COURSE DATA

DATA SUBJECT

Code: 33008
Name: Pathology and therapeutic focus on the locomotor system
Cycle: Undergraduate Studies
ECTS Credits: 6
Academic year: 2026-27

STUDY (S)

Degree	Center	Acad. year	Period
1202 - Degree in Physiotherapy	Facultat de Fisioteràpia	2	First quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
1202 - Degree in Physiotherapy	Medical conditions and surgical conditions and their treatments	BASIC

COORDINATION

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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 / LEARNING OUTCOMES

1202 - Degree in Physiotherapy

Have the ability to organise and plan work.

Know how to recognise and assess the symptoms of the diseases.

Know the diverse medical and surgical treatments of the studied diseases.

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.

Promote the participation of the users and their families in the recovering process.

Recognise diversity, multiculturality, democratic values and peace culture.

Recognise the evolution momentum of the learnt diseases.

Respect fundamental rights and equality between men and women.

Work in teams.

DESCRIPTION OF CONTENTS

0. UNIT 0. Presentation and introduction to the subject

1. UNIT 1. Pathology of the different components and tissues of the musculoskeletal system.

Topic 01. Bone tissue. Structure and composition. Bone injuries, fractures, periostitis. Modeling and remodeling. Bone consolidation process.
Topic 02. Cartilage and other joint tissues. Structure and composition. Traumatic and non-traumatic joint injury mechanisms. Osteoarthritis and arthritis. Recovery process.
Topic 03. The muscle. Structure and composition. Muscular pathology, traumatic and non-traumatic.

Recovery of muscle tissue.
Topic 04. Tendon, bursae, cysts and ganglions. Structure and composition. Tendon injury mechanisms, traumatic and non-traumatic. Recovery in the tendons. Pathological processes of bursae, cysts and ganglions.
Topic 05. The peripheral nerve. Structure and composition. Peripheral nerve injuries, traumatic and non-traumatic. Nerve recovery process.

2. UNIT 2: Generalities of musculoskeletal injuries

Topic 06. Surgical and conservative treatments for injuries to the musculoskeletal system.
Topic 07. Complications after an injury to the musculoskeletal system.
Topic 08. Characteristics of the lesions of the musculoskeletal system in the infant.
Topic 09. Characteristics of injuries to the locomotor system in the elderly. osteoporosis.

3. UNIT 3: Pathology of the shoulder joint complex

Topic 10. Traumatic pathology of the shoulder joint complex.

Topic 11. Non-traumatic pathology of the shoulder joint complex.

5. UNIT 4. Pathology of the elbow and forearm

Topic 12. Traumatic pathology of the elbow and forearm.
Topic 13. Non-traumatic pathology of the elbow and forearm.

5. UNIT 5. Pathology of the wrist and hand

Topic 14. Traumatic pathology of the wrist and hand.
Topic 15. Non-traumatic pathology of the wrist and hand.

6. UNIT 6. Pathology of the pelvis and hip

Topic 16. Traumatic pathology of the pelvis and hip.
Topic 17. Non-traumatic pathology of the pelvis and hip.

7. UNIT 7. Pathology of the knee

Topic 18. Traumatic pathology of the knee.
Topic 19. Non-traumatic pathology of the knee.

8. UNIT 8. Pathology of the ankle and foot

Unit 20. Traumatic pathology of the ankle and foot.
Topic 21. Non-traumatic pathology of the ankle and foot.

9. UNIT 9. Pathology of the spine, ribs and skull.

Topic 22. Traumatic pathology of the spine, ribs and skull.
Topic 23. Alterations in the alignment of the column. Scoliosis, hyperkyphosis, hyperlordosis.
Topic 24. Non-traumatic pathology of the trunk.

10. PRACTICAL PART

Practice 1. Introduction to pathological biomedical imaging, complementary diagnostic methods. Clinical manifestations. Introduction and methodology of clinical simulation within the subject of Pathology and Therapeutic Approach to the Locomotor System.

Practice 2. Traumatic pathology of the upper extremity: study and implementation of cases through clinical simulation.

Practice 3. Non-traumatic pathology of the upper extremity: study and implementation of cases through clinical simulation.

Practice 4. Traumatic pathology of the lower extremity: study and implementation of cases through clinical simulation.

