1. BASIC INFORMATION

<table>
<thead>
<tr>
<th>Course</th>
<th>Basic Physical Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree program</td>
<td>Degree in Physiotherapy</td>
</tr>
<tr>
<td>School</td>
<td>Physical Activity and Sport Sciences and Physiotherapy</td>
</tr>
<tr>
<td>Year</td>
<td>First</td>
</tr>
<tr>
<td>ECTS</td>
<td>6 ECTS</td>
</tr>
<tr>
<td>Credit type</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Language(s)</td>
<td>Spanish/English/French</td>
</tr>
<tr>
<td>Delivery mode</td>
<td>Classroom / Online</td>
</tr>
<tr>
<td>Semester</td>
<td>First semester</td>
</tr>
<tr>
<td>Academic year</td>
<td>2022/2023</td>
</tr>
<tr>
<td>Coordinating professor</td>
<td>Marina Castel Sánchez</td>
</tr>
<tr>
<td>Professor</td>
<td>Federico Salniccia</td>
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</tbody>
</table>

2. PRESENTATION

The subject Basic Physical Therapy represents the student's first approach to the field of physiotherapy. It has a course load of 6 ECTS within the Physiotherapy syllabus and is compulsory within the degree.

It provides the necessary knowledge for assessing, preventing and treating the patient by means of physical therapy agents and methods.

At the end of this subject, the student must be able to propose and carry out treatments in patients with different pathologies by using various physical agents.

This course is a first contact by the student with a more general knowledge of physiotherapy.

The teaching guide for the course Basic Physical Therapy clearly defines the general and specific competencies necessary to develop the different levels of learning in the subject.

The subject is taught in Spanish, English and French, depending on the modality in which Physiotherapy studies are taken and, given the marked international character of the European University of Madrid. It provides students with sufficient tools to achieve a level of knowledge that allows them to develop their professional work internationally in a specific language.

The syllabus provides students with basic knowledge of the evolution and theoretical and practical foundations of physiotherapy as a science and profession.

The training activities and teaching methodologies used in the subject include master classes, classroom practice, case study analysis and independent study, and allow students to progressively acquire knowledge and skills that will serve as a basis for other subjects that make up the syllabus.
3. COMPETENCIES AND LEARNING OUTCOMES

Core competencies:
• CC 1: Students have demonstrated possession and understanding of knowledge in an area of study which builds on the foundation of general secondary education and is usually at a level that, while relying on advanced textbooks, also includes some aspects involving knowledge from the cutting edge of their field of study.

• CC 2: Students can professionally apply their knowledge to their work or vocation and possess the competencies usually demonstrated through the development and defence of arguments and problem solving within their field of study.

• CC 3: Students can 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 can communicate information, ideas, problems and solutions to specialist and non-specialist audiences.

• CC 5: Students have developed those learning skills necessary to undertake further studies with a high degree of autonomy.

Cross-curricular competencies:
• CCC 3: Capacity for organization and planning.
• CCC 4: Capacity for analysis and synthesis.
• CCC 13: Critical reasoning.

Specific competencies:
• SC 108: Acquire the ability to reason and apply the different physical agents in physiotherapy.

• SC 109: Acquire knowledge of the physiological and structural changes that may occur due to applying physical agents.

• SC 110: Introduce the student to a physiotherapeutic diagnosis.

• SC 111: Obtain the necessary skills in applying movement as a therapeutic measure.

Learning outcomes:
• LO 1: Ability to advance the professionalisation of students in patient management and treatment.

• LO 2: Understanding of fundamental concepts related to basic physical therapies.

• LO 3: Ability to design a physiotherapy treatment protocol with the knowledge acquired.

The following table shows the relationship between the competencies developed during the course and the learning outcomes pursued:
<table>
<thead>
<tr>
<th>Competencies</th>
<th>Learning outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC1, CC2, CC3, CCC4, SC109, SC110, CS111</td>
<td>LO 2: Understanding of fundamental concepts related to basic physical therapies.</td>
</tr>
<tr>
<td>CC2, CC3, CC4, CCC4, CCC13, CS108, SC109, SC110</td>
<td>LO 3: Ability to design a physiotherapy treatment protocol with the knowledge acquired.</td>
</tr>
</tbody>
</table>

4. CONTENT
The subject is organised into twelve learning units, which in turn are divided into themes:

**Unit 1:** Concept, evolution and theoretical foundations of physiotherapy as a science and profession. Models of intervention in physiotherapy.
- 1.1. Introduction to physiotherapy.
- 1.2. Introduction to pain and inflammation.
- 1.3. Types of injuries.
- 1.4. Physiological effects.

