

COURSE PROGRAM

Academic Year: 2026/2027

Identification and characteristics of the course				
Code	501757		ECTS Credits	6
Course name (English)	Musculoskeletal Pathology			
Course name (Spanish)	Patología Aparato Locomotor			
Degree programs	Degree in medicine			
Faculty/School	Faculty of medicine and health sciences			
Semester	6	Type of course	Compulsory	
Module	Human Clinical Training			
Matter	Orthopaedic Surgery and Rheumatology			
Lecturer/s				
Name	Office		E-mail	Web page
Juan Antonio Constantino Cabrera	Office 23 1 st floor Building L, Perpetuo Socorro Hospital		juconstantic@unex.es	
José María Ramírez Moreno	Departamento de ciencias Biomédicas		iramrez@unex.es	
Justo Carrasco Jareño	4 th floor Perpetuo Socorro Hospital		justojcj@gmail.com	
Rafael Lorente Moreno	1 st floor Building L, Perpetuo Socorro Hospital		rlorentem@hotmail.com	
Francisco Lozano Moreno	1 st floor Building L, Perpetuo Socorro Hospital		franlozanomoreno@gmail. com	
Neftali Muñoz Cortegana	1 st floor Building L, Perpetuo Socorro Hospital		neftali.munoz@salud- juntaex.es	
José Luis Muñoz Ledesma	1 st floor Building L, Perpetuo Socorro Hospital		020366jlml@gmail.com	
Victoriano Javier Luque Merino	1 st floor Building L, Perpetuo Socorro Hospital		victor.luque@salud-juntaex.es	
Maria de la Cruz Rocha Rico	1 st floor Building L, Perpetuo Socorro Hospital		mariacruz.rocha@salud- juntaex.es	

Código Seguro De Verificación	t/2NMUBzw12fqfRBiH4GXA==	Estado	Fecha y hora
Firmado Por	María Dolores Apolo Arenas	Firmado	10/07/2026 13:29:13
Observaciones		Página	1/12
Url De Verificación	https://uex09.unex.es/vfirma/code/t/2NMUBzw12fqfRBiH4GXA==		
Normativa	Este informe tiene carácter de copia electrónica auténtica con validez y eficacia administrativa de ORIGINAL (art. 27 Ley 39/2015).		



Subject Area	Orthopaedics (4.5 credits) Rheumatology (1.5 credits)
Department	Surgical Medical Therapeutics (Orthopaedics) Biomedical sciences (Rheumatology)
Coordinating Lecturer (If more than one)	Juan Antonio Constantino Cabrera
Competencies	
Basic competencies:	
1. CB2 – Students should be able to apply their knowledge to their work or vocation in a professional way and possess the skills that are usually demonstrated through the elaboration and defense of arguments and the resolution of problems within their area of study.	
2. CB3 – Students have the ability to collect and interpret relevant data (usually within their area of study) to make judgments that include a reflection on relevant social, scientific or ethical issues	
General competencies:	
3. C.05. – Recognize the limitations and the need to maintain and update their professional competence, giving special importance to the autonomous learning of new knowledge and techniques and the motivation for quality.	
4. C.06. – Develop professional practice with respect to other health professionals, acquiring team work skills.	
5. C.09. – Understand and recognize the effects, mechanisms and manifestations of the disease on the structure and function of the human body.	
6. C.10. – Understand and recognize the causative agents and risk factors that determine the health status and development of the disease.	
7. C.11. – Understand and recognize the effects of growth, development and ageing on the individual and his social environment.	
8. C.12. – Understand the bases of action, indications and efficacy of therapeutic interventions, based on the available scientific evidence.	
9. C.13. – Obtain and prepare a clinical history containing all relevant information	
10. C.15. – Have the capacity to make an initial diagnostic assessment and establish a reasoned diagnostic strategy.	
11. C.16. – Recognize and deal with situations that put life in immediate danger and others that require immediate attention.	
12. C.17. – Establish the diagnosis, prognosis and treatment, applying the principles based on the best possible information and clinical safety conditions	
13. C.18. – Indicate the most appropriate therapy for the most prevalent acute and chronic processes, as well as for the terminally ill.	
14. C.19. – Propose and propose preventive measures appropriate to each clinical situation.	
15. C.28. – Obtain and use epidemiological data and assess trends and risks for health decision- making.	

