
Feldenkrais, M	1991	La dificultad de ver lo obvio		Buenos Aires, BCN, Mexico	Paidós.
<b>Tai-Chi</b>					
Fontana, D.		Aprender meditación Zen			Oniro
Bunnang, T.		El arte del Tai- chi chuang			Liebre de Marzo.
Roche, L.	1998	Tai-Chi,guía práctica	2ª edición	BCN	Obelisco
<b>Aquatic physiotherapy</b>					
Pérez Fernández, M	2005	Principios de la Hidroterapia y Balneoterapia		Madrid	McGraw-Hill Interamericana
Cole, A & Becker, B	2004	Comprehensive Aquatic Therapy		Philadelphia	Butterworth Heinemann. Elsevier.
Castillo, FJ	2012	Fisioterapia acuática		Jaén	Editorial Formación Alcalá

Articles						
Author	Title	Publication	Volume	Year	Pages	Description/ Comment
<b>Feldenkrais</b>						
PhilippUnsel	Vivimos como nos movemos	Cuerpo y mente	Nº 229	2011	52-57	Entrevista a Philipp Unsel
Volk E	Prise de conscience par le mouvement, Méthode Feldenkrais	Encycl.Méd.Chir (Editions Scientifiques et Médicales Elsevier , SAS, Paris.	26-061-B-10	2000	10p.	
<b>Tai-Chi</b>						
Marisa Hirsch	El Tai-chi enseña a dar y recibir	Cuerpo y mente	Nº 206	2009	80-83	Entrevista a Tew Bunnang
<b>Aquatic physiotherapy</b>						
Kemoun, G., Watelain, E., & Carette, P.	Hydrokinésithérapie	Kinésithérapie- Médecine physique- Réadaptation	26-140-A-10	2006	1-28	
Rodríguez Fuentes G., Iglesias Santos, R	Bases físicas de la hidroterapia	Fisioterapia	24	2002	14-21	

Web pages			
Title	Description	URL	
<b>Feldenkrais</b>			
Warrior's Awareness		<a href="http://www.warriors-awareness.com">www.warriors-awareness.com</a>	
The Feldenkrais Method with Ralph Strauch	Somatic options	<a href="http://www.somatic.com">www.somatic.com</a>	

Audiovisual material			
Title	Description		
<b>Feldenkrais</b>			
Move like the Animals & Monkey Moves	Stephen Rosenholtz, Ph.D. 1994		
Bebés	Película Año 2010. Francia. Director: Thomas Balmès		

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## BIBLIOGRAPHYS AND WEB PAGES / BASIC RECOMMENDED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Teràpies Complementàries					
Rakel D	2009	Medicina Integrativa	2a	Barcelona	Elsevier-Masson
Wisneski LA, Anderson L.	2009	The Scientific Basis of Integrative Medicine.	2a	Boca Raton	CRC Press;
Kayne SB	2009	Complementary and Alternative Medicine	2a	London	Pharmaceutical Press
Kayne SB..	2010	Traditional Medicine	1a	London	Pharmaceutical Press
Oshman JL	2000	Energy Medicine. The Scientific Basis	1a	Edinburgh	Churchill Livingstone
Sutton AL.	2010	Complementary and Alternative Medicine. Sourcebook.	4a	Detroit	Omnigraphics, Inc.
Feldenkrais					
Zemach,D.,Zemach,K.,Reese,M.	1990	Ejercicios de relajación		Barcelona	Paidós
Mars-Pryszko,J.	2001	Tratamiento de las cervicalgias		Barcelona	Masson
Aquatic physiotherapy					
Pappas Gaines, M	2006	Actividades acuáticas. Ejercicios de tonificación, cardiovasculares y de rehabilitación	3a	Barcelona	Paidotribo
Colado, JC	2004	Acondicionamiento Físico en medio acuático.		Barcelona	Paidotribo

Articles						
Author	Title	Publication	Volume	Year	Pages	Description/ comment
Aquatic physiotherapy						
Pazos Rosales, JM., González Represas, A	Técnicas de hidroterapia. Hidrocinesiterapia.	Fisioterapia	24	2002	34-42	

## PLANNING OF THE COURSE UNIT

Available on the virtual campus for all those students enrolled in this course unit

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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>ONLINE PRACTICAL PHYSIOTHERAPY</b>		
Code	<b>200576</b>	Academic year	<b>2016-2017</b>
ECTS	<b>6</b>	Type of course unit	<b>Optional</b>
Year	<b>4</b>	Term	<b>2</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit.		
Language of instruction	<b>CATALAN/SPANISH /ENGLISH</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Ms MAIDER SÁNCHEZ PADILLA</b>
e-mail	<a href="mailto:maider.sanchez@eug.es">maider.sanchez@eug.es</a>
Office hours	<b>To be agreed on</b>

- Team members

Name of lecturer	
e-mail	
Office hours	<b>To be agreed on</b>


## ADMISSION REQUIREMENTS

- To do this course it is advisable to be enrolled in one of the mentions in the 4th course.

## THE COURSE UNIT WITHIN THE CURRICULUM

- Course contents: Online practical physiotherapy.
- This course aims to offer deeper knowledge of examination, diagnosis, and treatment of daily physiotherapy practice using different resources and establishing an interrelationship among the documents presented by the teacher, the bibliography and the methodological search of information in order to maximise and optimise the resources at hand.



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## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

<b>Competence</b>	<p><b>E5.</b> Integrate, through clinical experience, ethical and professional values, the knowledge, skills, and attitudes characteristic in physiotherapy to solve specific clinical cases in hospital, out-of-hospital, primary and community health care environments.</p>
Learning outcomes	<p><b>E5.16.</b> Integrate the different competences acquired throughout the course in order to virtually assess, diagnose and plan a treatment based on a real case.</p> <p><b>Specific objectives:</b></p> <p><b>E5.16.1.</b> Identify the type of examination needed to treat a specific condition, based on some clinical cases presented in class.</p> <p><b>E5.16.2.</b> Establish the most accurate diagnosis according to the type of condition to be treated, based on some clinical cases presented in class.</p> <p><b>E5.16.3.</b> Identify the most appropriate type of treatment for a given condition, based on some clinical cases presented in class.</p> <p><b>E5.16.4.</b> Identify the possible contraindications of the selected treatment, based on some clinical cases presented in class.</p> <p><b>E5.16.5.</b> Identify the patient's health problems that can affect the selected treatment, based on some clinical cases presented in class.</p> <p><b>E5.16.6.</b> Establish the treatment goal according to the patient's needs, based on some clinical cases presented in class.</p> <p><b>E5.16.7.</b> Relate examination, treatment, contraindication, complementary pathologies, and the patient's needs in order to achieve an established goal, based on some clinical cases presented in class.</p>

### Transversal competences

<b>Competence</b>	<p><b>T4.</b> Manage information systems.</p>
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>T4.1.</b> Use information search strategies about the examination, diagnosis, and treatment related to some clinical cases presented in class.</p> <p><b>T4.2.</b> Manage health bibliographic databases.</p> <p><b>T4.3.</b> Manage electronic journals and document files in the field of healthcare.</p>
<b>Competence</b>	<p><b>T5.</b> Problem solving.</p>
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>T5.1.</b> Make a differential diagnosis of some clinical cases presented in class based on the data obtained.</p> <p><b>T5.2.</b> Choose the most appropriate actions based on the examination and diagnostic results of the clinical cases presented.</p>

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### Generic competences

<b>Competence</b>	<b>G2.</b> Develop strategies of autonomous learning.
Learning outcomes	This is a competence that is developed by working competence “T4. Manage information systems” and “T5. Problem solving”.

## CONTENTS

Since this is a course based on the integration of several competences, there are no distinctive, specific contents.

## TEACHING METHOD AND ACTIVITIES

### DIRECTED ACTIVITIES

- **In-person information session** where the course and its organisation will be presented.  
Estimated time: 3 hours.

### AUTONOMOUS ACTIVITIES


- **Resolution of clinical cases:** the student will be presented with some clinical cases on the virtual campus for which a treatment must be suggested based on the knowledge and information the student has.

Estimated time: 15 hours.

- **Autonomous work** of individual study to prepare exams, organise notes/material, tutorials: individually or in groups.

Estimated time: 130 hours.

ACTIVITY TYPE	ACTIVITY	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Directed activities	In-person information session	T4	3
Autonomous activities	Resolution of clinical cases online	E5, T4, T5, G2	15
	Autonomous work	E5	130
<b>TOTAL NUMBER OF HOURS</b>			<b>148</b>

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## ASSESSMENT METHOD

The assessment method will include:

- Continuous assessment through test-type exams online in relation to the clinical cases presented in the course.
- In-person test-type exam about the clinical cases presented in the course.

In order to pass the course, the following conditions have to be met:

- Pass the test-type exams online (clinical cases) with a minimum mark of 5.
- Pass the in-person exam with a minimum mark of 5.
- Get a minimum final mark of 5.

Final evaluation period: from 22/05/2017 to 09/06/2017.

Resit examination period: from 26/05/2017 to 16/06/2017.

Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).

A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.

ASSESSED ACTIVITIES	PERCENTAGE FINAL MARK	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Test-type exams online	50%	E5, T4, T5, G2	-
In-person test-type exam	50 %	E5, T4,T5, G2	2h
<b>TOTAL NUMBER OF HOURS</b>			<b>2h</b>

## BIBLIOGRAPHY AND WEB PAGES / BASIC REQUIRED READINGS

Web pages			
Title	Description	URL	
PeDRO	It is an evidence-based physiotherapy database where you can find publications of clinical trials, systematic reviews, and clinical practice guidelines.	<a href="http://www.pedro.org.au">http://www.pedro.org.au</a>	
Google Scholar	It is a database of scientific articles where you can find may full articles in pdf. It has an "advanced search" option that can make your search more efficient.	<a href="http://scholar.google.com">http://scholar.google.com</a>	
Pubmed	Accessing Medline is normally done through Pubmed, which includes more than 19 million	<a href="http://pubmed.gov">http://pubmed.gov</a>	

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	citations of articles.		
Accesowok	It is a platform, based on web technologies, consisting of an extensive collection of bibliographic data, citations, and references of scientific publications on any discipline. It contains a section called "Journal Citations Report" where you can find impact factor journals.	<a href="http://www.accesowok.fecyt.es">http://www.accesowok.fecyt.es</a>	
Tripdatabase	Evidence-based medical search engine.	<a href="http://tripdatabase.com">http://tripdatabase.com</a>	
Cochrane	Database created by Cochrane contributors that provides systematic revisions of clinical trials.	<a href="http://www.cochrane.es/">http://www.cochrane.es/</a>	
Excelencia Clínica .net	It is a translated version of TRIP. It is a metasearch engine. It is one of the best search engines in Spanish. It quickly identifies the best clinical evidence that supports clinical practice. It provides results both in Spanish and English, which can be filtered simply by clicking a button. This is a tool that allows us to make a search on different databases.	<a href="http://www.Excelenciaclinica.net">www.Excelenciaclinica.net</a>	
Guidelines.gov	Public resource of evidence-based clinical practice guidelines.	<a href="http://www.guidelines.gov">http://www.guidelines.gov</a>	
Infodoctor.org	In Spanish. It has links to other web pages and translations of key items in evidence-based medicine (EBM).	<a href="http://www.infodoctor.org">http://www.infodoctor.org</a>	
Fisterra.com	Evidence-based medicine. You can find a lot of information concerning research articles.	<a href="http://www.fisterra.com">http://www.fisterra.com</a>	
Scielo.org	Biomedical journals. Some of them are free (full articles can be downloaded).	<a href="http://www.scielo.org">http://www.scielo.org</a>	
Directory Of Open Access Journals	DOAJ: directory of open access scientific journals.	<a href="http://www.doaj.org/">http://www.doaj.org/</a>	

## BIBLIOGRAPHY AND WEB PAGES / BASIC RECOMMENDED READINGS

Web pages		
Title	Description	URL
Google Translate	It is a good translation service that can help you understand the articles you find in any of the recommended databases.	<a href="http://translate.google.com">http://translate.google.com</a>
Teseo	Spanish doctoral theses available for free download.	<a href="http://www.educacion.es/teseo">http://www.educacion.es/teseo</a>
Open Access Theses and Dissertations	OATD: International open access doctoral theses for free download.	<a href="http://www.oatd.org/">http://www.oatd.org/</a>

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## PLANNING OF THE COURSE UNIT

Available on the virtual campus for all those students enrolled in this course unit.