**Unit 2:** Theoretical and practical study of Massage Therapy.

**Unit 3:** Theoretical and practical study of Thermotherapy.
- 3.1. Superficial Thermotherapy.
- 3.2. Deep Thermotherapy
  - 3.2.1. Microwave.
  - 3.2.2. Short Wave.
  - 3.2.3. Diathermy / Radiofrequency

**Unit 4:** Theoretical-practical study of Cryotherapy.

**Unit 5:** Theoretical-practical analysis of Electrotherapy.
- 5.1. Electroanalgesia
  - 5.1.1. Transcutaneous Electrical Nerve Stimulation (TENS).
  - 5.1.2. Interferential.
  - 5.1.3. Galvanic current.
- 5.2. Electro-stimulation.
  - 5.2.1. Electro-stimulation of the innervated muscle.
    - 5.2.1.1. Transcutaneous electrical stimulation.
    - 5.2.1.2. Russian/KOTZ currents.
  - 5.2.2. Electro-stimulation of the denervated muscle.
- 5.3. Biofeedback.

**Unit 6:** Vibrotherapy.
- 6.1. Shock waves.
- 6.2. Ultrasound.

**Unit 7:** Phototherapy.
- 7.1. Infrared.
- 7.2. Laser.

**Unit 8:** Hydrotherapy.

**Unit 9:** Magnetotherapy.
Unit 10: Climatotherapy.
Unit 11: Thalassotherapy.
Unit 12: Heliotherapy.

5. TEACHING-LEARNING METHODOLOGIES
The types of teaching-learning methodologies used are indicated below:
- Master class.
- Self-study.
- Classroom practice.
- Analysis of cases.

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:**

<table>
<thead>
<tr>
<th>Learning activity</th>
<th>Number of hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master class.</td>
<td>70</td>
</tr>
<tr>
<td>Self-study.</td>
<td>40</td>
</tr>
<tr>
<td>Classroom practice.</td>
<td>30</td>
</tr>
<tr>
<td>Analysis of cases.</td>
<td>10</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>150</strong></td>
</tr>
</tbody>
</table>

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

**Campus-based mode:**

<table>
<thead>
<tr>
<th>Assessment system</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge tests</td>
<td>50-80%</td>
</tr>
<tr>
<td>Learning portfolio</td>
<td>30-60%</td>
</tr>
</tbody>
</table>

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.

7.1. First exam period

**Block I: Practical knowledge 30%**. Two sections:
- Practical objective tests 30%.
Block II: Theoretical knowledge 70%. Three sections:

- Objective theoretical test 30%.
  - 100% Theoretical test.
- Deliveries and dynamics 30%.
  - 6% Pain essay.
  - 6% Scientific articles activity.
  - 6% Introduction to electrotherapy questionnaire.
  - 6% Activity I/T curve denervated muscle.
  - 6% Hydrotherapy activity.
- Clinical Cases 10%.
  - 2 clinical cases, the weighting of the first case being 30% and the second 70%.

Within Block I in the section "Objective Practical Tests", it is necessary to obtain a 5 in the practical test of massotherapy, as well as a 5 in the arithmetic average of the 2 practical tests of electrotherapy to pass the subject. If the student obtains a grade lower than 4 on any of the tests, he/she will have to take the exam of entire practical content of the electrotherapy block in an extraordinary exam.

Block I is passed with a mark of 5.

Within block II and within the section "Objective Theoretical Tests", there is the Theoretical Test whose grade must be equal to or higher than 5 to pass the subject.

The Theoretical Test is averaged with the deliveries, dynamics, and clinical cases.

Block II is considered passed when a mark of 5 is achieved.

7.2. Second exam period

The student will present in July with those blocks failed. Within the practical, massotherapy and electrotherapy, and within the theoretical knowledge, the theoretical knowledge test, deliveries, dynamics and clinical cases.

If within each block, a section has been passed in the ordinary exam, the grade for that section will be kept (except for the grades for Activities, which, although they were passed in the ordinary exam, if the theoretical test has been failed, the student will have to take the entire syllabus in the Extraordinary Examination).

In the case of students who do not sit the exam, they will have to take all the sections that make up each block.