Código Seguro De Verificación	t/2NMUBzw12fqfRBiH4GXA==	Estado	Fecha y hora	
Firmado Por	María Dolores Apolo Arenas	Firmado	10/07/2026 13:29:13	
Observaciones		Página	2/12	
Url De Verificación	https://uex09.unex.es/vfirma/code/t/2NMUBzw12fqfRBiH4GXA==			
Normativa	Este informe tiene carácter de copia electrónica auténtica con validez y eficacia administrativa de ORIGINAL (art. 27 Ley 39/2015).			

Transversal competencies:	
16. CT1. – Students have demonstrated a mastery of Information and Communications Technologies (ICT) through the use of tools and processes that imply their application to the scientific methodology or the practical application of medicine.	
17. CT2. – Students have been able to develop the profile for professional practice in medicine through activities designed in all subjects of the curriculum.	
Specific competencies:	
18. CEM3.01.1. - Recognize, diagnose and guide the management of the main pathologies of the locomotor system.	
19. CEM3.02. - Know how to make a complete anamnesis, focused on the patient and oriented to the various pathologies, interpreting its meaning. Knowing how to make a physical exploration by systems, as well as a psychopathological exploration, interpreting their meaning.	
20. CEM4.12. - Know other diagnostic imaging techniques.	
21. CEM4.13. - Evaluate the indications and contraindications of the radiological studies.	
22. CEM4.24. - Know the general surgical indications, the preoperative risk and the postoperative complications	
23. CEM4.31. - Know how to interpret a radiological image by means of systematic reading.	
Contents	
Course outline*	
Study of the pathologies that affect the most prevalent Acute and Chronic musculoskeletal system: Pathophysiology, Diagnosis and Medical-Surgical Treatments. Care of the Geriatric Patient and the Terminally Ill. Education for health.	
Course syllabus	
Orthopaedic	
Title of unit 1: CLINICAL HISTORY, EXPLORATION AND TREATMENT OF THE PATHOLOGY OF THE LOCOMOTOR SYSTEM. Contents of unit 1: Anamnesis, clinical examination, radiological examination, non-surgical treatments, surgical treatments. Description of practical activities for unit 1: No practical activity	
Title of unit 2: ETIOLOGY AND MECHANISM OF FRACTURE PRODUCTION. CLINICAL. PHYSEAL FRACTURES. FRACTURE REPAIR PROCESS. Contents of unit 2: Etiology, general mechanism, Symptoms, diagnosis, consolidation process, fractures in the child. Physeal fractures. Description of practical activities for unit 2: No practical activity	

Código Seguro De Verificación	t/2NMUBzw12fqfRBiH4GXA==	Estado	Fecha y hora
Firmado Por	María Dolores Apolo Arenas	Firmado	10/07/2026 13:29:13
Observaciones		Página	3/12
Url De Verificación	https://uex09.unex.es/vfirma/code/t/2NMUBzw12fqfRBiH4GXA==		
Normativa	Este informe tiene carácter de copia electrónica auténtica con validez y eficacia administrativa de ORIGINAL (art. 27 Ley 39/2015).		



