

**COURSE DATA****Data Subject**

<b>Code</b>	33008
<b>Name</b>	Pathology and therapeutic focus on the locomotor system
<b>Cycle</b>	Grade
<b>ECTS Credits</b>	6.0
<b>Academic year</b>	2022 - 2023

**Study (s)**

<b>Degree</b>	<b>Center</b>	<b>Acad. year</b>	<b>Period</b>
1202 - Degree in Physiotherapy	Faculty of Physiotherapy	2	First term

**Subject-matter**

<b>Degree</b>	<b>Subject-matter</b>	<b>Character</b>
1202 - Degree in Physiotherapy	7 - Medical conditions and surgical conditions and their treatments	Basic Training

**Coordination**

<b>Name</b>	<b>Department</b>
HERNANDEZ GUILLEN, DAVID	191 - Physiotherapy
LLACER BOSCH, MARÍA JOSÉ	191 - Physiotherapy

**SUMMARY**

Pathophysiology of various diseases of the musculoskeletal system.

- Clinical manifestations of different diseases of the musculoskeletal system.
- Medical and surgical treatments of various diseases of the musculoskeletal system.
- Recognition and evaluation of symptoms of disease.
- Recognition of the time course of the disease



## PREVIOUS KNOWLEDGE

### Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

### Other requirements

Knowledge of Lower Extremity Anatomy and Arthrokinematics is recommended to all applicants.

## COMPETENCES (RD 1393/2007) // LEARNING OUTCOMES (RD 822/2021)

### 1202 - Degree in Physiotherapy

- Respect fundamental rights and equality between men and women.
- Recognise diversity, multiculturalism, democratic values and peace culture.
- Work in teams.
- Have the ability to organise and plan work.
- Know the general aspects of the endogenous and exogenous aetiology pathology of the locomotor, respiratory, cardiovascular and nervous systems.
- Know the structural, physiologic and functional changes that occur as a consequence of physiotherapy intervention.
- Know how to recognise and assess the symptoms of the diseases.
- Recognise the evolution momentum of the learnt diseases.
- Know the diverse medical and surgical treatments of the studied diseases.
- Promote the participation of the users and their families in the recovering process.

## LEARNING OUTCOMES (RD 1393/2007) // NO CONTENT (RD 822/2021)

The student will know the characteristic features of the pathology of the musculoskeletal system, the time course of the same and medical and surgical treatments applied in each case.

## DESCRIPTION OF CONTENTS

### 1. UNIT 1. Pathology of the skeletal system

- Topic 01. Fractures
- Topic 02. Complications of fractures
- Topic 03. Principles of bone consolidation
- Topic 04. Conservative and surgical treatment of fractures
- Topic 05. Bone lesions in children
- Topic 06. Bone pathology in the elderly
- Topic 07. Shoulder fractures



- Topic 08. Elbow fractures
- Topic 09. Wrist fractures
- Topic 10. Hand fractures
- Topic 11. Pelvic fractures
- Topic 12. Hip fractures
- Topic 13. Knee fractures
- Topic 14. Ankle fractures
- Topic 15. Foot fractures
- Topic 16. Cervical spine fractures
- Topic 17. Dorso-lumbar spine fractures
- Topic 18. Fractures of the skull, jaw and ribs
- Topic 19. Non-traumatic pathology of the spine
- Topic 20. Structural alterations: column
- Topic 21. Structural alterations: extremities

## **2. UNIT 2: Joint Pathology**

- Topic 22. Principles of dislocations
- Topic 23. Dislocations
- Topic 24. Sprains
- Topic 25. Cartilage and fibrocartilage injuries
- Topic 26. Articular degenerative pathology
- Topic 27. Inflammatory pathology

## **3. UNIT 3: Pathology of soft tissues**

- Topic 28. Muscle injuries
- Topic 29. Principles of tendon injuries
- Topic 30. Tendon injuries
- Topic 31. Nerve injuries
- Topic 32. Pathology of bursae, ganglions and cysts

## **4. HANDS-ON PRACTICAL BASED SYLLABUS**

Clinical Experience 1:

Introduction to the interpretation of biomedical imaging. Clinical manifestations.

Anatomy, clinic, radiographic diagnosis and conservative and surgical treatment of the region of the shoulder joint.

Clinical Experience 2:

Anatomy, clinic, radiographic diagnosis and conservative and surgical treatment of the region of the elbow, wrist and hand joints.

Clinical Experience 3:

Anatomy, clinic, radiographic diagnosis and conservative and surgical treatment of the region of the hip joint and pelvis.

Clinical Experience 4:



Anatomy, clinic, radiographic diagnosis and conservative and surgical treatment of the region of the knee joint.

Clinical Experience 5:

Anatomy, clinic, radiographic diagnosis and conservative and surgical treatment of the region of the ankle joint.

Clinical Experience 6:

Anatomy, clinic, radiographic diagnosis and conservative and surgical treatment of the region of the spine.

Clinical Experience 7:

Anatomy, clinic and diagnosis of soft tissue injuries using other diagnostic imaging tests.

Clinical Experience 8:

Group presentation of clinical cases.

## WORKLOAD

ACTIVITY	Hours	% To be attended
Theory classes	35,00	100
Laboratory practices	25,00	100
Development of individual work	20,00	0
Study and independent work	14,00	0
Preparation of evaluation activities	31,00	0
Preparing lectures	25,00	0
<b>TOTAL</b>	<b>150,00</b>	

## TEACHING METHODOLOGY

The subject consists of a theoretical and practical. During the theoretical sessions will be used a teaching-learning methodology based on the participatory master class. There will also be various group activities.

