

## 1. Basic information on the course/module

<b>Course</b>	Sports physiotherapy III
<b>Program</b>	Degree in Physical Therapy
<b>School / Faculty</b>	Physical activity and Sports Science
<b>Year</b>	Fourth
<b>ECTS</b>	6 ECTS
<b>Type</b>	Optional
<b>Language/s</b>	English, Spanish
<b>Modality</b>	Presential
<b>Semester</b>	Second semester
<b>Academic year</b>	2019/2020
<b>Coordinator</b>	Daniel Martín Vera

## 2. Presentation of the course/module

“Sports Physiotherapy II” belongs to an itinerary conformed by 3 elective subjects with a common core.

“Sports Physiotherapy III” is the third course of the track. This subject takes place in the fourth year of the bachelor; Considering the formative profile that will be expected from the student, this subject helps the student to acquire the theoretical knowledge and practical skills in the management of sport, attending to psychological variables through communication tools, knowledge of nutritional ergogenic aids that allow improving sports performance, methods of doping, proprioception and rehabilitation of the sport gesture, innovative methodology to prevent injuries sports, physical activity as a therapeutic tool in special populations, electrostimulation in sports, and the prevention and treatment of different sports injuries.

### 3. Competencies and learning outcomes

#### Core competencies:

- ) CB2: Students must be able to apply their knowledge to their work or vocation in a professional manner and have competences that can be demonstrated through devising and sustaining arguments and solving problems within their field of study.
- ) CB3: Students must have the ability to gather and interpret relevant data (usually within their field of study) to make judgments that include an analysis of relevant social, scientific or ethical topics.
- ) CB4: Students must be able to communicate information, ideas, problems and solutions to both specialist and non-specialist audiences.
- ) CB5: Students have developed the necessary learning skills to undertake further studies with a high degree of autonomy.

#### Cross-curricular competencies:

- ) CT 2: Problem solving.
- ) CT 9: Ethical commitment.
- ) CT 12: Work in an interdisciplinary team
- ) CT 13: Critical reasoning.
- ) CT 19: Autonomous learning

#### Specific competencies:

- ) CE 1: Ability to examine and assess the functional status of the patient / user.
- ) CE 4: Ability to provide effective and comprehensive care.
- ) CE 5: Capacity to keep knowledge, skills and attitudes up to date.
- ) CE 7: Ability to execute, direct and coordinate the physiotherapy intervention plan.

- ) CE 9: Ability to apply quality assurance mechanisms in the practice of physiotherapy, according to recognized and validated criteria.
- ) CE 11: Ability to prepare the Physiotherapy discharge report.
- ) CE 14: Ability to incorporate the ethical and legal principles of the profession into the professional culture.
- ) CE 20: Ability to maintain a learning and improvement attitude.
- ) CE 27: Ability to work responsibly.
- ) CE 54: Acquire an integrated knowledge of the different factors involved in the production of force by skeletal muscle.
- ) CE 57: Know and understand basic concepts of nutrition in their relationship with physical activity.
- ) CE 79: Incorporate the principles of Psychology and sociology into the professional practice of physiotherapy to ensure adequate care and treatment as well as prevention and promotion aimed at patients, groups and the community.

**Learning outcomes:**

- LO1: Understanding of the fundamental concepts related to the contents of the subject.
  - Psychological variables of the athlete.
  - Effects on the body of doping and ergogenic aids.
  - Bases of electrostimulation in sport.
  - Importance of the readaptation to the sport gesture.
  - Principles of sports physiotherapy in populations with special needs: Sports and disability; Sport in the elderly community.
- ) LO 2: Knowledge of the foundations of prevention in sport.
- ) LO 3: Ability to identify clinical pictures related to sports injuries.
- ) LO 4: Application of theoretical knowledge to practical cases for its resolution.
- ) LO 5: Preparation of a treatment protocol for the athlete.

- ) LO 6: Ability to improve the application of physiotherapy techniques that are put into practice in sports treatments: massage, functional bandages, stretching, proprioception, Cyriax.
- ) LO 7: Ability to acquire confidence in the approach of the patient athlete.
- ) LO 8: Ability to apply what has been learned in the subject in a patient athlete.