Title of unit 3: GENERAL TREATMENT OF FRACTURES. NON-SURGICAL. SURGICAL. PATHOLOGY OF THE FRACTURE CALLUS. PATHOLOGICAL FRACTURES Contents of unit 3: Non-surgical treatment, surgical treatment, open fractures, pathological fractures, complications of the fracture callus. Description of practical activities for unit 3: No practical activity
Title of unit 4: BONE AND JOINT INFECTIONS Contents of unit 4: Osteomyelitis, septic arthritis, spondylitis, implant infections. Description of practical activities for unit 4: No practical activity
Title of unit 5: MUSCULOSKELETAL TUMORS Contents of unit 5: Diagnostic approach, primary, metastatic bone tumors and soft tissue mass. Description of practical activities for unit 5: No practical activity
Title of unit 6: OSTEONECROSIS. OSTEOCHONDROSIS. OSTEOCHONDRITIS DISSECANS. Contents of unit 6: Osteonecrosis etiology, classification and treatment; Frieberg, Köhler, Sever and Osgood-Schlatter diseases; osteochondritis dissecans. Description of practical activities for unit 6: No practical activity
Title of unit 7: SURGICAL PATHOLOGY OF MUSCLES AND TENDONS Contents of unit 7: Musculotendinous physiopathology. Muscular and tendon injuries. muscle diseases, tendinosis and bursitis. Description of practical activities for unit 7: No practical activity
Title of unit 8: PERIPHERAL NERVE INJURIES. SYMPATHETIC-REFLEX DYSTROPHIES Contents of unit 8: Injury mechanisms, physiopathology, classification, symptomatology and exploration and management; reflex sympathetic dystrophy. Description of practical activities for unit 8: No practical activity
Title of unit 9: INJURIES OF SPINE. SPINAL CORD INJURIES Contents of unit 9: Injury mechanisms, classification, diagnosis and treatment. Description of practical activities for unit 9: No practical activity
Title of unit 10: SPINAL DEFORMITIES. SPONDYLOLISTHESIS Contents of unit 10: Idiopathic and degenerative scoliosis, kyphosis, Spondylolisthesis Description of practical activities for unit 10: Seminars of Spine and Pediatric Orthopaedics Description of practical activities for unit 10: No practical activity
Title of unit 11: Intervertebral Disc Pathology Contents of unit 11: Anatomy and biomechanics of the disc; cervical radiculopathy and myelopathy; disc herniation and spinal canal stenosis. Description of practical activities for unit 11: No practical activity
Title of unit 12: UPPER LIMB INJURIES I Contents of unit 12: Injuries of the shoulder and upper-limb. Glenohumeral instability Description of practical activities for unit 12: No practical activity
Title of unit 13: NON TRAUMATIC SHOULDER PATHOLOGY. Contents of unit 13: Rotator cuff injuries and subacromial syndrome, frozen shoulder, calcifying tendinitis. Description of practical activities for unit 13: No practical activity
Title of unit 14: UPPER LIMB INJURIES II Contents of unit 14: Injuries of the elbow, forearm, wrist and hand. Description of practical activities for unit 14: No practical activity
Title of unit 15: KIEMBOCK'S DISEASE AND OTHER DISEASES OF THE UPPER LIMB Contents of unit 15: Kienböck's disease. De Quervain's disease. epicondylitis. tenosynovitis. Dupuytren's disease. Description of practical activities for unit 15: No practical activity

Código Seguro De Verificación	t/2NMUBzw12fqfRBiH4GXA==	Estado	Fecha y hora
Firmado Por	María Dolores Apolo Arenas	Firmado	10/07/2026 13:29:13
Observaciones		Página	4/12
Url De Verificación	https://uex09.unex.es/vfirma/code/t/2NMUBzw12fqfRBiH4GXA==		
Normativa	Este informe tiene carácter de copia electrónica auténtica con validez y eficacia administrativa de ORIGINAL (art. 27 Ley 39/2015).		



