

**COURSE DATA****Data Subject**

<b>Code</b>	33032
<b>Name</b>	Physical preparation applied to physiotherapy
<b>Cycle</b>	Grade
<b>ECTS Credits</b>	4.5
<b>Academic year</b>	2023 - 2024

**Study (s)**

<b>Degree</b>	<b>Center</b>	<b>Acad. year</b>	<b>Period</b>
1202 - Degree in Physiotherapy	Faculty of Physiotherapy	4	Second term

**Subject-matter**

<b>Degree</b>	<b>Subject-matter</b>	<b>Character</b>
1202 - Degree in Physiotherapy	19 - Physical fitness applied to physical therapy	Optional

**Coordination**

<b>Name</b>	<b>Department</b>
CALATAYUD VILLALBA, JOAQUIN	191 - Physiotherapy
CASAÑA GRANELL, JOSÉ	191 - Physiotherapy

**SUMMARY**

"Physical Conditioning" is a course offered in the Bachelor of Physiotherapy at the University of Valencia in 4 th year on an optional basis.

The objective of this course is to provide future physiotherapist basic knowledge about fitness oriented therapeutic field, giving the therapist a tool to complement their performance. Thus, the content of this field are:

- The physical condition of the patient as a starting point.
- General information on the physical qualities of the patient.



- Fundamental principles of training.
- Fundamental principles of exercise.
- Planning and structuring exercise.
- Methods and systems for improving strength.
- Methods and systems flexibility.
- Methods and systems for resistance.
- Methods and systems of neuromotor training and coordination.

## PREVIOUS KNOWLEDGE

### Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

### Other requirements

Not required

## OUTCOMES

### 1202 - Degree in Physiotherapy

- Students must have acquired knowledge and understanding in a specific field of study, on the basis of general secondary education and at a level that includes mainly knowledge drawn from advanced textbooks, but also some cutting-edge knowledge in their field of study.
- Students must be able to apply their knowledge to their work or vocation in a professional manner and have acquired the competences required for the preparation and defence of arguments and for problem solving in their field of study.
- Students must have the ability to gather and interpret relevant data (usually in their field of study) to make judgements that take relevant social, scientific or ethical issues into consideration.
- Students must be able to communicate information, ideas, problems and solutions to both expert and lay audiences.
- Students must have developed the learning skills needed to undertake further study with a high degree of autonomy.
- Know and understand the physiotherapy methods, procedures and interventions applied in clinical settings for both, functional recovering or re-education and in activities aimed at health promotion and maintenance



- Get involved in the promotion, prevention, protection and recovery of health.
- Keep updated one's professional knowledge, competences and skills.
- Respect fundamental rights and equality between men and women.
- Recognise diversity, multiculturality, democratic values and peace culture.
- Work in teams.
- Have the ability to organise and plan work.
- Assess the physical condition of the patient.
- Know the physical characteristics of the patient.
- Know the general principles of muscular activity.
- Know the basic principles of physical exercise.
- Application of the different muscular systems to develop different types of strength.
- Application of techniques to develop flexibility, elasticity, coordination, proprioception and balance.
- Application of techniques to improve resistance to exercise.

## LEARNING OUTCOMES

On completing the course the student should be able to:

- Determine the characteristics of the physical qualities, factors that determine the rankings and more representative
- Determine the relationship between fitness and health
- Designing a physical training session aimed at improving one or more physical qualities following the basics of fitness
- Select and use methods work best suited for each athlete / patient rehabilitation
- Plan, develop and evaluate rehabilitation programs on the development of basic physical qualities.
- Apply the physical and physiological psychology.
- select and apply the most appropriate test to evaluate each of the physical qualities depending on the type of athlete / patient
- Participate in the design of activities and tasks that are scheduled for development of sports and physical activities alongside the other members of the multidisciplinary team



## DESCRIPTION OF CONTENTS

### 1. General introduction to physical training. Fitness

- The Physical Training in Physiotherapy
- The physical training session. Training structures
- Basics of fitness. Biological bases of exercise, Laws and Principles.
- Factors and special considerations involved in the field of physiotherapy.
- Planning and scheduling of physical training.