The table below shows the relation between the competencies developed during the course and the envisaged learning outcomes:

Competencies	Learning outcomes
CB2, CB3, CB4, CB5, CT2, CT9, CT12, CT13, CT19, CE1, CE4, CE5, CE7, CE9, CE11, CE14, CE20, CE27, CE54, CE57, CE79	<ul style="list-style-type: none"> <li>) LO1: Understanding of the fundamental concepts related to the contents of the subject.               <ul style="list-style-type: none"> <li>) Psychological variables of the athlete.</li> <li>) Effects on the body of doping and ergogenic aids.</li> <li>) Bases of electrostimulation in sport.</li> <li>) Importance of the readaptation to the sport gesture.</li> <li>) Principles of sports physiotherapy in populations with special needs: Sports and disability; Sport in the elderly community.</li> </ul> </li> </ul>

CB2, CB3, CB4, CB5, CT2, CT9, CT12, CT13, CT19, CE1, CE4, CE5, CE7, CE9, CE11, CE14, CE20, CE27, CE54, CE57, CE79	LO 2: Knowledge of the foundations of prevention in sport.
CB2, CB3, CB4, CT2, CT13, CT19, CE1, CE4, CE5, CE7, CE9, CE14, CE20, CE27, CE54, CE57, CE79	LO 3: Ability to identify clinical pictures related to sports injuries.
CB2, CB3, CB4, CT2, CT13, CT19, CE1, CE4, CE5, CE7, CE20, CE27, CE54, CE57, CE79	LO 4: Application of theoretical knowledge to practical cases for its resolution.
CB2, CB3, CB4, CT2, CT13, CT19, CE1, CE4, CE5, CE7, CE20, CE27, CE54, CE57, CE79	LO 5: Preparation of a treatment protocol for the athlete.
CB2, CB3, CB4, CT2, CT13, CT19, CE1, CE4, CE5, CE7, CE20, CE27, CE54, CE57, CE79	LO 6: Ability to improve the application of physiotherapy techniques that are put into practice in sports treatments: massage, functional bandages, stretching, proprioception, Cyriax .
CB2, CB3, CB4, CB5, CT2, CT9, CT12, CT13, CT19, CE1, CE4, CE5, CE7, CE9, CE11, CE14, CE20, CE27, CE54, CE57, CE79	LO 7: Ability to acquire confidence in the approach of the patient athlete.
CB2, CB3, CB4, CB5, CT2, CT9, CT12, CT13, CT19, CE1, CE4, CE5, CE7, CE9, CE11,	LO 8: Ability to apply what has been learned in the subject in a patient athlete.

CE14, CE20, CE27, CE54,  
CE57, CE79

#### **4. CONTENTS**

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

UA1: Psychology in sport.

Topic 1. Psychology in sport. Modalities of communication. Role of the physiotherapist in the treatment of the athlete attending to psychological variables.

UA2. Doping, ergogenic aids and sports nutrition.

Topic 2. Doping rules. Prohibitions and exemptions. Ergogenic aids. Sport nutrition. Supercompensation of hydrates. PH concept. Electrolytic balance.

UA3. Electrostimulation.

Topic 3. Electrostimulation. Henneman's principle. Faradic currents Kotz Biological principles of electrolysis.

UA4. Proprioception and readaptation to sports gesture. Biomechanics of sports injury.

Topic 4. Proprioception and readaptation to the sport gesture. Cervical-motor-thoracic motor control.

Return to sports activity. Normal biomechanics. Biomechanical analysis of the sports injury (race, swimming and cycling).

UA5. New trends in sports physiotherapy.

Topic 5. New trends in sports physiotherapy. Sports prevention: Vibratory platforms, TRX, isoinertial machines, slideboard, devices with elastic bands, etc.

UA6. Populations with special needs: Sports and disability; Sport in the elderly.

Topic 6. Physical activity as a therapeutic resource in special populations: Physical and intellectual disability, cancer, hypertension, pregnancy, children and adolescents, the elderly, mental alterations.

UA7: Sports injuries of lower, upper and lower limbs.