Title of unit 16: LOWER LIMB INJURIES I Contents of unit 16: Injuries of the pelvis, hip and femur. Description of practical activities for unit 16: No practical activity
Title of unit 17: PAINFUL HIP OF THE ADULT Contents of unit 17: Anamnesis, clinical examination, osteoarthritis, avascular necrosis .femoroacetabular impingement. Description of practical activities for unit 17: No practical activity

Title of unit 18: DEVELOPMENTAL DYSPLASIA OF THE HIP Contents of unit 18: Pathophysiology, Diagnosis, Management and treatment. Description of practical activities for unit 18: No practical activity
Title of unit 19: HIP PATHOLOGY IN THE CHILD AND ADOLESCENT Contents of unit 19: Legg->Calvé-Perthes disease, slipped capital femoral epiphysis, irritable hip (transient synovitis). Description of practical activities for unit 19: No practical activity
Title of unit 20: LOWER LIMB INJURIES II Contents of unit 20: Injuries of the knee, leg, ankle and foot. Description of practical activities for unit 20: No practical activity
Title of unit 21: PAINFUL KNEE Contents of unit 21: Anamnesis and clinical examination. Osteoarthritis, osteonecrosis, osteochondritis dissecans. Injuries of extensor apparatus. Description of practical activities for unit 21: No practical activity
Title of unit 22: INJURIES OF THE LIGAMENTS AND MENISCUS OF THE KNEE. Contents of unit 22: Etiology, classification, diagnosis and treatment. Description of practical activities for unit 22: No practical activity
Title of unit 23: ANGULAR AND ROTATIONAL DEFORMITIES OF LOWER LIMBS Contents of unit 23: Knee varus. Blount Disease, valgus knee, Intoeing, Out-toeing Description of practical activities for unit 23: No practical activity
Title of unit 24: DEFORMITIES OF THE FOOT Contents of unit 24: Clubfoot (Congenital Talipes Equinovarus), flatfoot, cavus Foot Description of practical activities for unit 24: No practical activity
Title of unit 25: PAINFUL FOOT Contents of unit 25: Metatarsalgia. Inferior heel pain. Hallux valgus, Deformities of lesser toes. Ingrown toenail. Diabetic foot. Description of practical activities for unit 25: No practical activity

Seminars:

- 1.Rachis, Bandages and plasters
- 2.Lower limb
- 3.Child Traumatology and Upper Limb
- 4.Bone injuries
- 5.Global Seminar

Rheumatology

Title of unit 1: GENERAL CHARACTERISTICS AND CLASSIFICATION OF RHEUMATIC DISEASES
Title of unit 2: OSTEOPOROSIS
Title of unit 3: SERONEGATIVE SPONDYLOARTHRITIS. ANKYLOSING SPONDYLITIS. PSORIATIC ARTHRITIS
Title of unit 4: RHEUMATOID ARTHRITIS. ADULT STILL'S DISEASE
Title of unit 5: DISSEMINATED LUPUS ERYTHEMATOSUS
Title of unit 6: POLYMYOSITIS, DERMATOMYOSITIS AND SJÖGREN'S SYNDROME

Código Seguro De Verificación	t/2NMUBzw12fqfRBiH4GXA==	Estado	Fecha y hora	
Firmado Por	María Dolores Apolo Arenas	Firmado	10/07/2026 13:29:13	
Observaciones		Página	5/12	
Url De Verificación	https://uex09.unex.es/vfirma/code/t/2NMUBzw12fqfRBiH4GXA==			
Normativa	Este informe tiene carácter de copia electrónica auténtica con validez y eficacia administrativa de ORIGINAL (art. 27 Ley 39/2015).			

Title of unit 7: SYSTEMIC SCLEROSIS AND CREST SYNDROME
Title of unit 8: VASCULITIS AND ANTIPHOSPHOLIPID SYNDROME
Title of unit 9: OSTEOARTHRITIS, PAGET'S DISEASE, FIBROMYALGIA
Title of unit 10: GOUT AND DISEASE BY DEPOSITION OF PYROPHOSPHATE-CALCIUM- DEHYDRATED CRYSTALS)
Title of unit 11: BONE AND JOINT INFECTIONS
CLINICAL PRACTICES AND SEMINARS:
1. CLINICAL CASES IN RHEUMATOLOGY.
2. THERAPIES IN RHEUMATOLOGICAL PATHOLOGY.