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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>PSYCHOMOTRICITY AND MUSIC THERAPY</b>		
Code	<b>200582</b>	Academic year	<b>2016-2017</b>
ECTS	<b>6</b>	Type of course unit	<b>Optional</b>
Year	<b>4</b>	Term	<b>2</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit.		
Language of instruction	<b>CATALAN/SPANISH</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Ms TERESA GANDUXÉ FENOLL</b>
e-mail	<a href="mailto:teresa.ganduxe@eug.es">teresa.ganduxe@eug.es</a>
Office hours	<b>To be agreed on</b>

- Team members

Name of lecturer	<b>Ms DÀMARIS GELABERT FERNÁNDEZ</b>
e-mail	<a href="mailto:damaris.gelabert@eug.es">damaris.gelabert@eug.es</a>
Office hours	<b>To be agreed on</b>

## ADMISSION REQUIREMENTS

- None

## THE COURSE UNIT WITHIN THE CURRICULUM

- Course contents: Psychomotricity and music therapy.
- This course aims to provide the student with some basic knowledge of psychomotricity and music therapy and get a deeper knowledge of some therapeutic techniques used in this field.
- The knowledge of psychomotricity and music therapy is very practical as part of the degree in physiotherapy and also in the professional field in order to treat many patients particularly paediatric and neurological patients.

## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

<b>Competence</b>	<b>E1.</b> Demonstrate knowledge of the morphology, physiology, pathology, and conduct of both healthy and ill people in their natural and social environment.
Learning outcomes	<p><b>E1.32.</b> Explain the basic notions of the child's psychomotor development.</p> <p><b>Specific objectives:</b></p> <p><b>E3.32.1.</b> Describe the most relevant aspects of the child's psychomotor development.</p> <p><b>E3.32.2.</b> Explain the basic acquisitions in the child's psychomotor development during the first six years of life.</p> <p><b>E3.32.3.</b> Identify any alteration in the child's psychomotor development.</p>

<b>Competence</b>	<b>E3.</b> Demonstrate knowledge of the physiotherapy methods, procedures, and actions that lead to clinical therapeutics.
Learning outcomes	<p><b>E3.25.</b> Use psychomotricity techniques with children</p> <p><b>Specific objectives:</b></p> <p><b>E3.25.1.</b> Establish the main treatment goals in the field of psychomotricity based on the child's problem and personal characteristics.</p> <p><b>E3.25.2.</b> Identify the appropriate psychomotricity techniques for the treatment of the established goals.</p> <p><b>E3.25.3.</b> Adapt psychomotricity techniques to individual and group treatments based on the child's problem and personal characteristics.</p> <p><b>E3.26.</b> Use music as a therapy in education, medicine, geriatrics, and mental health.</p> <p><b>Specific objectives:</b></p> <p><b>E3.26.1.</b> Design an appropriate music therapy intervention plan for a specific population.</p> <p><b>E3.26.2.</b> Identify the most appropriate music therapy techniques to be used in physiotherapy.</p>

<b>Competence</b>	<b>E4.</b> Demonstrate knowledge of the physiotherapy methods, procedures, and actions that contribute to health promotion and maintenance.
Learning outcomes	<p><b>E4.9.</b> Organise psychomotricity and music therapy group sessions</p> <p><b>Specific objectives:</b></p> <p><b>E4.9.1.</b> Organise group treatment sessions (opening, interventions, and closing) using psychomotricity and music therapy techniques.</p> <p><b>E4.9.2.</b> Organise group sessions to work on specific treatment goals using psychomotricity and music therapy techniques.</p>

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<b>Competence</b>	<b>E21.</b> Communicate effectively and clearly, both orally and in writing, with users of the health care service as well as with other health professionals.
Learning outcomes	<b>E21.10.</b> Run psychomotricity and music therapy group sessions. <b>Specific objectives:</b> <b>E21.10.1.</b> Run treatment group sessions for children with development impairments using psychomotricity techniques. <b>E21.10.2.</b> Run a group session taking into account the intervention methodology needed and applying some of the main music therapy techniques. <b>E21.10.3.</b> Observe the reactions of the people in the group in order to adapt group work dynamics. <b>E21.10.4.</b> Assess the session and all the other group sessions using different assessment mechanisms.

### Transversal competences

<b>Competence</b>	<b>T1.</b> Analyse and summarise.
Learning outcome	<b>Specific objectives:</b> <b>T1.1.</b> Summarise and identify the main ideas in one of the books or articles included in recommended readings. <b>T1.2.</b> Identify the most significant data of the clinical cases presented in class. <b>T1.3.</b> Observe and obtain clinical data based on visual information using the videos and pictures presented in class.

<b>Competence</b>	<b>T3.</b> Be able to communicate in a fluent, coherent, and adequate way according to established norms, both orally and in writing.
Learning outcomes	<b>Specific objectives:</b> <b>T3.1.</b> Use adequate specific terminology of this specialty for the oral presentations and written papers. <b>T3.2.</b> Use non-verbal communication as a basic communication tool in therapeutic interventions.



## CONTENTS

1. PSYCHOMOTRICITY
  - 1.1. General aspects.
  - 1.2. Applying psychomotricity.
  - 1.3. Psychomotor development.
  - 1.4. Physiotherapy and psychomotricity for children.
2. MUSIC THERAPY
  - 2.1. Introduction.
  - 2.2. Theoretical foundations.
  - 2.3. Main intervention fields.
  - 2.4. Intervention plan.
  - 2.5. Main models and techniques.
  - 2.6. Music therapy interventions for patients with physical problems.

## TEACHING METHOD AND ACTIVITIES

### DIRECTED ACTIVITIES

- **Theoretical lessons** that will provide the theoretical basics of each technique. The lessons will offer visual and computer-based support.  
Estimated time: 15 hours.
- **Practical lessons** where the teacher will present, with the help of a model or with audiovisual support, different assessment and treatment techniques.  
Estimated time: 22.5 hours.

### SUPERVISED ACTIVITIES

- **Practical activity**, under the teacher's supervision, to apply the different techniques presented.  
Estimated time: 22.5 hours.

### AUTONOMOUS ACTIVITIES

- **Paper writing**. The students will work either individually or in groups and will write some papers on some topics based on the student's bibliographical search.

**Individual written paper**. One of the books in the bibliography will be chosen and the student will have to write a summary of it and draw his/her conclusions.

Estimated time: 30 hours.

- **Preparing a short session of exercises** for each of the two parts of the course (psychomotricity and music therapy) that will be run in class.

Throughout the course the planning of a group treatment session will be designed and implemented in the last class.

The design of the sessions will follow a specific outline and take account of the goals previously set in class.

The presentation will be done orally and the student will have to justify the choice of activities and/or therapeutic techniques to achieve the established goals.

The preparation of the sessions will be evaluated taking into account the presentation and a report including the description of the design process.

Estimated time: 15 hours.

- **Autonomous work** of individual study to prepare exams, organise notes/material, tutorials: individually or in group.

Estimated time: 42 hours.

ACTIVITY TYPE	ACTIVITY	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Directed activities	Theoretical lessons	E1, E3, E4	15
	Practical lessons	E3, E4	22.5
Supervised activities	Practical activity	E3, E4	22.5
Autonomous activities	Paper writing	E1, E3, T1	30
	Preparing a session of exercises	E3, E4, E21, T3	15
	Autonomous work	E1, E3, E4	42
<b>TOTAL NUMBER OF HOURS</b>			<b>147</b>

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## ASSESSMENT METHOD

The assessment method will include:

- The theoretical knowledge acquired along the course will be assessed through written tests, which amount to 25% of the final mark.
- Assessment of the manual skills necessary to apply a specific technique and of adequacy of the technique/manoeuvre used in a given situation, through oral practical tests, account for 50% of the final mark.
- The written papers account for 15% of the final mark.
- The session of exercises amounts to 10% of the final mark.

In order to pass the course, the following conditions have to be met:

- Pass each section and part of the unit with a minimum mark of 5.
- Attendance at 100% of practical classes (justified absences will allow the student to miss up to 20% of all the practical classes).
- Get a minimum final mark of 5.

Rules concerning internal practical lessons:

Please, check the school's Rules of Internal Practical lessons.

Final evaluation period: from 22/05/2017 to 09/06/2017.

Resit examination period: from 26/05/2017 to 16/06/2017.

Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).

A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.

ASSESSED ACTIVITIES	PERCENTAGE FINAL MARK	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Written tests	25 %	E1, E3, E4	2
Oral practical tests	50 %	E3, E4	0.50
Written papers	15 %	E3, T1	---
Session of exercises	10 %	E3, E4, E21, T3	0.50
<b>TOTAL NUMBER OF HOURS</b>			<b>3</b>


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## BIBLIOGRAPHY AND WEB PAGES / BASIC REQUIRED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Jacqueline Gassier	1990	Manual del desarrollo psicomotor del niño	1ª Edició	Barcelona	Masson
Huguette Bucher	1976	Trastornos psicomotores en el niño : práctica de la reeducación psicomotriz	2ª Edició	Barcelona	Masson
Davis, W. D; Gfeller, K.E.; Thaut, M.H.	1999	Introducción a la Musicoterapia. Teoría y práctica	1ª Edició	Barcelona	Boileau

Web pages			
Title	Description	URL	
TOTSONA	Music for children, music therapy instruments.	<a href="http://www.totsona.com/">http://www.totsona.com/</a>	

Audiovisual material			
Title	Description		
"Massatge amb cançons" Dàmaris Gelabert	Massage for babies and children with multiple disabilities with sounds and songs.		
"Rítmica a l'escola" Eugènia Arus	Songs for motor and rhythmic stimulation.		