Topic 7. Clinical pictures related to sports pathology. Evaluation and treatment of sports pathology.

## **5. TEACHING-LEARNING METHODOLOGIES**

The teaching-learning methodologies to be implemented in the class are indicated below:

- ) Magisterial class.
- ) Collaborative learning.
- ) Case method.
- ) Dialogic learning.
- ) Self-directed learning.

## **6. TRAINING ACTIVITIES**

The following table shows how the different types of activities are distributed and how many hours are assigned to each type:

Type of educational activity	Number of hours
Master Class	20
Practical cases	15
Scientific works	20
Classroom practice	32
Self-study	63
<b>TOTAL</b>	<b>150</b>

## 7. ASSESSMENT

The assessment systems and their percentage in the final mark are indicated below:

Assessment systems	Percentage
Theoretical test	30%
Scientific Work - dynamic	30%
Simulations - classroom practice	20%
Problem/case analysis	20%

The student will find the activities detailed in the virtual platform, by accessing the corresponding module, as well as their deadlines and the assessment procedures that will be followed for each one of them.

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

### First exam period

To pass the subject in first exam period it is necessary to obtain a final grade equal to or higher than 5.0 which will result from the sum of the grades obtained in the different evaluable activities (theoretical knowledge test, simulation, case analysis, scientific works) as long as the grade is greater than or equal to 5.0 out of 10.0 in each of the evaluable activities of the subject.



Plagiarism will imply failing the module automatically and academic profile warning. Also, students will need to prove their communication skills and level of linguistic expertise, meeting grammar, writing and punctuation requirements.

### Second exam period

To pass the subject in second exam period it is necessary to obtain a grade greater than or equal to 5.0 out of 10.0 in the final grade of the subject. Activities that must be delivered are the ones not passed in the first exam period, after having received the corresponding corrections by the teacher, or those that were not delivered.

Plagiarism will imply failing the module automatically and academic profile warning. Also, students will need to prove their communication skills and level of linguistic expertise, meeting grammar, writing and punctuation requirements.

## 8. SCHEDULE

The following table contains the schedule with the estimated deadlines for the activities in this module:

Activities	Date
Activity 1. Theoretical exam	Week 9 and 18
Activity 2. Case Analysis	Week 9 and 18
Activity 3. Classroom practice-simulations	Week 6 and 10
Activity 4. Scientific work - dynamic	Week 13 to 15

This working plan may be modified after logistic reasons in the development of the activities. Any modifications will be notified to the student timely and in due form.

## 9. Bibliography

Bundy M. Leaver A. A Guide to Sports and Injury Management. Ed. Churchill Livingstone; 2010

Comfort P., Abrahamson E. Sports Rehabilitation and Injury Prevention. Ed. Wiley-Blackwell; 2010

Crowther A. Pilates en casa. Ejercicios, recetas, y consejos para ponerse en forma paso a paso. Barcelona: ed. RBA libros; 2006

Fernández R. Manual de Pilates: suelo con implementos. Badalona: ed. Paidotribo; 2008

Guerrero Morilla R., Pérez Moreno B. Prevención y tratamiento de lesiones en la práctica deportiva. 3ª ed. Madrid: Ed. Formación Alcalá; 2005

Gusi Fuertes N., Rodríguez Rodríguez L. P. Manual de prevención y rehabilitación de lesiones deportivas. Ed. Síntesis; 2002

Maitland. G: Maitland Manipulación Vertebral. Ed. Elsevier; 2007

Maitland. G. Maitland Manipulación Periférica. Ed. Elsevier; 2007

Mark Jones, Darren Rivett: Clinical Reasoning for manual therapists. Ed. Butterworth; 2003

Menezes. A. The complete guide to Joseph H. Pilates' techniques of physical conditioning. 2<sup>nd</sup> edition; 2004

Peterson L. Renstrom P. Sports injuries. Their prevention and treatment. Ed. Informa Healthcare; 2000

Ramón Balias Matas. Patología muscular en el deporte. Diagnóstico, tratamiento y recuperación funcional. Ed. Masson; 2005.