**“The teaching program can be modified during the course development if the teacher, under the criterion of quality teaching and assimilation of knowledge by the student, considers it appropriate”.**

## EVALUATION



The evaluation will consist of four blocks: theoretical, practical, attendance at practices and autonomous work.

To pass the subject, the sum of the notes of the four blocks will have to be at least 5 points out of the 10 possible. Additionally, it will be necessary to have passed the theoretical and practical blocks in order to pass the subject.

Spelling errors will be penalized in any test or written presentation.

**Theoretical block**

The theoretical block will be evaluated by means of a written exam on the day of the official date, with the duration of this test being 60 minutes. The theoretical exam will have a value of 4.5 points on the final grade and will consist of a total of 45 multiple choice questions with four possible answer options, of which 40 will be on the theoretical syllabus and 5 on a clinical case raised in the exam. .

It is necessary to have passed this block to pass the subject. That is, the student will have to get at least 2.25 points out of the 4.5 possible in the theoretical exam.

This note can be saved for the second call, but not for subsequent courses.

The theoretical exam is recoverable. The type of test between calls does not change.

<p>Written test</p> <p><b>THEORETICAL</b></p>	<p>• Multiple choice exam of 45 questions with four possible options: 40 on the theoretical syllabus and 5 on a clinical case</p> <p>• Note= [correct answers – (errors/number of options – 1) x (maximum note / number of questions)]</p>	<p>45%</p>
		<p><b>45%</b></p>

**Practical block**

The practical block will be evaluated by means of a written exam on the day of the official date, which will last 60 minutes to complete it. The practical exam will have a value of 4 points on the final grade: 3 points will correspond each to a clinical case to be developed starting from a radiographic image with its corresponding clinical history and 1 point between two short questions with the support of diagnostic images.



It is necessary to have passed this block in order to pass the subject, that is, to have at least 2 points out of the 4 possible in the practical exam.

This note can be saved for the second call, but not for subsequent courses.

The practical exam is recoverable. The type of test between calls does not change.

Written test  PRACTICE	3 development questions about 3 clinical cases supported with radiological images evaluated by rubric  Spelling errors will be penalized	30%
	2 short questions on the theoretical-practical syllabus with the use of diagnostic imaging.  Spelling errors will be penalized	10%
		<b>40%</b>

**Practice attendance block**

Attendance at practices will be scored. The value of this block will be 0.5 points on the total grade of the subject.

To calculate this grade, the value of this block will be divided by the number of practices, then this value will be multiplied by each practice that the student has attended.

This note can be saved between calls. It will not be necessary to have passed this block to pass the subject.

This block may not be recoverable in the second call, but it may be done in subsequent courses.

ATTENDANCE	Attendance at practices	5%
		<b>5%</b>



**Autonomous work block**

The autonomous work will be of a group type and will be carried out in groups of 2-3 students.

It will consist of two parts: the first, the realization of a clinical case in group with its resolution based on the practical agenda; the second, oral presentation of the clinical case carried out.

This block will have a value of 1 point out of the 10 of the subject, which consists of two evaluations: the realization of the case will be evaluated by the teaching staff by means of a rubric and will have a value of 0.5 points; The oral presentation of the case will be evaluated by the students through the use of a rubric and will have a value of 0.5 points.

The note of the autonomous work can be saved between calls. It will not be necessary to have passed this part to pass the course.

This block may not be recoverable in the second call, but it may be done in subsequent courses.

Autonomous work	<ul style="list-style-type: none"> <li>▷ Realization of clinical case evaluated by rubric.</li> <li>▷ Spelling errors and plagiarism will be penalized.</li> </ul>	5%
	<ul style="list-style-type: none"> <li>Oral presentation of the clinical case, evaluated by rubric.</li> <li>Spelling errors will be penalized.</li> </ul>	5%
		<b>10%</b>

**REFERENCES**

**Basic**

- Caceres Palou E, Fernández Sabaté A, Fernández Portal L. et al. Manual SECOT de cirugía ortopédica y traumatología. Madrid: Ed. Médica Panamericana. 2003
- Moller TB, Reif E. Anatomía radiológica. Ed.Marban. 2002
- Pérez-Caballer AJ, De Pedro Moro JA. Patología del aparato locomotor en ciencias de la salud. Ed. Panamericana. 2004.



- Sanchis-Guarner Cabanilles M. Patologia quirúrgica osteoarticular. Generalitats. Ed. Universitat de Valencia. 2002
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#### **Additional**

- Atkinson K, Coutts F, Hassenkamp AM. Fisioterapia en Ortopedia. Ed. Eselvier. 2006
- Del Amo López R et al. Manual de práctica quirúrgica y traumatológica en atención primaria. Ed. Semergen.2003
- Goodman CC, Snyder TK. Patología médica para fisioterapeutas. Ed. MacGraw-Hill. Interamericana. 2002
- Hoppenfeld S, Murthy VL. Fracturas tratamiento y rehabilitación. Ed. Marban. 2001
- Jurado Bueno A, Medina Porqueres I. Manual de pruebas diagnósticas en traumatología y ortopedia. Ed. Paidotribo
- McRae R. Ortopedia y fracturas. Exploración y tratamiento. Ed. Marban; 2000
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- Schatzker, Tile. Tratamiento quirúrgico de las fracturas. Ed. Panamericana. 1998
- Munuera L. Introducción a la traumatología y la cirugía ortopédica. MacGraw-Hill. Interamericana. 2002
- Tixà S. Atlas de Anatomía palpatoria. Tomo I: cuello, tronco y miembro superior. Ed Elsevier Masson; 2006
- Tixà S. Atlas de Anatomía palpatoria. Tomo II: Miembro inferior. Ed Elsevier Masson; 2006