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## BIBLIOGRAPHY AND WEB PAGES / BASIC RECOMMENDED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Barbara Zukunft-Hubber	1995	Gimnasia para Bebes		Barcelona	Paidotribo
Peter Walter	2001	El arte practico del masaje infantil		Barcelona	Paidotribo
Freedman	2001	Yoga para bebes	1ª Edició	Madrid	Gaia Ediciones
Clark, Chadwick	1980	Clinically adapted instruments for the multiply handicapped		Missouri	St. Louis MO:MMB Music Inc.
Elliot, B	1982	Guide to the selection of musical instruments with respect to physical ability and disability		Missouri	St. Louis MO:MMB Music Inc.
Lydia Coriat	1974	Maduración psicomotriz en el primer año del niño		Buenos Aires	Hemisur
Vimala Scheneider	1994	Masaje infantil	1ª reimpressió	Barcelona	Medici
Burs i Gunn	1995	El síndrome de Down, estimulación y actividad motora		Barcelona	Herder
Elfriede Hengstenberg	1994	Desplegándose		Barcelona	Los libros de la Liebre de Marzo
Hiltrud Lodes	2002	Aprende a respirar		Barcelona	RBA Integral
Jean Ayres	1998	La integración sensorial y el niño		Mèxic	Trillas
Leixa Arribas	2001	Juegos sensoriales y de conocimiento corporal	5ª Edició	Barcelona	Paidotribo
Jean Le Bouch	1997	El movimiento en el desarrollo de la persona		Barcelona	Paidotribo
Sophie Levitt	2000	Tratamiento de la parálisis cerebral y el retraso motor	3ª Edició	Madrid	Panamericana
Lourdes Macias y Joaquin Fagoaga	2002	Fisioterapia en pediatría		Madrid	Interamericana
Sara Peiró	1991	Programación de la psicomotricidad en la educación especial : niveles y etapas		Madrid	CEPE
M. Jesus Comellas	2003	Psicomotricidad en la educación infantil : recursos pedagógicos		Barcelona	CEAC
Juan Antonio García Núñez, Pedro Pablo Berruezo y Adelantado	1994	Psicomotricidad y educación infantil		Madrid	CEPE
Frédéric Leboyer	2002	Shantala : un arte tradicional el masaje de los niños	12ª Edició	Buenos Aires	Edicial
Michel Le Métayer	1994	Reeducación cerebromotriz del niño pequeño : educación terapéutica		Barcelona	Masson
Benenson, Rolando O.	1995	Manual de Musicoterapia		Barcelona	Paidos
Alvin, Juliette	1967	Musicoterapia		Barcelona	Paidos
E. Thayer Gaston	1993	Tratado de Musicoterapia		Mèxic	Paidos

Web pages			
Title	Description	URL	
"Asociación Española de Musicoterapeutas Profesionales"		<a href="http://www.webjam.com/musicoterapeutas">http://www.webjam.com/musicoterapeutas</a>	
American Music Therapy Association		<a href="http://www.musictherapy.org/">http://www.musictherapy.org/</a>	

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<p>“IMAGINE” The early childhood online magazine of the American Music Therapy Association.</p>		<p><a href="http://imagine.musictherapy.biz/Imagine/hello.html">http://imagine.musictherapy.biz/Imagine/hello.html</a></p>	
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## PLANNING OF THE COURSE UNIT

Available on the virtual campus for all those students enrolled in this course unit.

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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>ADVANCED ERGONOMICS</b>		
Code	<b>200581</b>	Academic year	<b>2016-2017</b>
ECTS	<b>6</b>	Type of course unit	<b>Optional</b>
Year	<b>4</b>	Term	<b>2</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit.		
Language of instruction	<b>CATALAN</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Mr LLUIS AUGUET CARBONELL</b>
e-mail	<a href="mailto:lluis.auguet@eug.es">lluis.auguet@eug.es</a>
Office hours	<b>To be agreed on</b>

## ADMISSION REQUIREMENTS

- None.

## THE COURSE UNIT WITHIN THE CURRICULUM

- Course contents: Advanced ergonomics
- This course aims to offer deeper knowledge and training of the different prevention techniques in the field of occupational health by means of ergonomics.
- The knowledge of ergonomics is fundamental as a prevention tool within the degree and the profession.

## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

<b>Competence</b>	<b>E14.</b> Take part in the areas of health promotion, prevention, protection, and recovery.
Learning outcomes	<p><b>E14.11.</b> Analyse ergonomic risk factors for workers using appropriate tools.</p> <p><b>Specific objectives:</b></p> <p><b>E14.11.1.</b> Explain the concept of ergonomics, its goals and areas of application, identifying those risk factors that can affect health at work.</p> <p><b>E14.11.3.</b> Define the concepts of anthropometrics and biomechanics, as necessary tools to design work environments.</p> <p><b>E14.11.4.</b> Explain the basic concepts of design to prevent poor posture and its harmful effects.</p> <p><b>E14.11.5.</b> Explain the concept of work physical load as a group of physical demands a person faces throughout his/her working life and that can negatively affect their health.</p> <p><b>E14.11.6.</b> Define the concept of environmental discomfort at work, to the extent that environmental parameters directly influence workers' safety and health.</p> <p><b>E14.11.7.</b> Explain the concept of vibrations and their effects on human beings and their health.</p> <p><b>E14.11.8.</b> Explain the concept of mental loads at work as a group of tensions on a person caused by mental demands of their work.</p> <p><b>E14.12.</b> Adopt the most appropriate prevention measures in order to prevent lesions, and at the same time promote good health and welfare at work.</p> <p><b>Specific objectives:</b></p> <p><b>E14.12.1.</b> Apply the necessary correction or prevention measures, according to the assessment of ergonomic risk in order to have safe working conditions.</p> <p><b>E14.12.2.</b> Apply redesign options at work that can minimise or eliminate previously identified and assessed ergonomic risks.</p>

### Transversal competences

<b>Competence</b>	<b>T3.</b> Be able to communicate in a fluent, coherent, and adequate way according to established norms, both orally and in writing.
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>T3.1.</b> Use adequate terminology in the field of ergonomic prevention.</p>

<b>Competence</b>	<b>T5.</b> Problem solving.
Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>T5.1.</b> Identify those risk factors related to the appearance of musculoskeletal disorders derived from occupational activities.</p>



**T5.2.** Quantify, through analytical methods, the level of exposure to some ergonomic risks and compare the results to legal reference values or obtained by reliable sources when there are no legal limits.

**T5.3.** Choose the main ergonomic assessment methods to analyse postural (OWAS, REBA, RULA).

**T5.4.** Choose the main assessment methods to analyse manual load manipulation (Guía Técnica del Instituto Español para la Seguridad e Higiene en el Trabajo (NIOSH).

## CONTENTS

1. Concept of ergonomics, goals and limitations.
2. Ergonomic methodology.
3. Types of ergonomics.
4. Concept of anthropometrics and biomechanics. Their link with ergonomics.
5. Basic design concepts.
6. Work physical load. Type of physical work.
7. Risk of manual load manipulation.
8. Risk of repetitive movements.
9. Risk of forced postures.
10. Risk of physical effort.
11. Environmental discomfort at work.
12. Vibrations. Concept of vibration.
13. Mental loads at work.

## TEACHING METHOD AND ACTIVITIES

### DIRECTED ACTIVITIES

- **Theoretical lessons** that will provide the student with the theoretical basics of the course. The lessons will offer visual and computer-based support.

Estimated time: 30 hours.

- **Practical lessons** where the teacher will present different cases related to everyday and occupational activities. The lessons will offer visual and computer-based support

Estimated time: 7.5 hours.

### SUPERVISED ACTIVITIES

- **Practical activity**, under the teacher's supervision, to solve different clinical cases.

Estimated time: 15 hours.

**AUTONOMOUS ACTIVITIES**

- **Individual paper writing** on some topics based on the student's bibliographical search.
  - Ergonomic assessment of a workplace (to be agreed with every individual student) suggesting ergonomic solutions.
  - Solutions to problems: after every practical lesson, the students will have to solve and hand in an exercise given by the teacher.

Estimated time: 42 hours.

- **Autonomous work** of individual study to prepare exams, organise notes/material, tutorials: individually or in group.

Estimated time: 53.5 hours.

ACTIVITY TYPE	ACTIVITY	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Directed activities	Theoretical lessons	E14	30
	Practical lessons	E14	7.5
Supervised activities	Practical activity	E14	15
Autonomous activities	Paper writing	E14, T3, T5	42
	Autonomous work	E14	53.5
<b>TOTAL NUMBER OF HOURS</b>			<b>148</b>

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## ASSESSMENT METHOD

The assessment method will include:

- The theoretical and practical knowledge acquired along the course will be assessed through written tests, which amount to 60% of the final mark.
- The written papers will account for the remaining 40% of the final mark.

In order to pass the course, the following conditions have to be met:

- Pass each section and part of the unit with a minimum mark of 5.
- Attendance at 100% of practical classes (justified absences will allow the student to miss up to 20% of all the practical classes).
- Get a minimum final mark of 5.

Rules concerning internal practical lessons:

Please, check the school's Rules of Internal Practical lessons.


Final evaluation period: from 22/05/2017 to 09/06/2017.

Resit examination period: from 26/05/2017 to 16/06/2017.

Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).

A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.

ASSESSED ACTIVITIES	PERCENTAGE FINAL MARK	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Written tests	60 %	E14	2
Written papers	40 %	E14, T3, T5	—
<b>TOTAL NUMBER OF HOURS</b>			<b>2</b>

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## BIBLIOGRAPHY AND WEB PAGES / BASIC READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Manuel Bestratén Belloví, Ana Hernández Calleja, Pablo Luna Mendaza, Clotilde Nogareda Cuixart, Silvia Nogareda Cuixart, Margarita Oncins de Frutos, M <sup>a</sup> Dolores Solé Gómez		Ergonomia	4 <sup>a</sup>	Madrid	Instituto Nacional de Seguridad e Higiene en el Trabajo
Sabina Asensio Cuesta, María José Bastante Ceca, José Antonio Diego Más	2012	Evaluación ergonómica de puestos de trabajo.	1 <sup>a</sup>	Madrid	Ediciones Paraninfo, S.A.
Centro Nacional de Condiciones del Trabajo		Guía Técnica: Para la evaluación y prevención de los riesgos relativos a la manipulación manual de cargas		Madrid	Instituto Nacional de Seguridad e Higiene en el trabajo. MTAS
Pedro R. Mondelo, Enrique Gregori, Pedro Barrau	1999	Ergonomía 1 Fundamentos	3 <sup>a</sup>	Barcelona	Edicions UPC
Rodríguez Mondelo, Pedro; Gregori Torada, Enrique; Blasco de Busquets, Joan, (aut.)		Ergonomía 3 Diseño de Puestos de Trabajo	1 <sup>a</sup>	Barcelona	Ediciones UPC, S.L.


Web pages			
Title	Description	URL	
Factors de risc relacionats amb els trastorns múscul esquelètics	Information about risk factors related to musculoskeletal disorders.	<a href="http://www.ergonautas.upv.es/art-tech/tme/TME%20indice.htm">http://www.ergonautas.upv.es/art-tech/tme/TME%20indice.htm</a>	
Ergonautas	Website on ergonomics (Universitat Politècnica de València)	<a href="http://www.ergonautas.upv.es/">http://www.ergonautas.upv.es/</a>	

## BIBLIOGRAPHY AND WEB PAGES / BASIC RECOMMENDED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
IBV		Ergonomía y discapacidad	2 <sup>a</sup>	Madrid	Ministerio de Trabajo y Asuntos Sociales
M.R. Jouvencel	1994	Ergonomía Básica		Madrid	Editorial Diaz de Santos

## PLANNING OF THE COURSE UNIT

Available on the virtual campus for all those students enrolled in this course unit.

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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>INTRODUCTION TO ANTHROPOLOGY</b>		
Code	<b>200577</b>	Academic year	<b>2016-2017</b>
ECTS	<b>6</b>	Type of course unit	<b>Optional</b>
Year	<b>4</b>	Term	<b>2</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit		
Language of instruction	<b>CATALAN</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Dr ENRIC SIRVENT RIBALDA</b>
e-mail	<a href="mailto:enric.sirvent@eug.es">enric.sirvent@eug.es</a>
Office hours	<b>To be agreed on</b>

- Team members

Name of lecturer	
e-mail	
Office hours	<b>To be agreed on</b>

## ADMISSION REQUIREMENTS

- None

## THE COURSE UNIT WITHIN THE CURRICULUM

- Course contents: introduction to anthropology.
- The course is an approach to the concepts of nature, society, and culture and to the notions of body and illness from the perspective of cultural and social diversity as well as from the perspective of intercultural relations.
- The notion of body, illness, and health will be approached from three different perspectives: the process of construction of the anatomical human body as a symbolic representation, disease and body as a personal experience, and the social representation of body and illness. The cultural dimension of manual therapies from a transcultural perspective will also be dealt with.