Practice 5. Non-traumatic pathology of the lower extremity: study and implementation of cases through clinical simulation.

Practice 6. Traumatic pathology of the trunk: study and implementation of cases through clinical simulation.

Practice 7. Non-traumatic pathology of the trunk: study and implementation of cases through clinical simulation.

Practice 8. Clinical simulation practice on pathology of the upper, lower and trunk extremities.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theory	35,00
Laboratory	25,00
Total hours	**60,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	20,00
Independent study and work	14,00
Preparation of lessons	25,00
Preparation for assessment activities	31,00
Resolution of case studies	0,00
Total hours	**90,00**

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 two blocks: theoretical and practical.

To pass the subject, the sum of the marks of the two blocks will have to be at least half of the maximum possible score of the total of the subject. Additionally, it will be necessary to have at least half the score on both sides so that they can mediate with each other.

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

To pass the course, you must obtain at least half of the maximum grade (5 out of 10) and also pass both the written theoretical exam and the practical exam independently.

Written test THEORETICAL	Multiple choice exam of 50 questions with four possible options. Note= [correct answers (errors/number of options 1) x (maximum note / number of questions)]	50%
Continuous evaluation activities	Continuous evaluation activities	10%
		60%

Theoretical block

The grade for the block will come from the sum of both the written test and the continuous evaluation.

The theoretical exam will have a value of 5 points on the final grade and will consist of a total of 5 multiple choice questions with four possible answer options where errors remain.Some of the multiple-choice questions may be based on clinical cases presented in the exam.

On the other hand, during the semester, continuous evaluation activities will be carried out throughout the theoretical classes. This activity will have a value of 1 point of the total of the subject.

If this block is passed, the note can be saved for the second call, but not for subsequent courses.

The theoretical exam is recoverable. The type of test between calls will not suffer variations.

Those continuous evaluation activities that require in-person attendance due to their particular characteristics may not be recoverable outside the completion hours established in the schedule. The above is subject to the specific instructions for each activity reflected in the specific document available in the Virtual Classroom.

Practical block

The practical block will be evaluated by the sum of different blocks. The practical exam will have a value of 4 points on the final grade, which will be distributed as follows:

- Attendance at practices (0.5 points). This score will be split evenly among the eight practices.

- Creation of a clinical case of clinical simulation through video with the help of radiological images in a collaborative manner (1 point).

- Individual final practical exam (2,5 points). This test will consist of solving a clinical case through clinical simulation. An evaluation of technical and non-technical skills will be carried out through a rubric. It will be necessary to have passed this part in order to pass the subject (at least 1.25 points out of a possible 2.5).

If this block is passed, the note will be saved for the second call. The notes of the different blocks may be saved for the second call of the same course, if deemed appropriate. Both the grade for the practical part and for each of its blocks will not be saved between courses.

The evaluation in the second call of the same course may vary with respect to the first call, as specified below:

- Attendance at practicals: This mark cannot be recovered in the second call due to its face-to-face nature.

- Creation of a clinical case through video: The work may be resubmitted in the second call, being carried

out both collaboratively and individually. In the latter case, the student may have help from classmates, although the grade will only be awarded to the one who presents it.

- Individual practical exam: It will not change with respect to the first call.

Practical Part	
Assitance	5%
Creating a video simulation case	10%
Individual practical exam through clinical simulation. Evaluation of competences by rubric.	25%
	40%

REFERENCES

Basic:

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

Sanchis-Guarner Cabanilles M. Patologia quirúrgica osteoarticular. Membres superior i raquis. Ed. Universitat de Valencia. 2007

Brukner, P. (2012).¿Brukner & Khan's clinical sports medicine. North Ryde: McGraw-Hill.

Duckworth, A. D., Porter, D., & Ralston, S. H. (2017).Ortopedia, traumatología y reumatología. Elsevier Health Sciences.

Martínez, F. M., & Martínez-Aedo, A. L. U. (2022).Traumatología y Ortopedia para el grado en medicina. Elsevier Health Sciences.

Additional:

Konnikova, M. (2013).Cómo pensar como Sherlock Holmes. Grupo Planeta (GBS).

Munuera L. Introducción a la traumatología y la cirugía ortopédica. MacGraw-Hill. Interamericana. 2002

Likewise, each topic will specify the books, scientific articles, and readings of interest recommended for preparing the content covered.