Travell & Simons. Dolor y disfunción miofascial. Vol. I. Ed. Médica Panamericana; 2002

Travell & Simons. Dolor y disfunción miofascial. Vol. II. Ed. Médica Panamericana; 2004

William E. Prentice. Técnicas de rehabilitación en medicina deportiva. Ed. Paidotribo; 2009.

Sola A. La readaptación físico-deportiva de lesiones en medio acuático. Onposport;

2013.

Boyling JD, Jull GA. Grieve Terapia Manual Contemporánea. Barcelona: Elsevier/Churchill Livingstone. 2006:368.

Scientific articles organized by topics.

## **10. ATTENTION TO DIVERSITY UNIT**

For those student with specific needs for educational support:

Curricular adaptations and adjustments for students with specific needs for education support will be indicated by the Attention to Diversity Unit (Unidad de Atención a la Diversidad, UAD), in order to guarantee opportunity equity among individuals.

In order to do so, a report issued by that unit will be required, so, students with specific needs for educational support will need to contact the unit at the beginning of every semester, via email address: [unidad.diversidad@universidadeuropea.es](mailto:unidad.diversidad@universidadeuropea.es).

# **INSTITUTIONAL ASSESSMENT OF LEARNING OUTCOMES PLAN Covid-19 TEMPLATE TO ADAPT TEACHING AND EVALUATION ACTIVITIES**

Teaching Activity described in the syllabus	Adapated activity in distance learning
Master Class	Master Class in mixed format, face-to-face in the first third of the schedule and virtual until the end of the course.
Scientific works	Scientific works in virtual format.
Practical cases	Analysis of practical cases in online mode.
Classroom practice	Classroom practice in mixed format, face-to-face in the first third of the schedule and virtual until the end of the course.
Self-study	Self-study

Evaluation Activity that was planned in the Syllabus for face to face instruction		NEW virtual evaluation activity (adapted)	
<b>Description of original face to face evaluation activity</b>	Scientific works - dynamic	<b>Description of new activity</b>	Scientific works in virtual format.
<b>Content to be assessed</b>	The content to be addressed in each evaluation activity should be the same. Topic 7. Sports injuries of lower limbs, upper limbs and spine.		
<b>Learning Outcomes to be assessed</b> <i>(Please check Syllabus of the course/module)</i>	The Learning Outcomes that are addressed are the same: specify: <ul style="list-style-type: none"> <li>) LO 4: Application of theoretical knowledge to practical cases for its resolution.</li> <li>) LO 7: Ability to acquire confidence in the approach of the patient athlete.</li> <li>) LO 8: Ability to apply what has been learned in the subject in a patient athlete.</li> </ul>		
<b>Duration</b>	2h	<b>Approximate duration</b>	<b>2h</b>
<b>Weight in evaluation</b>	30%	<b>Weight in evaluation</b>	<b>30%</b>
<b>Please note:</b>			

Evaluation Activity that was planned in the Syllabus for face to face instruction		NEW virtual evaluation activity (adapted)	
Description of original face to face evaluation activity	Practical cases analysis (x2)	Description of new activity	Practical cases analysis (x2) in virtual format.
Content to be assessed	The content to be addressed in each evaluation activity should be the same. <u>All units</u>		
Learning Outcomes to be assessed (Please check Syllabus of the course/module)	<ul style="list-style-type: none"> <li>) LO1: Understanding of the fundamental concepts related to the contents of the subject.</li> <li>) Psychological variables of the athlete.</li> <li>) Effects on the body of doping and ergogenic aids.</li> <li>) Bases of electrostimulation in sport.</li> <li>) Importance of the readaptation to the sport gesture.</li> <li>) Principles of sports physiotherapy in populations with special needs: Sports and disability; Sport in the elderly community.</li> <li>) LO 3: Ability to identify clinical pictures related to sports injuries.</li> <li>) LO 4: Application of theoretical knowledge to practical cases for its resolution.</li> <li>) LO 5: Preparation of a treatment protocol for the athlete.</li> <li>) LO 6: Ability to improve the application of physiotherapy techniques that are put into practice in sports treatments: massage, functional bandages, stretching, proprioception, Cyriax.</li> <li>) LO 7: Ability to acquire confidence in the approach of the patient athlete.</li> <li>) LO 8: Ability to apply what has been learned in the subject in a patient athlete.</li> </ul>		
Duration	1h30min	Approximate duration	45 min (1st practical case: 5th may; 2nd practical case: 28th may)
Weight in evaluation	20%	Weight in evaluation	20%
Please note:			