- The knowledge of the aforementioned perspectives is essential, within the degree and also within the profession, in order to improve the student's communication level in the use of manual therapies and his/her understanding of the concept of illness beyond the biomedical paradigm.

## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

<b>Competence</b>	<b>E2. Demonstrate knowledge of the principles, models, techniques, and instruments around which physiotherapy is developed and articulated.</b>
Learning outcomes	<p><b>E2.20.</b> Explain the foundations of anthropology. <b>Specific objectives:</b>  <b>E2.20.1.</b> Identify the different cultural, social and economic organization models of kinship and filiation groups.  <b>E2.20.2.</b> Identify the aim of anthropology and ethnography within social, natural, and human sciences.  <b>E2.20.3.</b> Formulate the concept of people's cultural identity.  <b>E2.20.4.</b> Formulate the concept of intercultural communication.</p> <p><b>E2.21.</b> Explain different healthcare services in other cultures. <b>Specific objectives:</b>  <b>E2.21.1.</b> Relate the different notions of illness and pain.  <b>E2.21.2.</b> Identify different medical and physiotherapy models from a transcultural perspective.</p> <p><b>E2.22.</b> Identify the patient's priorities according to his/her cultural identity. <b>Specific objectives:</b>  <b>E2.22.1.</b> Relate the practice of manual therapies to the patient's cultural identity.  <b>E2.22.2.</b> Identify the interrelational conditions between the therapist and the patient from a cultural perspective.</p> <p><b>E2.23.</b> Analyse the actions taken in the practice of physiotherapy from sociocultural perspectives. <b>Specific objectives:</b>  <b>E2.23.1.</b> Design strategies related to the occupation of personal space in the use of manual therapies.  <b>E2.23.2.</b> Manage verbal and nonverbal communication models in physiotherapy care.</p> <p><b>E2.24.</b> Assess social and cultural aspects associated with physiotherapy treatments improving their adaptation process based on sociocultural differences. <b>Specific objectives:</b>  <b>E2.24.1.</b> Develop the characteristics of haptic interventions and body manipulation.</p>

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	<b>E2.24.2.</b> Distinguish the different clinical practice models in different health care disciplines.
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### Transversal competences

<b>Competence</b>	<b>T7.</b> Team work.
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Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>T7.1.</b> Develop techniques of social and cultural anthropology, particularly participant observation.</p> <p><b>T7.2.</b> Have a constructive attitude when working in groups (positively contributing to the choice of topic and its development).</p> <p><b>T7.3.</b> Respect and take into account the contributions and different attitudes of the other group members.</p> <p><b>T7.4.</b> Share responsibilities when working in group.</p>
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<b>Competence</b>	<b>T8.</b> Develop interpersonal relationships.
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Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>T8.1.</b> Acknowledge one's own mistakes in relation to interrelations among group members.</p> <p><b>T8.2.</b> Evaluate others' ideas, even if they are completely opposed to yours, in a respectful and constructive manner.</p> <p><b>T8.3.</b> Speak one's own mind in relation to the choice and making of the fieldwork that will be conducted during the course.</p>
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<b>Competence</b>	<b>T9.</b> Develop critical thinking.
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Learning outcomes	<p><b>Specific objectives:</b></p> <p><b>T9.1.</b> Be able to maintain critical distance from ethnocentric positions and take a holistic, comparative, and reflective perspective on the anthropological study of social realities.</p> <p><b>T9.2.</b> Express one's own opinions and evaluations when doing group work, particularly when doing participant observation.</p>
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## CONTENTS

<ol style="list-style-type: none"> <li>1. INTRODUCTION TO SOCIAL AND CULTURAL ANTHROPOLOGY.</li> <li>2. ANTHROPOLOGY OF THE HUMAN BODY.</li> <li>3. ANTHROPOLOGY OF ILLNESS AND PAIN.</li> <li>4. ANTHROPOLOGY OF MANUAL THERAPIES.</li> </ol>
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## TEACHING METHOD AND ACTIVITIES

### DIRECTED ACTIVITIES

- **Theoretical lessons** that will provide the theoretical basics of the course and **conferences** given by professionals related to the different teaching units. The lessons and conferences will offer visual and computer-based support.

Estimated time: 37.5 hours.

### SUPERVISED ACTIVITIES

- **Debates on a proposed topic:** the students in the course will be divided in groups of 3 or 4 and each of them will have to choose an article, from a selection made by the teacher, for the first three teaching units. After reading the article, the student will make a proposal for the debate he/she will have with the other members in the group. He/she will be in charge of taking notes of the debate and he/she will also be responsible for a) present the topic of the article before all the students in class and b) open the debate to all the students ("general debate") so that, depending on how rich and informative the first debate has been, he/she will have more tools for the general debate. One of the 3-4 topics per group will be chosen, by draw, so that each group will present only one paper. The mark given for this activity will be the same for all the group members. The paper will be tutored by the teacher. For Erasmus students, they will also choose one of the articles proposed by the teacher and a summary will be sent to the teacher based on some deadlines, the tutorials will be on-line.

Estimated time: 15 hours.

### ACTIVITATS AUTÒNOMES

- **Information search, treatment and analysis** in order to complement and contribute to the debate of the chosen topic.

Estimated time: 15 hours.

- **Paper writing:** once the students are divided into groups of 4 or 5, each group will have to choose, tutored by the teacher, a topic related to teaching units 2-3-4 for a paper. This paper will be presented in public at the end of the term. The assessment of the paper will be done by the teacher (80%) and the class (20%). Erasmus students will write a comparative paper, tutored on-line, about their experience abroad. This paper will be presented in public at the end of the term and the assessment procedures will be the same as for other papers.

Estimated time: 50 hours.

- **Autonomous work** of individual study to prepare exams, organise notes/material, tutorials: individually or in group.

Estimated time: 30 hours.

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ACTIVITY TYPE	ACTIVITY	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Directed activities	Theoretical lessons and conferences	E2	37.5
Supervised activities	Debates about a topic	E2, T7, T8, T9, G1, G3	15
Autonomous activities	Information search and management	E2	15
	Paper writing	E2, T7, T9, G1	50
	Autonomous work	E2	30
<b>TOTAL NUMBER OF HOURS</b>			<b>147.5</b>

## ASSESSMENT METHOD

The assessment method will include:

- The theoretical knowledge will be assessed through written tests, which amount to 30% of the final mark.
- The student's motivation, attitude and participation in the debate will amount to 20% of the final mark.
- Paper writing and presentation will account for 50% of the final mark.

In order to pass the course, the following conditions have to be met:

- Pass each section and part of the unit with a minimum mark of 5.
- Get a minimum final mark of 5.

Final evaluation period: from 22/05/2017 to 09/06/2017.

Resit examination period: from 26/05/2017 to 16/06/2017.

Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).

A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.

ASSESSED ACTIVITIES	PERCENTAGE FINAL MARK	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Written tests	30 %	E2	2
Motivation, attitude and participation in debate	20 %	E2, T7, T8, T9, G1, G3	---
Paper writing	50 %	E2, T7, T9, G1	0.5
<b>TOTAL NUMBER OF HOURS</b>			<b>2.5</b>

## BIBLIOGRAPHY AND WEB PAGES / BASIC READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Kottak, Conrad Phillip	1994	Antropología: una exploración de la diversidad humana	1	Madrid	McGraw-Hill,
Harris, Marvin	2000	Antropología cultural	1	Madrid	Alianza
Esteban Mari Luz	2004	Antropología del cuerpo: género, itinerarios corporales, identidad y cambio	1	Barcelona	Bellaterra
Torralba Francesc	1998	Antropología del cuidar	1	Madrid	Mapfre medicina
Le Breton, David	1999	Antropología del dolor	1	Barcelona	Sex Barral
Martínez Hernández, A.	2008	Antropología médica: teorías sobre la cultura, el poder y la enfermedad	1	Madrid	Anthropos
Frigole J.	1995	Antropología Social	1	Barcelona	Proa
Esteban M.L, Comelles JM, Déz C.	2010	Antropología, género, salud y atención	1	Barcelona	Bellaterra
Ehrenreich, B.	1988	Brujas, comadronas y enfermeras: historia de las sanadoras: dolencias y trastornos; política sexual de la enfermedad	1	Barcelona	La Sal
Boixareu, RM	2008	De la antropología filosófica a la antropología de la salud	2	Barcelona	Herder
Menéndez, E.L.	2009	De sujetos, saberes y estructuras: introducción al enfoque relacional en el estudio de la salud colectiva	1	Buenos Aires	Lugar
Bonte, P. , Izard, M.	1996	Diccionario de etnología y antropología	1	Madrid	Akal
Allué, M.	2003	Discapacitados: la reivindicación de la igualdad en la diferencia	1	Barcelona	Bellaterra
Morin, E.	1999	El hombre y la muerte	1	Barcelona	Kairós
Comelles, JM, Martínez, A.	1993	Enfermedad, cultura y sociedad: un ensayo sobre las relaciones entre la antropología social y la medicina	1	Madrid	Eudema
San Román, T.	1986	Entre la marginación y el racismo: reflexiones sobre la vida de los gitanos	1	Madrid	Alianza
Ramírez, S.	1997	Entre calles estrechas: gitanos, prácticas y	1	Barcelona	Bellaterra

		saberes mèdics			
Godeau, E.	2007	L'esprit de corps: sexe et mort dans la formation des internes en médecine	1	Paris	Maison des sciences de l'homme
Kenny, M., De Miquel JM.	1980	La antropología médica en España	1	Barcelona	Anagrama
Bauman, Z.	2002	La cultura como praxis	1	Barcelona	Paidós
Dethlefsen, T.	1996	La enfermedad como camino: una interpretación distinta de la medicina	1	Barcelona	Plaza&Janés
Sontag, S.	1996	La enfermedad y sus metáforas, el Sida y sus metáforas	1	Madrid	Taurus
Turner, V.	2008	La selva de los símbolos	1	Madrid	Siglo XX
Llobera, JR:	1999	Manual d'antropologia social: estructura i evolució de les societats humanes	1	Barcelona	Pòrtic
Ackerknecht, EH.	1985	Medicina y antropología social	1	Madrid	Akal
Comelles, JM., Perdigueró, E.	2000	Medicina y cultura: estudios entre la antropología y la medicina	1	Barcelona	Bellaterra
Harris, M. Ross, E.	1999	Muerte, sexo y fecundidad: la regulación demográfica en las sociedades preindustriales y en desarrollo	1	Madrid	Alianza
Pera, C.	2006	Pensar en el cuerpo: ensayo sobre la corporeidad humana	1	Madrid	Triscatela
Douglas, M.	2007	Pureza y peligro: un análisis de los conceptos de contaminación y tabú	–	Buenos Aires	Nueva Visión
Mallart, LL.	1996	Soy hijo de los evuzok: la vida de un antropólogo en Camerún	1	Barcelona	Ariel
Turner Bryan, S.	2008	The body & society: explorations in the social theory	1	Los Angeles	SAGE
Harris, M.	1980	Vacas, cerdos, guerras y brujas: los enigmas de la cultura	1	Madrid	Alianza


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## BIBLIOGRAPHY AND WEB PAGES / BASIC RECOMMENDED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
De Vos	1981	Antropología psicológica	1	Barcelona	Anagrama
Evans-Pritchard, E.E.	1997	Brujería, magia y oráculos entre los Azande	1	Barcelona	Anagrama
Fericgla, JM.	1992	Envejecer: una antropología de la ancianidad	1	Barcelona	Anthropos
Leiris, M.	1995	L'etnòleg davant el colonialisme	1	Barcelona	Icaria
Foucault, M.	1990	La vida de los Hombres infames: ensayos sobre la desviación y dominación	1	Madrid	La Piqueta
Le Breton, R.	1983	Las étinias	1	Vilasar de Mar	Oikos Tau
San Román, T.	1996	Los muros de la separación: ensayo sobre alterofobia y filantropía	1	Madrid	Tecnos
Delgado, M.	1998	Diversitat i integració: lògica i dinàmica de les identitats a Catalunya	1	Barcelona	Empuries

## PLANNING OF THE COURSE UNIT

Available on the virtual campus for all those students enrolled in this course unit.