Código Seguro De Verificación	t/2NMUBzw12fqfRBiH4GXA==	Estado	Fecha y hora
Firmado Por	María Dolores Apolo Arenas	Firmado	10/07/2026 13:29:13
Observaciones		Página	6/12
Url De Verificación	https://uex09.unex.es/vfirma/code/t/2NMUBzw12fqfRBiH4GXA==		
Normativa	Este informe tiene carácter de copia electrónica auténtica con validez y eficacia administrativa de ORIGINAL (art. 27 Ley 39/2015).		



Educational activities								
Orthopaedic								
Student workload in hours by lesson		Lectures	Practical activities				Monitoring activity	Homework
Lesson	Total	L	HI	LAB	COM	SEM	SGT	PS
1	4	2						2
2	4	1						3
3	3	1						2
4	3	1						2
5	6	2						4
6	3	1						2
7	3	1						2
8	3	1						2
9	6	2						4
10	5	2						3
11	3	1						2
12	4	1						3
13	4	1						3
14	3	1						2
15	3	1						2
16	4	1						3
17	3	1						2
18	3	1						2
19	4	1						3
20	4	2						2
21	4	1						3
22	3	1						2
23	4	2						2
24	4	2						2
25	4	1						3
Seminar 1	3					2		1
Seminar 1	3					2		1
Seminar 1	3					2		1
Seminar 1	3					2		1
Seminar 1	4					2.5		1.5
Assessment **	2.5	2				0.5		
Subtotal	111.5	34				11		66.5
Rheumatology								
1	1.5	0.5						1
2	3	1						2
3	3	1						2
1	1.5	0.5						1
5	3	1						2

**

Código Seguro De Verificación	t/2NMUBzw12fqfRBiH4GXA==	Estado	Fecha y hora	
Firmado Por	María Dolores Apolo Arenas	Firmado	10/07/2026 13:29:13	
Observaciones		Página	7/12	
Url De Verificación	https://uex09.unex.es/vfirma/code/t/2NMUBzw12fqfRBiH4GXA==			
Normativa	Este informe tiene carácter de copia electrónica auténtica con validez y eficacia administrativa de ORIGINAL (art. 27 Ley 39/2015).			

6	3	1						2
7	3	1						2
8	3	1						2
9	3	1						2
10	3	1						2
11	3	1						2
Clinical practice	3					1.5		1.5
Seminar	3		2					1
Assessment*	1	0.5				0,5		
Subtotal	38.5	11	2			2		23.5
TOTAL	150	45	2			13		90

L: Lectures (85 students)

HI: Hospital internships (7 students)

LAB: Laboratory or field practices (15 students)

COM: Computer room or language laboratory practices (20 students)

SEM: Problem classes or seminars or case studies (40 students)

SGT: Scheduled group tutorials (educational monitoring, ECTS type tutorials)

PS: Personal study, individual or group work and reading of bibliography

Teaching Methodologies*

1. Lectures and participatory classes. Classroom training activities for the entire group. procedures and applications relating to various topics. The concepts and procedures will be presented in the classroom, using audiovisual media (video projector presentations).
2. Seminars/workshops.
3. Virtual campus.
4. Assessment: the different types of evaluation are described in the section assessment methods.

** Indicate the total number of evaluation hours of this subject.

Código Seguro De Verificación	t/2NMUBzw12fqfRBiH4GXA==	Estado	Fecha y hora
Firmado Por	María Dolores Apolo Arenas	Firmado	10/07/2026 13:29:13
Observaciones		Página	8/12
Url De Verificación	https://uex09.unex.es/vfirma/code/t/2NMUBzw12fqfRBiH4GXA==		
Normativa	Este informe tiene carácter de copia electrónica auténtica con validez y eficacia administrativa de ORIGINAL (art. 27 Ley 39/2015).		