### 2. The physical attributes.

- The physical attributes: Introduction. Classification. Defining characteristics. Determining factors. Assessment and control.
- Physical Attribute: Strength
- Physical Attribute: Resistance
- Physical Attribute: Flexibility
- Physical Attribute: Speed
- Considerations in special populations.

### 3. Design of physical exercise programs

- Previous considerations.
- Methodological criteria.
- Therapeutic Physical Exercise.

## WORKLOAD

ACTIVITY	Hours	% To be attended
Classroom practices	30,00	100
Theory classes	15,00	100
Development of group work	10,00	0
Development of individual work	24,00	0
Study and independent work	33,50	0
<b>TOTAL</b>	<b>112,50</b>	

## TEACHING METHODOLOGY

The teaching-learning of the subject, will be framed in the cognitive-constructivist theory of learning, which stresses the role of the student essentially active. This will be the star of their education and seek to develop meaningful learning based on prior knowledge. The teacher will act as mediator and facilitator of learning techniques using motivating, modeling, mayeutics, introspection and problem solving.



The teaching program may be modified during the development of the course if the teacher under teacher quality criteria and assimilation of knowledge by the student, deems it appropriate.

## EVALUATION

The evaluation system of the subject will consist of the sum of the grades obtained from (A) the evaluation of the theoretical knowledge of the student and (B) of the practical skills and other competences demonstrated during the development of the subject, and the student needs to **OBTAIN A SCORE OF 5 OUT OF 10** in each of these parts to obtain the final grade.

**A) Theoretical part**, which will represent 40% of the final grade of the subject:

**OBJECTIVE TEST (TYPE TEST EXAM):** The test will consist of 20 - 40 multiple choice questions, one of the four answer options being correct. The correction of said test will be made according to the following formula:

• Score = [correct- (errors / no options-1)] \* (maximum score/ n° questions).

**B) Practical part**, which will represent 60% of the final grade of the subject. The student may choose between a continuous assessment or a practical exam.

a. Continuous evaluation: mandatory attendance to practices (at least 80%), in which the attitude and participation in the different proposed activities will be assessed. Students who opt for this option must present a group work that will be supervised by the teaching team. The group work and its presentation will constitute 60% of the final grade of the subject.

b. Practical exam: the same day of the theoretical exam will be a practical exam at the end of it, with 3-5 development questions. This test will have a value of 60% of the final grade of the subject.

## REFERENCES

### Basic

- Baechle TR, Earle RW. Principios del entrenamiento de la fuerza y del acondicionamiento físico. Buenos Aires Madrid: Médica Panamericana; 2007.
- López Chicharro J, López Mojares LM. Fisiología clínica del ejercicio. Buenos Aires: Médica Panamericana; 2008.
- Manual NSCA. Fundamentos del entrenamiento personal. Barcelona: Editorial Paidotribo; 2016.
- Pescatello LS. ACSM's Guidelines for Exercise Testing and Prescription. 9th ed. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins Health 2014.
- Wilmore JH, Costill DL. Fisiología del esfuerzo y del deporte. Barcelona: Paidotribo; 2007.
- Rodríguez García PL [coordinador]. Ejercicio físico en salas de acondicionamiento muscular: bases científico-médicas para una práctica segura y saludable. Madrid: Editorial Médica Panamericana; 2008.





- Romero D, Tous J. Prevención de lesiones en el deporte. Claves para un rendimiento deportivo óptimo. Madrid: Editorial Médica Panamericana; 2011.

#### **Additional**

- Kisner C, Allen CL. Ejercicio terapéutico. Fundamentos y técnicas. 5ª ed. Buenos aires: Editorial médica Panamericana; 2010.
- Mora-Rodríguez R. Fisiología del deporte y el ejercicio: prácticas de campo y laboratorio. Madrid: Médica Panamericana; 2010.
- Moore GE, Durstine L, Patricia L. ACSMs Exercise Management for Persons With Chronic Diseases and Disabilities. 4th ed. USA: Human Kinetics; 2016.