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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>INTRODUCTION TO HORSE ASSISTED MOVEMENT THERAPY</b>		
Code	<b>200578</b>	Academic year	<b>2016-2017</b>
ECTS	<b>6</b>	Type of course unit	<b>Optional</b>
Year	<b>4</b>	Term	<b>2</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit.		
Language of instruction	<b>CATALAN AND SPANISH</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Ms TERESA XIPELL PRUNÉS</b>
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- Team members

Name of lecturer	<b>Mr XAVIER SALA BARAT</b>
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Name of lecturer	<b>Mr ENRIC PIGUILLEM</b>
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Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Ms DOLORES ECHEVARRIA</b>
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Office hours	<b>To be agreed on</b>

## ADMISSION REQUIREMENTS

- None

## THE COURSE UNIT WITHIN THE CURRICULUM

- Course contents: Introduction to horse assisted therapy.

- This course aims to consolidate the basics of physiotherapy with horses, introducing the basic principles of horse care and management and an introduction to horse riding.
- The knowledge of the morphology, anatomy, biomechanics, and aetiology of the horse is essential not only as part of the degree but also to work with horses, both providing therapy with horses (horse-assisted therapy) as well as providing treatment for the horse itself.

## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

Competence	E4. Demonstrate knowledge of the physiotherapy methods, procedures, and actions that contribute to health promotion and maintenance.
Learning outcomes	<p><b>E4.10.</b> Explain the basics of the horse world.</p> <p><b>Specific objectives:</b></p> <p><b>E4.10.1.</b> Describe basic anatomy, biomechanics, and aetiology of the horse.</p> <p><b>E4.10.2.</b> Identify, through palpation, the main osseous reliefs and superficial musculature related to the horse's front and rear legs and back.</p> <p><b>E4.10.3.</b> Recognise the horse's gaits.</p> <p><b>E4.10.4.</b> Enumerate the different horse riding disciplines</p> <p><b>E4.10.5.</b> Explain briefly the history of equestrian sports.</p> <p><b>E4.11.</b> Manage, ride, and take care of a horse.</p> <p><b>Specific objectives:</b></p> <p><b>E4.11.1.</b> Apply the adequate procedures to clean the horse's stalls and the horse itself using appropriate tools.</p> <p><b>E4.11.2.</b> Identify the different types of saddles and bits used for horse riding.</p> <p><b>E4.11.3.</b> Choose and put the most appropriate saddle and bit for each horse to be ridden.</p> <p><b>E4.11.4.</b> Lead a horse.</p> <p><b>E4.11.5.</b> Make the horse move backward, forward, walk and halt using appropriate aids and maintaining the right position.</p> <p><b>E4.11.6.</b> Enumerate equine safety guidelines.</p> <p><b>E4.12.</b> Explain the basics of physiotherapy applied to horses.</p> <p><b>Specific objectives:</b></p> <p><b>E4.12.1.</b> Describe the main pathologies or disorders of the horse that can be treated with physiotherapy.</p> <p><b>E4.12.2.</b> Distinguish the scope of responsibility of veterinarians and physiotherapists to prevent mutual intrusions.</p> <p><b>E4.13.</b> Explain the basics of therapeutic riding and hippotherapy to administer equine therapy to disabled people.</p> <p><b>Specific objectives:</b></p> <p><b>E4.13.1.</b> Define hippotherapy.</p> <p><b>E4.13.2.</b> Identify possible hippotherapy clients.</p> <p><b>E4.13.3.</b> Choose the horse and material taking into account the treatment goals of hippotherapy.</p> <p><b>E4.13.4.</b> Define therapeutic riding.</p>

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	<b>E4.13.5.</b> Identify possible therapeutic riding clients. <b>E4.13.6.</b> Choose the horse and material taking into account the treatment goals of therapeutic riding.
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<b>Competence</b>	<b>E15.</b> Work in professional teams, collaborating effectively with the whole multidisciplinary team.
Learning outcomes	<b>E15.6.</b> Explain the different competences of the different professionals involved in the horse world. <b>Specific objectives:</b> <b>E15.6.1.</b> Identify the professionals in the horse world and those in the therapeutic world. <b>E15.6.2.</b> Describe the function of each professional in the multidisciplinary team in hippotherapy, therapeutic riding, and physiotherapy applied to horses.

### Transversal competences

<b>Competence</b>	<b>T12.</b> Identify and deal with changes easily.
Learning outcomes	<b>Specific objectives:</b> <b>T12.1.</b> Be aware of the fact that we are working with an animal so we have to ensure therapy is always given safely. <b>T12.2.</b> Understand the rider's different levels of collaboration and adapt each session accordingly.

<b>Competence</b>	<b>T14.</b> Demonstrate sensitivity to environmental issues.
Learning outcomes	<b>Specific objectives:</b> <b>T14.1.</b> Describe the general measures of environmental protection in equestrian sports. <b>T14.2.</b> Apply professional environmental protection actions in equestrian sports through the recycling of residues, the rational use of water and energy saving tips.



## CONTENTS

1. Basic horse anatomy.
2. Biomechanics applied to horse movements.
3. Horse aetiology.
4. Horse gaits.
5. Horse riding.
6. Horse tack.
7. Horse habitat.
8. Horse preparation.
9. The rider.
10. Position of the rider.
11. Healthy horse / unhealthy horse.
12. Equine safety guidelines.
13. Horse habitat and environment.
14. Hippotherapy.
15. Therapeutic riding.

## TEACHING METHOD AND ACTIVITIES

### DIRECTED ACTIVITIES

- **Theoretical lessons** that will provide the theoretical basics of horse assisted therapy. The lessons will offer visual and computer-based support.

Estimated time: 30 hours.

### SUPERVISED ACTIVITIES

- **Horse management, care and riding in a riding centre.**

Estimated time: 50 hours.


### AUTONOMOUS ACTIVITIES

- **Individual or group paper writing** on some topics based on the student's bibliographical search.

Estimated time: 30 hours.

- **Autonomous work** of individual study to prepare exams, organise notes/material, tutorials: individually or in group.

Estimated time: 36.5 hours.

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ACTIVITY TYPE	ACTIVITY	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Directed activities	Theoretical lessons	E4	30
Supervised activities	Horse management, care and riding in a riding centre	E4, E15, T12, T14, G3	50
Autonomous activities	Paper writing	E4	30
	Autonomous work	E4	36.5
<b>TOTAL NUMBER OF HOURS</b>			<b>146.5</b>

## ASSESSMENT METHOD

The assessment method will include:

- The theoretical and practical knowledge acquired along the course will be assessed through written tests, which amount to 25% of the final mark.
- The ability in horse management, care, and riding will be assessed through some practical tests in a riding centre and it will account for 60% of the final mark.
- The written papers will account for 15% of the final mark.

In order to pass the course, the following conditions have to be met:

- Pass each section and part of the unit with a minimum mark of 5.
- Attendance at 100% of practical classes (justified absences will allow the student to miss up to 20% of all the practical classes).
- Get a minimum final mark of 5.

Final evaluation period: from 22/05/2017 to 09/06/2017.

Resit examination period: from 26/05/2017 to 16/06/2017.

Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).

A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.

ASSESSED ACTIVITIES	PERCENTAGE FINAL MARK	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Written tests	25 %	E4	2
Practical tests in a riding centre	60 %	E4, E15, T12, T14, G3	1.5
Written papers	15 %	E4	---
<b>TOTAL NUMBER OF HOURS</b>			<b>3.5</b>

## BIBLIOGRAPHY AND WEB PAGES / BASIC READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
E. Agüera y J. Sandoval	1999	Anatomía Aplicada al Caballo		Madrid	Harcourt Brace
Sara Wyche	2002	The Horses Muscles in Motion			Marlborough - Crowood
D. Mills, K. Nankervis, Blackwell et Science	1999	Equine Behavior. Principles and Practice			Blackwell Science
Massimo Frascarelli, Daniele Nicolas Citterio	2000	Trattato di Riabilitazione Equestre		Milan	Phoenix Editrice Soc. Coop.arl
Sally Swuift	1997	Equitació Centrada		Barcelona	Hispano Europea
Com. V Congreso Internacional	2004	Animales de Compañía , fuente de salud		Barcelona	Viena Editorial
Sociedad Hípica Británica	1998	Manual de Hípica			Pony Club
Tatiana Lermontov	2004	Psicomotricidade na Equoterapia		Brasil	Ideas & Letras

Articles						
Author	Title	Publication	Volume	Year	Pages	Description/ comment
Dorothee Debuse, Colin Chandler, and Catherine Gibb	An exploration of German and British physiotherapists' views on the effects of hippotherapy and their measurement	Physiotherapy Theory and Practice		2005	22	
Debby Silkwood-Sherer,PT,MS, and Heather Warmbier, MPT	Effects of Hippotherapy on Postural Stability, in Persons with Multiple Sclerosis: A Pilot Study	Central Michigan University		2007	8	
Josep Medina, Teresa Xipell, Montserrat Quintana	Resultats d'un protocol d'hipoteràpia en la rehabilitació de pacients amb dany cerebral	ACTUALITZACIONS EN FISIOTERÀPIA	IV	2008	17-23	

## PLANNING OF THE COURSE UNIT

Available on the virtual campus for all those students enrolled in this course unit.

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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>BUSINESS ORGANIZATION AND MANAGEMENT</b>		
Code	<b>200580</b>	Academic year	<b>2016-2017</b>
ECTS	<b>6</b>	Type of course unit	<b>Optional</b>
Year	<b>4</b>	Term	<b>2</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit		
Language of instruction	<b>CATALAN / SPANISH</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Dr MANEL TABOADA GONZALEZ</b>
e-mail	<a href="mailto:manel.taboada@eug.es">manel.taboada@eug.es</a>
Office hours	<b>To be agreed on</b>

- Team members

Name of lecturer	<b>Ms ELISA SALVADOR DELGADO</b>
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Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Mr ALEX GINÉS</b>
e-mail	<a href="mailto:alex.gines@eug.es">alex.gines@eug.es</a>
Office hours	<b>To be agreed on</b>

## ADMISSION REQUIREMENTS

- None

## THE COURSE UNIT WITHIN THE CURRICULUM

- Course contents: Business organization and management.
- A common professional opportunity for many graduates in physiotherapy is self-employment. Taking this into account, this course aims to facilitate the necessary basic tools and knowledge

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that can help them organise and manage their own businesses (commercial management, administrative management, financial management, etc.).

- This course also aims to help graduates in the admission process to third-party businesses by presenting different business organisation models.

## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

<b>Competence</b>	<b>E19.</b> Develop planning, management, and control activities in healthcare units providing physiotherapy care and their relationship with other health services.
Learning outcomes	<p><b>E19.6.</b> Define business organisation models: choose the most appropriate model and make an organization chart and a simple organization manual.</p> <p><b>Specific objectives:</b></p> <p><b>E19.6.1.</b> Describe different business organization models.</p> <p><b>E19.6.2.</b> Choose the most appropriate organization model for a physiotherapy centre.</p> <p><b>E19.6.3.</b> Define the basic concepts included in a business organization manual.</p> <p><b>E19.6.4.</b> Summarise a business organization model on an organization chart.</p> <p><b>E19.7.</b> Make a business marketing plan: establish business goals and strategies and create a marketing mix (commodity, cost, channel and communication).</p> <p><b>Specific objectives:</b></p> <p><b>E19.7.1.</b> Define the basic components of a marketing mix.</p> <p><b>E19.7.2.</b> Make a simple marketing plan for a physiotherapy centre.</p> <p><b>E19.8.</b> Describe the standard administrative system: organise a business agenda, invoicing, payments, incomes and expenses.</p> <p><b>Specific objectives:</b></p> <p><b>E19.8.1.</b> Explain the scope and the elements that are part of a business administrative system.</p> <p><b>E19.8.2.</b> Explain the basics of business obligations related to a physiotherapy centre: accounting obligations, fiscal obligations, commercial obligations, etc.</p> <p><b>E19.9.</b> Explain alternative finance sources: characteristics and associated costs.</p> <p><b>Specific objectives:</b></p> <p><b>E19.9.1.</b> Enumerate all the current business finance solutions.</p> <p><b>E19.9.2.</b> Study the variables that will allow choosing the most convenient business finance source.</p>

### Transversal competences

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<b>Competence</b> T2. Organising and planning.	
Learning outcomes	<b>Specific objectives:</b> <b>T2.1.</b> Identify and plan team tasks. <b>T2.2.</b> Distribute team tasks based on each team member's competences.

<b>Competence</b> T11. Show initiative and resourcefulness.	
Learning outcomes	<b>Specific objectives:</b> <b>T11.1.</b> Describe the qualities and abilities of entrepreneurs, either when setting up their own business or when working for a third party (intra-entrepreneurs). <b>T11.2.</b> Make a SWOT analysis in the field of entrepreneurship and, based on its results, identify competitive advantages. <b>T11.3.</b> Identify the key ideas of a proposal (marketing plan, organization model, financial plan) and present them in a clear and convincing way to an audience.

<b>Competence</b> T13. Show a strategic and flexible learning attitude.	
Learning outcomes	<b>Specific objectives:</b> <b>T13.1.</b> Find reliable and quality information sources that can be used to do research on a topic. <b>T13.2.</b> Identify the relevant pieces of information in relation to a specific objective.

## CONTENTS

1. BUSINESS COMPANIES
2. BUSINESS ORGANIZATION
3. BUSINESS MANAGEMENT
4. PLANNING
5. MANAGEMENT AND CONTROL
6. RESOURCEFULNESS
7. SETTING UP ONE'S OWN BUSINESS

## TEACHING METHOD AND ACTIVITIES

#### **DIRECTED ACTIVITIES**

- **Theoretical lessons** that will provide the theoretical basics of the course. The lessons will offer visual and computer-based support.

Estimated time: 37.5 hours.

#### **SUPERVISED ACTIVITIES**

- **Reading articles** that will be discussed and **resolution of practical situations** related to theoretical concepts. These activities will be done individually or in groups.

Estimated time: 22.5 hours.

#### **AUTONOMOUS ACTIVITIES**

- **Group paper writing** on topics, among others, such as making a marketing plan, an organization manual or a financial plan to buy equipment and material, for existing or new physiotherapy centres.

Estimated time: 45 hours.

- **Autonomous work** of individual study to prepare exams, organise notes/material, tutorials: individually or in group.

Estimated time: 41 hours.

ACTIVITY TYPE	ACTIVITY	LEARNIGN OUTCOMES	TIME DEVOTED BY THE STUDENT
Directed activities	Theoretical lessons	E19	37.5
Supervised activities	Reading articles and resolution of practical situations	E19, T2, T11, T13	22.5
Autonomous activities	Paper writing	E19, T2, T11, T13	45
	Autonomous work	E19, T13	41
<b>TOTAL NUMBER OF HOURS</b>			<b>146</b>

## **ASSESSMENT METHOD**

The assessment method will include:

- The theoretical knowledge acquired along the course will be assessed through written tests, which amount to 40% of the final mark.
- The written papers account for 30% of the final mark.
- Paper presentation amounts to 30% of the final mark

In order to pass the course, the following conditions have to be met:

- Pass each assessment activity with a minimum mark of 5.
- Get a minimum final mark of 5.

Final evaluation period: from 22/05/2017 to 09/06/2017.

Resit examination period: from 26/05/2017 to 16/06/2017.

Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).

A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.



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ASSESSED ACTIVITIES	PERCENTAGE FINAL MARK	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Written tests	40 %	E19	2
Written papers	30 %	E19, T2, T11, T13	0
Paper presentation	30 %	T2, T11, T13	2
<b>TOTAL NUMBER OF HOURS</b>			<b>4</b>

## BIBLIOGRAPHY AND WEB PAGES / BASIC READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Eduardo Bueno Campos	1.994	Economía de empresa ISBN 978-84-368-0207-1	15a	Madrid	PIRAMIDE
Julio Garcia Junco, Cristobal Casanueva Rocha	2.000	Fundamentos de gestión empresarial ISBN 978-84-368-1505-X		Madrid	PIRAMIDE
S Miquel, A.Moya, J.Enrique Bigué	1.994	Introducción al marketing ISBN 978-84-481-1846-4		Madrid	McGRAW HILL


Web pages			
Title	Description	URL	
Agencia Tributaria	Current taxes	<a href="http://www.agenciatributaria.es">www.agenciatributaria.es</a>	
Organigramas de l'empresa	Types of organization charts	<a href="http://www.promonegocios.net/organigramas/tipos-de-organigramas.html">http://www.promonegocios.net/organigramas/tipos-de-organigramas.html</a>	
Cambra de Comerç de Barcelona	Finance sources	<a href="http://www.cambrabcn.org/c/document_library/get_file?folderId=207499&amp;name=DLFE-3101.pdf">http://www.cambrabcn.org/c/document_library/get_file?folderId=207499&amp;name=DLFE-3101.pdf</a>	
INAEM	Current contracts of employment	<a href="http://w.aragon.es/DepartamentosOrganismosPublicos/Organismos/InstitutoAragonesEmpleo/AreasTematicas/Empresas/ci.02_Contratos_trabajo.detalleDepartamento#section6">http://w.aragon.es/DepartamentosOrganismosPublicos/Organismos/InstitutoAragonesEmpleo/AreasTematicas/Empresas/ci.02_Contratos_trabajo.detalleDepartamento#section6</a>	

## BIBLIOGRAPHY AND WEB PAGES / BASIC RECOMMENDED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Joaquín Sánchez Herrera	2.001	Plan de marketing : Análisis, decisiones y control ISBN 978-84-368-1606-4		Madrid	PIRAMIDE
Ignasi Brunet, Antoni Vidal	2.004	Empresa y recursos organizativos ISBN 978-84-368-1903-9		Madrid	PIRAMIDE

## PLANNING OF THE COURSE UNIT

Available on the virtual campus for all those students enrolled in this course unit.

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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>PRACTICUM - VI</b>		
Code	<b>200569</b>	Academic year	<b>2016-2017</b>
ECTS	<b>6</b>	Type of course unit	<b>Compulsory</b>
Year	<b>4</b>	Term	<b>2</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit		
Language of instruction	<b>CATALAN</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Ms YOLANDA SÁNCHEZ</b>
e-mail	<a href="mailto:yolanda.sanchez@eug.es">yolanda.sanchez@eug.es</a>
Office hours	<b>To be agreed on</b>

- Team members

Name of lecturer	<b>Ms MELANIA MASÓ</b>
e-mail	<a href="mailto:melania.maso@eug.es">melania.maso@eug.es</a>
Office hours	<b>To be agreed on</b>

Name of lecturer	<b>Ms DIANA MUÑOZ</b>
e-mail	<a href="mailto:diana.munoz@eug.es">diana.munoz@eug.es</a>
Office hours	<b>To be agreed on</b>

## ADMISSION REQUIREMENTS

- BASIC PHYSIOTHERAPY OF THE LOCOMOTOR SYSTEM – I
- BASIC PHYSIOTHERAPY OF THE LOCOMOTOR SYSTEM – II

## THE COURSE UNIT WITHIN THE CURRICULUM

- Contents: Guided training.

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- This course unit aims to consolidate and integrate all the knowledge, abilities, skills, attitudes, and values acquired and related to any clinical specialty, under the guidance of qualified physiotherapists. All those professional competences necessary to prepare the student to give effective, specialist physiotherapy care to patients/users will be developed.

## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

<b>Competence</b>	<b>E4.</b> Demonstrate knowledge of the physiotherapy methods, procedures, and actions that contribute to health promotion and maintenance.
Learning outcomes	<b>E4.1.</b> Design, teach, and advise about the different prevention methods for functional impairments and particularly those related to postural hygiene, mobility loss, and algid acute stages. <b>Specific objectives:</b> <b>E4.1.1.</b> Recommend prevention guidelines for any specialty. <b>E4.1.2.</b> Explain, in a clear and structured way, recommended prevention guidelines developed for any specialty.

<b>Competence</b>	<b>E5.</b> Integrate, through clinical experience, ethical and professional values, the knowledge, skills, and attitudes characteristic in physiotherapy to solve specific clinical cases in hospital, out-of-hospital, primary and community health care environments.
Learning outcomes	<b>E5.5.</b> Solve clinical cases susceptible of physiotherapy treatment in any clinical specialty. <b>Specific objectives:</b> <b>E5.5.1.</b> Solve a clinical case presented in the training program, applied to any clinical specialty, and write a progress report.

<b>Competence</b>	<b>E6.</b> Write and fill in physiotherapy registers.
Learning outcomes	<b>E6.3.</b> Record all the steps taken from the moment the patient/user is admitted to the moment he/she is discharged in an adequate and effective way according to each clinical specialty. <b>Specific objectives:</b> <b>E6.3.1.</b> Write accurate physiotherapy records, applied to any clinical specialty, about the treatment given and the results obtained.

<b>Competence</b>	<b>E7.</b> Assess the patient's functional state, taking into account physical, psychological, and social aspects.
Learning outcomes	<b>E7.12.</b> Follow the adequate physiotherapy validation procedures in order to determine the level of affection and its possible functional impact for the patients/users the student takes care of during the training. <b>Specific objectives:</b> <b>E7.12.1.</b> Use appropriately the specific assessment tools for any pathology in any clinical specialty.

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<b>Competence</b>	<b>E8.</b> Make the physiotherapy diagnosis according to established norms and internationally recognised validation instruments.
Learning outcomes	<b>E8.9.</b> Establish a physiotherapy diagnostic hypothesis. <b>Specific objectives:</b> <b>E8.9.1.</b> Identify the deficiencies, limitations in everyday activities, participation restrictions, and contextual factors of patients with conditions within any clinical speciality. <b>E8.9.2.</b> Interrelate the deficiencies, limitations in everyday activities, and participation restrictions of the patient applied to any clinical speciality.