Learning outcomes *	
To know and understand the fundamental theoretical contents of musculoskeletal system pathology, including the main traumatic, orthopedic, and rheumatological conditions. To take a complete and structured medical history focused on musculoskeletal disorders. To perform a systematic physical examination of the musculoskeletal system, identifying relevant clinical signs and recognizing the main abnormalities. To identify and recognize the clinical manifestations, signs, and symptoms of the main traumatic, orthopedic, and rheumatological conditions. To establish an initial diagnostic assessment based on the integration of medical history, physical examination, and basic complementary tests. To interpret, at a basic level, the main diagnostic tests used in musculoskeletal pathology (plain radiology, basic laboratory tests, etc.). To propose an appropriate initial therapeutic approach for the most common conditions, including basic pharmacological, rehabilitative, and surgical measures. To apply basic clinical management principles in patients with musculoskeletal disorders, including referral criteria and follow-up	
Assessment systems *	
Students may choose between a continuous assessment system or a single final comprehensive assessment. This choice must be explicitly communicated in writing within the first three weeks of the semester. If no such communication is made, the student will be considered to have opted for continuous assessment. Orthopaedics The assessment system will be continuous, with mandatory attendance and active participation in lectures, as well as attendance at seminars. A final practical exam will be conducted (eliminary), consisting of 10 questions, of which at least 6 must be answered correctly (no negative marking). The final theoretical exam will consist of 30 multiple-choice questions. One point will be deducted for every 3 incorrect answers, while unanswered questions will neither add nor subtract marks. For students following continuous assessment, attendance at seminars is required, and both the practical and theoretical exams must be passed in order to pass the course. The final grade will be calculated as follows: - Practical exam: 20% - Theoretical exam: 80% A minimum score of 5 in the theoretical exam is required. A single final comprehensive assessment is available for students not opting for continuous assessment. In this case, seminar attendance is not mandatory. The exam will include: - The common theoretical and practical components	

Código Seguro De Verificación	t/2NMUBzw12fqfRBiH4GXA==	Estado	Fecha y hora
Firmado Por	María Dolores Apolo Arenas	Firmado	10/07/2026 13:29:13
Observaciones		Página	9/12
Url De Verificación	https://uex09.unex.es/vfirma/code/t/2NMUBzw12fqfRBiH4GXA==		
Normativa	Este informe tiene carácter de copia electrónica auténtica con validez y eficacia administrativa de ORIGINAL (art. 27 Ley 39/2015).		



- An additional 10 questions aimed at assessing competencies acquired through seminar attendance

The final grade will be calculated as follows:

- Practical exam: 20%
- Theoretical exam: 70%
- Seminar-related questions: 10%

Rheumatology

1. Seminars (S) and/or Practical Classes (PC)

For students opting for continuous assessment, attendance is mandatory (the program consists of 2 sessions of 2 hours each). Students who miss 50% (one 2-hour session) without proper justification will no longer be eligible for continuous assessment.

Attendance at practical sessions requires students to wear a clinical coat and bring a stethoscope.

2. Examination

A written multiple-choice test of 20 questions will be conducted, each with 5 possible answers, only one of which is correct. To reduce random guessing, a penalty system will apply: 4 incorrect answers will subtract 1 point (equivalent to the value of one correct answer). The exam is passed with a grade of 5 or higher.

A final practical exam (eliminary) will also be conducted, consisting of 5 questions, of which at least 3 must be answered correctly (no negative marking).

The final grade will be calculated as follows:

- Practical exam: 20%
- Theoretical exam: 80%

A single final comprehensive assessment is available for students not opting for continuous assessment. The exam will include:

- The common theoretical component
- The practical exam
- Two additional questions assessing competencies developed through seminars and clinical practice

The final grade will be calculated as follows:

- Theoretical exam: 70%
- Practical exam: 20%
- Seminar/practical questions: 10%

Código Seguro De Verificación	t/2NMUBzw12fqfRBiH4GXA==	Estado	Fecha y hora	
Firmado Por	María Dolores Apolo Arenas	Firmado	10/07/2026 13:29:13	
Observaciones		Página	10/12	
Url De Verificación	https://uex09.unex.es/vfirma/code/t/2NMUBzw12fqfRBiH4GXA==			
Normativa	Este informe tiene carácter de copia electrónica auténtica con validez y eficacia administrativa de ORIGINAL (art. 27 Ley 39/2015).			

