

## 1. OVERVIEW

Course	Sports Physiotherapy I
Degree program	Degree in Physical Therapy
School	Health Faculty
Year	2nd
ECTS	6
Credit type	Optional
Language(s)	Spanish, English
Delivery mode	ON CAMPUS
Semester	1

## 2. INTRODUCTION

The subject of Sports Physiotherapy aims to enable students to acquire knowledge, attitudes and skills using special physiotherapy techniques. With these they will correctly address the different physiotherapy problems characteristic of sports physiotherapy in the different phases of treatment such as prevention, treatment of injuries and readaptation. The contents of this course are general and specific aspects of physical activity, basic physical abilities of the sportsman, most frequent injuries in the area of sport and physiotherapy techniques applied to the treatment of sport injuries.

## 3. SKILLS AND LEARNING OUTCOMES

### Core competencies:

- CC 1- That students have demonstrated knowledge and understanding in an area of study that is at the core of general secondary education, and is usually at a level that, while supported by advanced textbooks, also includes some aspects that involve knowledge from the cutting edge of their field of study.
- CC 2- that students know how to apply their knowledge to their work or vocation in a professional way and possess the skills that are usually demonstrated through the development and defence of arguments and the resolution of problems within their area of study.
- CC 3 - students have the ability to gather and interpret relevant data (usually within their area of study) to make judgements that include reflection on relevant social, scientific or ethical issues.

- CC 4- Students are able to convey information, ideas, problems and solutions to both specialist and non-specialist audiences.
- CC 5- Students have developed those learning skills necessary to undertake further study with a high degree of autonomy.

**Cross-curricular competencies:**

- CT11- Planning and time management: Ability to establish objectives and choose the means to achieve these objectives using time and resources in an effective way.
- - CT12- Critical reasoning: Ability to analyze an idea, phenomenon or situation from different perspectives and to assume a personal and personal approach, built from rigor and argued objectivity, and not from intuition.
- - CT17- Teamwork: ability to integrate and collaborate actively with other people, areas and/or organizations to achieve common goals.
- - CT4- Capacity for analysis and synthesis: to be able to break down complex situations into their constituent parts; also to evaluate other alternatives and perspectives to find optimal solutions. Synthesis seeks to reduce complexity in order to better understand it and/or solve problems.
- - CT8-Information management: Ability to search, select, analyze and integrate information from different sources.

**Specific competencies:**

- SC05 - Understand the learning theories to be applied in health education and in the lifelong learning process itself.
- SC09 - Know the physiological and structural changes that may occur as a result of the application of physiotherapy.
- SC19 - Understand and apply the manual and instrumental methods and procedures of assessment in Physical Therapy and Physical Rehabilitation, as well as the scientific evaluation of their usefulness and effectiveness.
- SC21 - Identify the most appropriate physiotherapeutic treatment in the different processes of alteration, prevention and promotion of health as well as in the processes of growth and development.

**Learning outcomes:**

- - LO1: The student will understand the fundamental concepts related to the contents of the subject.

- - LO2: The student will know the basics of cryotherapy and its application.
- - LO3: The student will know the principles of sports massage application.
- - LO5: The student will know the basics of injury prevention in sports.
- - LO6: The student will demonstrate the ability to identify clinical pictures characteristic of sports injuries.
- - LO7: The student will apply theoretical knowledge to practical cases for their resolution.
- - LO8: The student will be able to improve in the application of physiotherapy techniques that are put into practice in sports treatments: massage, functional bandages, stretching, proprioception, Cyriax, electrotherapy...

The following table shows the relationship between the competencies developed during the course and the learning outcomes pursued:

Competencies	Learning outcomes
CC1, CC2, CC3, CC4, CC5, CT11, CT12, CT27, CT4, CT8, CE5, CE9, CE19, CE21	LO1
CC1, CC2, CC3, CC4, CC5, CT11, CT12, CT27, CT4, CT8, CE5, CE9, CE19, CE21	LO2
CC1, CC2, CC3, CC4, CC5, CG18, CT11, CT12, CT27, CT4, CT8, SC5, SC9, SC19, SC21	LO3
CC1, CC2, CC3, CC4, CC5, CG18, CT11, CT12, CT27, CT4, CT8, SC5, SC9, SC19, SC21	LO10
CC1, CC2, CC3, CC4, CC5, CG18, CT11, CT12, CT27, CT4, CT8, SC5	LO5, LO6, LO8
CC1, CC2, CC3, CC4, CC5, CG18, CT11, CT12, CT27, CT4, CT8, SC5, SC19, SC21	LO7
CC1, CC2, CC3, CC4, CC5, CG18, CT11, CT12, CT27, CT4, CT8, SC5, SC9, SC19, SC21	LO9
CC1, CC2, CC3, CC4, CC5, CG18, CT11, CT12, CT27, CT4, CT8, SC5, SC9, SC19, SC21	LO11

## 4. CONTENTS

This section indicates the content of each of the topics contained in the learning units.

- Bone and soft tissue regeneration. Evolution of bone, muscle and tendon injuries. Histology and histopathology. Pathophysiology Risk factors. Treatment. Prevention. Clinical applications.
  - Topic 1: Soft tissue pathophysiology: Muscle
  - Topic 2: Soft tissue pathophysiology: Tendon
  - Topic 3: Bone and soft tissue regeneration
- Sports massage.
  - Topic 4. Scientific evidence of the use of massage as a preparation and recovery tool from

the sportive activity. Structural palpation. Masotherapy pre and post-competition.

- Cryotherapy.
  - Topic 5. Bases of the use of the cold as therapy for functional recovery and post-effort. Modalities of cryotherapy. Scientific evidence of the use of cryotherapy in the recovery of the athlete. Cryokinetics
- Electrostimulation.
  - Topic 6. Electrostimulation. Henneman's principle. Faradic currents Kotz Biological, principles of electrolysis.
- Sports injuries of lower limbs, upper limbs and spine.
  - Topic 7. Clinical pictures related to sports pathology. Examination and treatment of sports pathology.
  - Topic 8: Spine and sport.

## 5. TEACHING-LEARNING METHODOLOGIES

The types of teaching-learning methodologies used are indicated below:

- Simulation Environments
- Master Class
- Cooperative Learning
- Case method
- Dialogic learning
- Autonomous learning

## 6. LEARNING ACTIVITIES

Listed below are the types of learning activities and the number of hours the student will spend on each one:

**Campus-based mode:**

Learning activity	Number of hours
Classroom practice	30
Knowledge tests	2
Case Study Analysis	15
Master Classes	18
Tutoring	15
Self-learning	50
Scientific works	20
<b>TOTAL</b>	<b>150</b>

## 7. ASSESSMENT

Listed below are the assessment systems used and the weight each one carries towards the final course grade:

### Campus-based mode:

Assessment system	Weight
Knowledge test	30
Practical knowledge test	40
Learning portfolio	20
Reflective journal	10

When you access the course on the *Campus Virtual*, you'll find a description of the assessment activities you have to complete, as well as the delivery deadline and assessment procedure for each one.

## 8. BIBLIOGRAPHY

The main reference work for this subject is:

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9. Izquierdo M. Biomecánica y bases neuromusculares de la actividad física y el deporte. Buenos Aires: Editorial Médica Panamericana; 2017.
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13. Pedersen BK, Saltin B. Exercise as medicine - evidence for prescribing exercise as therapy in different chronic diseases. Scand J Med Sci Sports. diciembre de 2015;25:1-72.