<b>Competence</b>	<b>E9.</b> Develop a physiotherapy intervention plan according to criteria of adequacy, validity, and efficiency.
Learning outcomes	<b>E9.17.</b> Define the general and specific objectives for the application of the physiotherapy treatment. <b>Specific objectives:</b> <b>E9.17.1.</b> Plan and propose the treatment objectives of specific pathologies within any clinical speciality.  <b>E9.18.</b> Establish treatment priorities according to the problems detected. <b>Specific objectives:</b> <b>E9.18.1.</b> Classify the short-term and long-term goals applied to any clinical speciality. <b>E9.18.2.</b> Prioritise problems according to their importance and/or emergency, applied to any clinical speciality.  <b>E9.19.</b> Establish the periodicity for a physiotherapy treatment. <b>Specific objectives:</b> <b>E9.19.1.</b> Establish follow-up sessions for the treatment of any clinical condition.


<b>Competence</b>	<b>E10.</b> Implement, run, and coordinate a physiotherapy intervention plan using physiotherapy methods and taking the patient's individuality into account.
Learning outcomes	<b>Specific objectives:</b> <b>E10.1.</b> Devise a physiotherapy intervention plan.

<b>Competence</b>	<b>E11.</b> Assess the evolution of the results obtained in the treatment in relation to the final goals.
Learning outcomes	<b>E11.1.</b> Assess the results and their link with the final goals, through real cases in the different clinical specialties. <b>Specific objectives:</b> <b>E11.1.1.</b> Compare the results and the predetermined goals in any clinical speciality.

<b>Competence</b>	<b>E12.</b> Write discharge reports when the objectives have been achieved.
Learning outcomes	<b>E12.2.</b> Make a physiotherapy report that includes all the necessary information so that it is a valid communication tool for users and/or professionals. <b>Specific objectives:</b> <b>E12.2.1.</b> Write clear and correct physiotherapy reports on any clinical condition.

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<b>Competence</b>	<b>E13.</b> Provide the patient with effective physiotherapy care and offer comprehensive care.
Learning outcomes	<p><b>E13.9.</b> Guide any course of action in relation to the patient/user, non-medical staff, and junior employees.</p> <p><b>Specific objectives:</b>  <b>E13.9.1.</b> Organize and integrate any action and procedure into the multidisciplinary team.</p> <p><b>E13.10.</b> Refer the patient, when necessary, to another health professional.</p> <p><b>Specific objectives:</b>  <b>E13.10.1.</b> Be aware of one's own competences and refer the patient, when necessary, to another health professional.</p>
<b>Competence</b>	<b>E15.</b> Work in professional teams, collaborating effectively with the whole multidisciplinary team.
Learning outcomes	<p><b>E15.5.</b> Reach an agreement among the members of the multidisciplinary team, if necessary, on the main goals to integrate any actions and medical assistance.</p> <p><b>Specific objectives:</b>  <b>E15.5.1.</b> Cooperate with the members of the multidisciplinary team.</p>
<b>Competence</b>	<b>E17.</b> Participate in the making of health care protocols of scientific evidence-based physiotherapy, promoting professional activities that foster research in physiotherapy.
Learning outcomes	<p><b>E17.5.</b> Apply health care protocols of scientific evidence-based physiotherapy.</p> <p><b>Specific objectives:</b>  <b>E17.5.1.</b> Apply validated and/or agreed health care protocols to any clinical specialty.</p>
<b>Competence</b>	<b>E19.</b> Develop planning, management, and control activities in healthcare units providing physiotherapy care and their relationship with other health services.
Learning outcomes	<p><b>E19.4.</b> Analyse and assess different management and control systems of physiotherapy services.</p> <p><b>Specific objectives:</b>  <b>E19.4.1.</b> Analyse and assess the management and control systems in the training centre.</p>
<b>Competence</b>	<b>E20.</b> Apply the quality guarantee mechanisms in the practice of physiotherapy, according to recognised and validated criteria.
Learning outcomes	<p><b>E20.9.</b> Analyse the quality guarantee mechanisms in the care provided by the physiotherapy services in the training centre, using the assessment methods learnt in other course units.</p> <p><b>Specific objectives:</b>  <b>E20.9.1.</b> Describe the quality control processes of the training centre.</p>
<b>Competence</b>	<b>E22.</b> Carry out any physiotherapy action from a comprehensive care approach involved in multidisciplinary cooperation, process integration, and continuity of care.

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Learning outcomes	<b>Specific objectives:</b> <b>E22.1.</b> Integrate the different physiotherapy interventions in a multidisciplinary cooperative context. <b>E22.2.</b> Ensure continuity of care.
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### Transversal competences

<b>Competence</b>	<b>T6.</b> Take the most adequate decisions in a specific situation.
Learning outcomes	<b>Specific objectives:</b> <b>T6.1.</b> Take informed decisions. <b>T6.2.</b> Take firm decisions.

<b>Competence</b>	<b>T9.</b> Develop critical thinking.
Learning outcomes	<b>Specific objectives:</b> <b>T9.1.</b> Distinguish facts from opinions, interpretations, and assessments when discussing with team members. <b>T9.2.</b> Contribute elements that can improve our colleagues' and our own actions. <b>T9.3.</b> Make one's own judgments and assessments.

<b>Competence</b>	<b>T10.</b> Identify, analyse, and solve ethical problems in complex situations.
Learning outcomes	<b>Specific objectives:</b> <b>T10.1.</b> Identify any possible ethical problems in specific situations. <b>T10.2.</b> Identify the patient's will, respecting his/her personal and cultural values. <b>T10.3.</b> Respect privacy and professional secrecy.

<b>Competence</b>	<b>T11.</b> Show initiative and resourcefulness.
Learning outcomes	<b>Specific objectives:</b> <b>T11.1.</b> Use one's own initiative in day-to-day situations. Work on one's own, without being constantly supervised. <b>T11.2.</b> Present new ideas and projects that help in your own development. <b>T11.3.</b> Act effectively in situations that require firm action due to their level of difficulty.

### Generic competences

<b>Competence</b>	<b>G2.</b> Develop strategies of autonomous learning.
Learning outcomes	This competence is developed by working competences "T9. Develop critical thinking" and "T11. Show initiative and resourcefulness".

## CONTENTS

- The Practicum aims to integrate all the knowledge, abilities, skills, attitudes, and values acquired in and related to any clinical specialty, under the guidance of qualified physiotherapists. All those professional competences necessary to prepare the student to give effective physiotherapy care and comprehensive care to patients/users will be developed.

## TEACHING METHOD

### TRAINING

- The student will assess the patients, make the physiotherapy diagnosis, create a plan of action and apply it, and evaluate the results.  
Estimated time: 105 hours.

### INFORMATIVE SESSIONS

- The student will be informed about how to do the different training activities.  
Estimated time: 7.5 hours.

### PAPER WRITING

- Write a report about the clinical training.  
Estimated time: 30 hours.

### SELF-EVALUATION

- Write a self-evaluation report.  
Estimated time: 4.5 hours.

### EVALUATION BY THE CENTRE AND TUTOR

- Fill in an evaluation form about the centre and tutor.  
Estimated time: 3 hours.

ACTIVITY TYPE	ACTIVITY	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Directed activities	Informative sessions	7.5	
Supervised activities	Training	105	E4, E5, E6.3, E7, E8.9, E9.17, E9.18, E9.19, E10, E11, E12, E13.9, E13.10, E15.5, E17, E19, E20.9, E22, T6,T9, T10, T11, G2
Autonomous activities	Write a report about the clinical training	30	E4, E5, E6.3, E7, E8.9, E9.17, E9.18, E9.19, E11, T9
	Write a self-evaluation report	4.5	T9
	Fill in an evaluation form about the centre and tutor	3	T9
<b>TOTAL NUMBER OF HOURS</b>			<b>150</b>

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## ASSESSMENT METHOD

The Practicum commission will take the following into account:

- The report presented by the tutor. This will account for 60% of the final mark.
- The student's self-evaluation report. This will account for 1% of the final mark.
- The practicum report. This will account or 39% of the final mark.

In order to pass the course, the following conditions have to be met:

- Pass each section and part of the unit with a minimum mark of 5.
- Get a minimum final mark of 5.

Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).

A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.

ASSESSED ACTIVITIES	PERCENTAGE FINAL MARK	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
The report presented by the tutor	60%	E4, E5, E6.3, E7, E8.9, E9.17, E9.18, E9.19, E10, E11, E12, E13.9, E13.10, E15.5, E17, E19, E20.9, E22, T6, T9, T10, T11, G2	--
The student's self-evaluation report.	1%	T9	--
The practicum report.	39%	E4, E15.5, E19, E20.9, T10, G2	--
<b>TOTAL NUMBER OF HOURS</b>			<b>0</b>

## BIBLIOGRAPHY AND WEB PAGES / BASIC READINGS

Web pages			
Title	Description	URL	
EscalesFisioterapia.pdf	Escales de valoració i qüestionaris més emprats a Fisioteràpia	Intranet de l'assignatura	

## PLANNING OF THE COURSE UNIT

Available on the virtual campus for all those students enrolled in this course unit.



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## GENERAL INFORMATION

### COURSE UNIT

Course unit	<b>FINAL PAPER</b>		
Code	<b>200570</b>	Academic year	<b>2016-2017</b>
ECTS	<b>12</b>	Type of course unit	<b>Compulsory</b>
Year	<b>4</b>	Term	<b>Annual</b>
Timetable	Available on the virtual campus for all those students enrolled in this course unit.		
Language of instruction	<b>CATALAN</b>		

### TEAM TEACHERS

- Team leader

Name of lecturer	<b>Dr JOSEP SÁNCHEZ ALDEGUER</b>
e-mail	<a href="mailto:josep.sanchez@eug.es">josep.sanchez@eug.es</a>
Office hours	<b>To be agreed on</b>

- Team members

Name of lecturer	<b>Dr JORDI ESQUIROL CAUSSA</b>
e-mail	<a href="mailto:jordi.esquirol@eug.es">jordi.esquirol@eug.es</a>
Office hours	<b>To be agreed on</b>

## ADMISSION REQUIREMENTS

- It is required to have two thirds of the total number of credits in the curriculum (160 ECTS).

## THE COURSE UNIT WITHIN THE CURRICULUM

- Course contents: Final paper.
- Writing a final paper is a very important part of any discipline of health sciences since demonstrating knowledge of the discipline and its advances is essential for the practice of a health profession.
- This course has a theoretical and a practical part that can be done either individually or in groups in order to apply the theoretical knowledge acquired and write a paper – scientific research paper to be handed in at the end of the course.

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- This course aims to present the basics to write a good research paper:
  - Identify the outline of scientific writings.
  - Learn how to write research projects, do advanced bibliographic searches, and define research goals and each part of a scientific paper.
  - Do a complete bibliographic review, develop a clinical plan, and present the results in writing and orally.

## COMPETENCES AND LEARNING OUTCOMES

### Specific competences

<b>Competence</b>	<b>E17.</b> Participate in the making of health care protocols of scientific evidence-based physiotherapy, promoting professional activities that foster research in physiotherapy.
Learning outcomes	<p><b>E17.7.</b> Establish research lines within the profession's competences.</p> <p><b>Specific objectives:</b></p> <p><b>E17.7.1.</b> Define the goals of the research paper.</p> <p><b>E17.8.</b> Analyse physiotherapy methods, protocols and treatments and make sure these prove adequate for the development of scientific knowledge.</p> <p><b>Specific objectives:</b></p> <p><b>E17.8.1.</b> Use evidence-based physiotherapy methods for the theoretical framework of the research paper.</p> <p><b>E17.8.2.</b> Use evidence-based physiotherapy methods for the hypotheses and goals of the research paper.</p> <p><b>E17.8.3.</b> Use evidence-based physiotherapy methods for the protocol of the research paper and the proposed treatment guidelines.</p>

<b>Competence</b>	<b>E18.</b> Keep up with the knowledge, skills, abilities, and attitudes required by professional competences.
Learning outcomes	<p><b>E18.2.</b> Demonstrate updated knowledge of physiotherapy methods and techniques.</p> <p><b>Specific objectives:</b></p> <p><b>E18.2.1.</b> Interpret the results of a bibliographical search through the critical appraisal of the publications selected.</p> <p><b>E18.4.</b> Develop strategies of autonomous learning so that the student is constantly learning and improving.</p> <p><b>Specific objectives:</b></p> <p><b>E18.4.1.</b> Understand the need of keeping informed on scientific knowledge in order to improve one's professional skills.</p>

<b>Competence</b>	<b>E21.</b> Communicate effectively and clearly, both orally and in writing, with users of the health care service as well as with other health professionals.
Learning outcomes	<b>E21.6.</b> Present a research work to a specialised audience.