Evaluation Activity that was planned in the Syllabus for face to face instruction		NEW virtual evaluation activity (adapted)	
Description of original face to face evaluation activity	Theoretical test (x2)	Description of new activity	Theoretical test (x2) in virtual format
Content to be assessed	The content to be addressed in each evaluation activity should be the same. All units.		
Learning Outcomes to be assessed <i>(Please check Syllabus of the course/module)</i>	<p>The Learning Outcomes that are addressed are the same: specify:</p> <ul style="list-style-type: none"> <li>) LO1: Understanding of the fundamental concepts related to the contents of the subject. <ul style="list-style-type: none"> <li>) Psychological variables of the athlete.</li> <li>) Effects on the body of doping and ergogenic aids.</li> <li>) Bases of electrostimulation in sport.</li> <li>) Importance of the readaptation to the sport gesture.</li> <li>) Principles of sports physiotherapy in populations with special needs: Sports and disability; Sport in the elderly community.</li> </ul> </li> <li>) LO 2: Knowledge of the foundations of prevention in sport.</li> <li>) LO 3: Ability to identify clinical pictures related to sports injuries.</li> <li>) LO 4: Application of theoretical knowledge to practical cases for its resolution.</li> <li>) LO 5: Preparation of a treatment protocol for the athlete.</li> <li>) LO 6: Ability to improve the application of physiotherapy techniques that are put into practice in sports treatments: massage, functional bandages, stretching, proprioception, Cyriax.</li> <li>) LO 7: Ability to acquire confidence in the approach of the patient athlete.</li> <li>) LO 8: Ability to apply what has been learned in the subject in a patient athlete.</li> </ul>		
Duration	50 min	Approximate duration	50 min (1st test 7th may; 2 <sup>nd</sup> test 4 <sup>th</sup> june)
Weight in evaluation	30%	Weight in evaluation	30%
Please note:			

Evaluation Activity that was planned in the Syllabus for face to face instruction		NEW virtual evaluation activity (adapted)	
<b>Description of original face to face evaluation activity</b>	Simulations. Classroom practice. <ul style="list-style-type: none"> <li>- 1st simulation: cervical and scapulohumeral motor control</li> <li>- 2nd simulation: new trends in treatment and prevention in sport.</li> </ul>	<b>Description of new activity</b>	Simulations: <ul style="list-style-type: none"> <li>- 1st simulation: cervical and scapulohumeral motor control already carried out in person.</li> <li>- 2nd simulation: new trends in sports treatment and prevention. Made in virtual format.</li> </ul>
<b>Content to be assessed</b>	The content to be addressed in each evaluation activity should be the same.  <u>All units</u>		
<b>Learning Outcomes to be assessed</b> <i>(Please check Syllabus of the course/module)</i>	The Learning Outcomes that are addressed are the same: specify: <ul style="list-style-type: none"> <li>) LO1: Understanding of the fundamental concepts related to the contents of the subject.</li> <li>) Psychological variables of the athlete.</li> <li>) Effects on the body of doping and ergogenic aids.</li> <li>) Bases of electrostimulation in sport.</li> <li>) Importance of the readaptation to the sport gesture.</li> <li>) LO 4: Application of theoretical knowledge to practical cases for its resolution.</li> <li>) LO 7: Ability to acquire confidence in the approach of the patient athlete.</li> <li>) LO 8: Ability to apply what has been learned in the subject in a patient athlete.</li> </ul>		
<b>Duration</b>	1h 40min	<b>Approximate duration</b>	<b>1h40 min (1st simulation: 25th Febr; 2nd simulation: 16th april)</b>
<b>Weight in evaluation</b>	20%	<b>Weight in evaluation</b>	<b>20%</b>
<b>Please note:</b>			