The percentages in both blocks (I and II) change for the Extraordinary Examination as follows:

Block I: Practical knowledge 30%.

- Practical objective tests.
  - Practical test on massotherapy 10%.
  - Practical electrotherapy tests 20%.
Block II: *Theoretical knowledge 70%. Three sections:*

- Objective theoretical test 30%.
  - This will be assessed using a single theoretical exam in which the whole syllabus will be included (including the subjects evaluated in ordinary exams using group activities, even if the student has passed the activities in ordinary exams).
- Clinical case 10%.
- Deliveries and dynamics 30%.

8. **SCHEDULE**

This table shows the delivery deadline for each assessable activity in the course:

<table>
<thead>
<tr>
<th>Assessable activities</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge test: theoretical</td>
<td>Week 15</td>
</tr>
<tr>
<td>Knowledge test: practical</td>
<td>Week 8 and 9</td>
</tr>
<tr>
<td></td>
<td>Week 12</td>
</tr>
<tr>
<td></td>
<td>Week 16</td>
</tr>
<tr>
<td>Knowledge test: clinical cases</td>
<td>Week 8</td>
</tr>
<tr>
<td></td>
<td>Week 15</td>
</tr>
<tr>
<td>Learning portfolio: simulation</td>
<td>All practical lessons</td>
</tr>
<tr>
<td>Learning portfolio: practice notebook</td>
<td>Week 16</td>
</tr>
<tr>
<td>Learning portfolio: MO, OC, IR, US and laser activity</td>
<td>Week 12</td>
</tr>
<tr>
<td>Learning portfolio: reading scientific articles</td>
<td>Week 14</td>
</tr>
<tr>
<td>Learning portfolio: hydrotherapy activity</td>
<td>Week 12</td>
</tr>
<tr>
<td>Knowledge test: theoretical</td>
<td>Week 15</td>
</tr>
</tbody>
</table>

This schedule may be subject to changes for logistical reasons relating to the activities. Professor will notify the student of any change as and when appropriate.

9. **BIBLIOGRAFÍA**

The main reference work for this subject is:

- **Specific bibliography: Books**
  - *Diccionario médico.*
o Fritz S. Fundamentos del masaje terapéutico. 3ª ed. Madrid; Elsevier; 2005.
o Montiel V. Los masajes en el deporte. Editorial Médica Panamericana.

• Additional bibliography: Articles
  o Cameron, Michelle H. Agentes físicos en rehabilitación. Elsevier España, 2013.


Hingne PM, Sluka KA. Differences in waveform charasteristics have no effect on the anti-hyperalgesia produced by transcutaneous electrical nerve stimulation (TENS) in rats with joint inflammation. J Pain 2007; 8: 251-255.


M Linares a, K Escalante a, R La Touche . Bibliographical review of the currents and parameters more effective in the electroestimulation of the cuadriceps. Universidad Sán Pablo CEU. 2004; 26:4.


- Palmeri RM, Garrison JC. Peripheral ankle cooling and core body temperature, J Athl Train. 2006; 41:185-188.
- Parolo E, Onesta MP. HCR900. Ipetermia a transferimento energetico resistivo e capacitivo nel trattamento di lesioni muscolo-scheletriche acute e chroniche. La Riabilitazione 1998; 31(2): 81-83.
- Storheim K, Gjersing L, Bølstad K, Risberg MA. Extracorporeal shock wave therapy (ESWT) and radial extracorporeal shock wave therapy (rESWT) in chronic musculoskeletal pain. Tidsskr Nor Laegeforen. 2010 Dec 2; 130(23):2360-4. Systematic Review.

10. **DIVERSITY MANAGEMENT UNIT**

Students with specific learning support needs:

Curricular adaptations and adjustments for students with specific learning support needs, in order to guarantee equal opportunities, will be overseen by the Diversity Management Unit (UAD: Unidad de Atención a la Diversidad).

It is compulsory for this Unit to issue a curricular adaptation/adjustment report, and therefore students with specific learning support needs should contact the Unit at unidad.diversidad@universidadeuropea.es at the beginning of each semester.

11. **ONLINE SURVEYS**

Your opinión matters!

The Universidad Europea encourages you to participate in several surveys which help identify the strengths and areas we need to improve regarding professors, degree programs and the teaching-learning process.

The surveys will be made available in the “surveys” section in virtual campus or via e-mail.

Your assessment is necessary for us to improve.

Thank you very much for your participation.