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	<p><b>Specific objectives:</b>  <b>E21.6.1.</b> Present the results of research orally and in writing.</p> <p><b>E21.7.</b> Write a paper using the scientific method.</p> <p><b>Specific objectives:</b>  <b>E21.7.1.</b> Plan the steps of the clinical action protocol for the final paper, using a scientific methodology.</p>
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### Transversal competences

<b>Competence</b>	<b>T2.</b> Organising and planning.
Learning outcomes	<p><b>Specific objectives:</b>  <b>T2.1.</b> Organise and plan the different stages for the making of a clinical action protocol.</p>

<b>Competence</b>	<b>T3.</b> Be able to communicate in a fluent, coherent, and adequate way according to established norms, both orally and in writing.
Learning outcomes	<p><b>Specific objectives:</b>  <b>T3.1.</b> Present the results of one's research both orally before an evaluation tribunal and in writing.</p>

<b>Competence</b>	<b>T4.</b> Manage information systems.
Learning outcomes	<p><b>Specific objectives:</b>  <b>T4.1.</b> Use information technology resources to search for specific scientific bibliography in the appropriate sites.</p>

<b>Competence</b>	<b>T9.</b> Develop critical thinking.
Learning outcomes	<p><b>Specific objectives:</b>  <b>T9.1.</b> Evaluate critically the appropriateness of the bibliographical search based on the critical appraisal of the publications selected.</p>

<b>Competence</b>	<b>T11.</b> Show initiative and resourcefulness.
Learning outcomes	<p><b>Specific objectives:</b>  <b>T11.1.</b> Establish research goals in topics that are innovative or hardly known in physiotherapy.</p>

<b>Competence</b>	<b>T13.</b> Show a strategic and flexible learning attitude.
Learning outcomes	<p><b>Specific objectives:</b>  <b>T13.1.</b> Comprehend the evolution of thought and scientific knowledge to be constantly informed about health sciences, taking into account that this knowledge and the methods to acquire it are ever-changing.</p>

### Generic competences

<b>Competence</b>	<b>G1.</b> Develop critical thinking and reasoning and know how to effectively express it
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both in the student's own languages and in a third language.	
Learning outcomes	<b>Specific objectives:</b> <b>G1.1.</b> Critically analyse scientific literature. <b>G1.2.</b> Critically analyse the results of one's own research. <b>G1.3.</b> Write an abstract or summary of the final paper in English.

<b>Competence</b>	<b>G2.</b> Develop strategies of autonomous learning.
Learning outcomes	This is a competence that is developed by working competence "T2. Organising and planning", "T3. Be able to communicate in a fluent, coherent, and adequate way according to established norms, both orally and in writing", "T4. Manage information systems", "T9. Develop critical thinking", "T11. Show initiative and resourcefulness" and "T13. Show a strategic and flexible learning attitude".

<b>Competence</b>	<b>G3.</b> Respect diversity and plurality of ideas, people, and situations.
Learning outcomes	<b>Specific objectives:</b> <b>G3.1.</b> Accept and respect different opinions and ideas corroborated by scientific knowledge.

<b>Competence</b>	<b>G4.</b> Formulate innovative and competitive proposals in the field of research and professional activity.
Learning outcomes	<b>Specific objectives:</b> <b>G4.1.</b> Establish research goals in topics that are innovative or hardly known in physiotherapy.

## CONTENTS

<p>Module I:          Science, a concept. Variability in clinical practice. Evidence-based physiotherapy. Outline of the final paper. The experimental scientific method. Validity of the research. Assessment of diagnostic tests. Causal inference.</p> <p>Module II:          Theoretical framework and research note cards. Bibliographic databases. The practice of bibliographical searches. Critical appraisal of scientific literature.</p> <p>Module III:          Clinical practice guidelines and procedure manuals. Clinical action protocols. Working with protocols. Team work.</p> <p>Module IV:          Drawing conclusions. Written presentation of results. Oral presentation of results. Presentation and defence of the final project before an evaluation tribunal by means of an exercise about content integration and acquired competences.</p>
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## TEACHING METHOD AND ACTIVITIES

### SUPERVISED ACTIVITIES

- ICT-supported group tutorials that will provide the student with the theoretical foundations for the contents of this course.
- Follow-up tutorials: presentation of the protocol to be assessed and revised.
- Seminars on how to write a scientific paper and present results. The seminars will offer visual and computer-based support.
- Individual presentation of the final paper before a tribunal.

Estimated time: 74.25 hours.

### AUTONOMOUS ACTIVITIES

- Select a topic of your choice and preliminary search for information in order to determine the problem or object for study.
- Do a systematic, organised bibliographic search.
- Design an action plan.
- Elaboration and implementation of the action plan.
- Present the results and main conclusions.

Estimated time: 225 hours.

ACTIVITY TYPE	ACTIVITY	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Supervised activities	Group tutorials	T2, T3, T4, G2	20
	Seminars	T2, T3, T4, G2	20
	Follow-up tutorials	T2, T3, T4, T9, T11, T13, G2	20
	Individual paper presentation	E21.6, T3	14.25
Autonomous activities	Paper/project preparation	E17.7, E17.8, E18.2, E18.4, E21.7, T2, T3, T4, T9, T11, T13, G1, G2, G3, G4	225
<b>TOTAL NUMBER OF HOURS</b>			<b>299.25</b>

## ASSESSMENT METHOD

An examination committee will be responsible for the evaluation of the research paper. The members of this committee will take the following criteria into account:

- Presentation, which accounts for 10% of the final mark.
- Didactic quality, which amounts to 10% of the final mark.
- Visual support, which amounts to 10% of the final mark.
- Research, which accounts for 35% of the final mark.
- New contributions, which account for 10% of the final mark.
- Conclusions, which account for 15% of the final mark.
- The student's answers to the questions during the public presentation, which amount to 10% of the final mark.

In order to pass the course, the following conditions have to be met:

- Pass each section and part of the unit with a minimum mark of 5.
- Get a minimum final mark of 5.

Score review process: please, check the school's Assessment Norms (Chapter 10 and annex-I).

A student will be "non-assessed" when he/she has not undertaken the required assessment tasks or has not done a compulsory activity.

ASSESSED ACTIVITIES	PERCENTAGE FINAL MARK	LEARNING OUTCOMES	TIME DEVOTED BY THE STUDENT
Presentation	10	E21.6, T3	0.5
Didactic quality	10	T2, T3, G2	---
Visual support	10	T3	---
Research	35	E21.7, E17, E18, T2, T4, T13, G2, G3	---
New contributions	10	E17, E18, T11, G2, G4	---
Conclusions	15	E17, E18, T9, G1, G2, G3	---
Answers in the presentation	10	E21.6, T3, G2, G1, G3	0.25
<b>TOTAL NUMBER OF HOURS</b>			<b>0.75</b>

 <p>escoles universitàries gimbernat i Tomàs Cerdà ADSCRITA A LA UFRB</p>	<b>PHYSIOTHERAPY (EHEA DEGREE)</b> <b>COURSE CATALOGUE</b>	<b>EUIF GIMBERNAT</b> Physiotherapy
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## BIBLIOGRAPHY AND WEB PAGES / BASIC REQUIRED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Hulley SB, Cummings S.	1993	Diseño de la investigación clínica		Barcelona	Doyma
Desantes-Guanter JM, López Yepes J.	1996	Teoría y técnica de la investigación científica		Madrid	Síntesis
Rebagliato M, Ruiz I, Arranz M.	1996	Metodología de la investigación en epidemiología		Barcelona	Díaz de Santos
Álvarez Cáceres R.	1995	El método científico en las ciencias de la salud		Madrid	Díaz de Santos
Sánchez Aldeguer J, Frutos Martínez, F.	2000	Aspectos generales de la investigación para médicos de residencias. En Reuss Jm. Medicina Geriátrica en residencias		Madrid	Edimsa
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

Articles						
Author	Title	Publication	Volume	Year	Pages	Description/ comment
Cabezali Sánchez JM, Sánchez Aldeguer J.	El cuestionario: bases metodológicas y su utilización en Fisioterapia, para lograr una mayor calidad asistencial	Fisioterapia	19(2)	1997	97-103	

PUBLICATIONS IN THE LIBRARY						
Author	Title	Publication	Volume	Year	Pages	Description/ comment
		Archivos de Bronconeumología				
		British Journal of Sports Medicine				
		Fisioterapia				
		Geriatrka				
		Gerokomos				
		Kinésithérapie Scientifique				
		Journal of Hand Therapy				
		Noticiari de Fisioteràpia				
		Physical Therapy				
		Revista de Patología Respiratoria				
		Revista Española de Geriatria y Gerontología				
		The British Journal of Hand Therapy				

Web pages			
Title	Description	URL	
Australian Journal of Physiotherapy (sumaris)		<a href="http://physiotherapy.asn.au/index.php/quality-practice/ajp/about-ajp">http://physiotherapy.asn.au/index.php/quality-practice/ajp/about-ajp</a>	
Journal of the Canadian Chiropractic Association		<a href="http://www.jcca-online.org/">http://www.jcca-online.org/</a>	

	<b>PHYSIOTHERAPY (EHEA DEGREE)</b> <b>COURSE CATALOGUE</b>	<b>EUIF GIMBERNAT</b> Physiotherapy
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Journal of the Japanese Physical therapy Association		<a href="http://www.jstage.jst.go.jp/browse/jjpta/_vols/-char/en">http://www.jstage.jst.go.jp/browse/jjpta/_vols/-char/en</a>	
New Zealand Journal of Physiotherapy		<a href="http://nzsp.org.nz/index02/Publications/Journals.htm">http://nzsp.org.nz/index02/Publications/Journals.htm</a>	
Physical Therapy (articles de més de 2 mesos)		<a href="http://www.ptjournal.org/">http://www.ptjournal.org/</a>	

## BIBLIOGRAPHY AND WEB PAGES / BASIC RECOMMENDED READINGS

Books					
Author/s	Year	Title	Edition	City	Publisher
Laporte JR.	1993	Principios básicos de investigación clínica		Madrid	Zéneca
Departamento de Medicina y Psiquiatría (Universidad de Alicante)	1995	Tratado de epidemiología clínica		Madrid	Du Phont Pharma
Ahlbom A, Norell S.	1992	Fundamentos de epidemiología	3ª ed	Madrid	Siglo Veintiuno
Matthews DE, Farewell VT.	1990	Estadística médica. Aplicación e interpretación.	2ª ed	Barcelona	Salvat
López Yepes J.	1995	La aventura de la investigación científica.		Madrid	Síntesis

## PLANNING OF THE COURSE UNIT

Available on the virtual campus for all those students enrolled in this course unit.