Final Course Grade Calculation

The course is passed or failed as a whole.

- If one of the two parts (Traumatology or Rheumatology) is failed, the final grade will correspond to the failed component.
- If a student passes one part and fails the other, the passed component grade will be retained for the two extraordinary exam sessions within the same academic year.
- If both parts are failed, the final grade will be the weighted average:
 - 75% Traumatology
 - 25% Medicine
- If both parts are passed, the final grade will also be calculated as the weighted average using the same proportions.

Extraordinary Examinations

Extraordinary examination sessions will follow the same format and conditions established for the ordinary examinations.

Bibliography (basic and complementary)

Orthopaedics

1. Ortopedia, Traumatología y Reumatología, Duckworth, A. - Porter, D. - Ralston, 2017 S.Elsevier
2. Essential Orthopaedics, Mark D. Miller, 2020 Elsevier Saunders.
3. Ortopedia y Traumatología. M.D. Miller. 5ª Edición . Elsevier Saunders.
4. Manual SECOT de Cirugía Ortopédica y Traumatología. Panamericana.
5. Ortopedia y Fracturas. McRae. 2017 .Marban.
6. Traumatología y ortopedia para el grado en Medicina, Fernando marco Martínez. 2º edición 2022. Elsevier

Rheumatology

1. Cecil .Tratado de Medicina Intema. 23a edición, 2009. Editorial Elsevier.
2. Farreras.Medicina Intema. 16a edición, 2008. Editorial Elsevier.
3. Harrison .Tratado de Medicina Interna. 18a edición, 2011. Editorial McGraw-Hill.
4. Raftery y Cols.Diagnóstico Diferencial. 3a edición, 2011. Editorial Elsevier.
5. Laso, FJ. Diagnóstico Diferencial en Medicina Interna. 2a edición, 2004. Editorial Elsevier.
6. Friedrnan, H. Manual de Diagnóstico Médico. 5a edición, 2004. Editorial Elsevier.
7. Young A, Huizinga T.Reumatología Clínica. 1a Edición, 2010. Editorial Elsevier.
- Duró JC. Reumatología Clínica. 1a Edición, 2010. Editorial Elsevier.

Código Seguro De Verificación	t/2NMUBzw12fqfRBiH4GXA==	Estado	Fecha y hora
Firmado Por	María Dolores Apolo Arenas	Firmado	10/07/2026 13:29:13
Observaciones		Página	11/12
Url De Verificación	https://uex09.unex.es/vfirma/code/t/2NMUBzw12fqfRBiH4GXA==		
Normativa	Este informe tiene carácter de copia electrónica auténtica con validez y eficacia administrativa de ORIGINAL (art. 27 Ley 39/2015).		



Other resources and complementary educational materials

Web pages:

<https://www.orthobullets.com/>

podcast:

<https://www.buzzsprout.com/325448>

YouTube Channels:

<https://www.youtube.com/c/OrthopedicPrinciple/videos>

Código Seguro De Verificación	t/2NMUBzw12fqfRBiH4GXA==	Estado	Fecha y hora
Firmado Por	María Dolores Apolo Arenas	Firmado	10/07/2026 13:29:13
Observaciones		Página	12/12
Url De Verificación	https://uex09.unex.es/vfirma/code/t/2NMUBzw12fqfRBiH4GXA==		
Normativa	Este informe tiene carácter de copia electrónica auténtica con validez y eficacia administrativa de ORIGINAL (art. 27 Ley 39/2015).		

