

Academic Year/course: 2022/23

## 26341 - Optimising Performance in Different Sports Disciplines

### Syllabus Information

**Academic Year:** 2022/23

**Subject:** 26341 - Optimising Performance in Different Sports Disciplines

**Faculty / School:** 229 - Facultad de Ciencias de la Salud y del Deporte

**Degree:** 295 - Degree in Physical Activity and Sports Science

**ECTS:** 6.0

**Year:**

**Semester:** Second semester

**Subject Type:** Optional

**Module:**

## 1. General information

### 1.1. Aims of the course

The general aim of this module is to develop a critical and coherent sense in the student regarding the optimization of performance in any sport and context through an appropriate choice of resources to be used for training.

1. Understand the various conditional, motor and information factors associated with improving sports performance in different sports.
2. Apply physiological, biomechanical and behavioral principles during the training process aimed at improving sports performance according to the modality.
3. Understand and differentiate the relationship between different methods of strength training, resistance, mobility and the adaptation of neurophysiological and biomechanical processes in the different sports modalities.
4. Understand the adequacy of training methods according to the motor and informational needs of the sports and sports modality.
5. Evaluate and compare the different conditional, motor and information manifestations of the different sports modalities. Understand the importance of continuous scientific training for the development of professional work associated with sports training.
6. Look for continued scientific information on the training process aimed at improving sports performance.

These aims are in agreement with the following Aims of Sustainable Development (ODS) of the United Nations Agenda 2030 (<https://www.un.org/sustainabledevelopment/es/>), so that the acquisition of the learning goals will allow the student the competence to achieve success: Health and wellness, Quality Education.

### 1.2. Context and importance of this course in the degree

"Optimization of the performance in the different sports modalities" is the most specific subject of this ar

### 1.3. Recommendations to take this course

The student should consult the bibliography recommended by the lecturers via Moodle, bearing in mind t

It is advisable, but not mandatory, to have passed the previous module "Theory and practice of sports trai

## 2. Learning goals

### 2.1. Competences

**Upon passing the subject, the student will be more competent to ...**

By passing this course will help to achieve the basic and general skills of the Degree in Sciences of Physi

In addition, the following specific competences will also be worked on:

CE10 - Plan, develop and control the training process in its different levels and contexts, according to the

CE14 - Know the motor action as an object of fundamental study in the field of physical activity and spo

CE20 - Plan, develop and evaluate the realization of programs based on the practice of physical-sport act

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### 2.2. Learning goals

**The student, to pass this subject, must demonstrate the following results ...**

1. Define the concept of performance as a global concept where the different factors are interrelated in di
2. Identify the different conditional, motor and informational factors associated with the improvement of
3. Be able to obtain, select, analyze, understand and synthesize the most up-to-date scientific information

### 2.3. Importance of learning goals

1. Understand the performance factors of any sport, analyze them and know how to apply them in the most appropriate way to the context in which they occur.
2. Be able to search, select, analyze and synthesize the best scientific information on topics that optimize performance in most sports.

## 3. Assessment (1st and 2nd call)

### 3.1. Assessment tasks (description of tasks, marking system and assessment criteria)

**The student must demonstrate that he has achieved the expected learning outcomes through the fol**

**FIRST CALL:** there will be two types of evaluation.

#### **CONTINUOUS EVALUATION MODALITY**

In relationship with the pandemic evolution, the global assessment will be developed taking into account the student's speciality in class or the student's speciality through the Google Meet platform and their active work.

Continuous evaluation with compulsory attendance:

- Evaluation test 1 (20%):

Personal work notebook: the student must develop his personal workbook as the subject is taught both in its theoretical and practical section. Elaboration of documents: it will be based on the performance of weekly works based on visualization of training, search, analysis of articles, case studies, control of specialization talks, etc. These works will follow the thread of the subject and its objective will be autonomous, meaningful learning based on guiding the student with guidelines that allow him to develop a reflective and critical spirit in front of the exposed topics.

- Evaluation test 2 (30%):

This will consist of a theory exam (single-choice test) in which the student will show his/her knowledge acquired during both theory and practical lectures.

- Evaluation test 3 (50%):

Students will have to select a given sporting discipline (previously agreed with the lecturer), and write an essay describing the performance indicators of that given sport. This will also have to be defended (orally) using powerpoint, and the student will be subjected to questions from the lecturer.

All the evaluation tests must be passed at least with a 5 to pass the subject.

### **EVALUATION MODALITY GLOBAL TEST:**

The global evaluation will be on the day established for its development and officially published for its realization in the ordinary call.

The test will consist of:

Short summary questions about all the theoretical and practical contents developed in class (60%).

Review and synthesis of one or several scientific review articles or meta-analysis on topics related to improvement of sports performance. **SECOND CONVOCATORY.** It can only be examined through a Global evaluation. The global evaluation

Fraud or plagiarism (total or partial) in any of the evaluation tasks will suppose the fail in the present modality.

## **4. Methodology, learning tasks, syllabus and resources**

### **4.1. Methodological overview**

This course aims to connect theory with practice, so that the proposed activities will work as a guide for the students to activate their curiosity and interest in the course contents, and to encourage their autonomy, reflective and critical skills that leads to meaningful and autonomous learning.

A wide range of teaching and learning tasks are implemented, such as lectures where the student acquires the basic concepts of the course that are complemented with assignments to encourage autonomous learning (search of articles, analysis of training, case analysis, etc.) and practice sessions where the student learns, experiences, interprets and analyzes the concepts and techniques acquired.

The students in their personal notebook must collect everything that they considers important for their learning. The students must show the learning of course contents through the elaboration of practical assignments on training athletes.

The students will be provided with a current selection of the best scientific review articles and / or meta-analysis of topics associated with the improvement of sports performance. The student must present the synthesis of the information obtained from these articles.

At the beginning of the course a series of professional specialization talks will be elaborated, where

professionals of different fields related to sports performance will offer students a real vision of their work. The global issues addressed will be: Resistance, strength, load control, rehabilitation, work with latest generation devices, stress tests, etc.

#### **4.2. Learning tasks**

The course includes the following learning tasks:

- Search for novel research articles.
- Presentation and defense of articles and projects worked.
- Attendance and active participation in the different specialization classes.
- Active participation in the compulsory practice sessions of the course.

#### **4.3. Syllabus**

The course will address the following contents:

- Topic 1. Exercise training and sporting performance: Internal and external load in sport.
- Topic 2. Determining factors of sports performance in different modalities. Racket sports.
- Topic 3. Determining factors of sports performance in different modalities. Individual and endurance sports (cycling, long-distance running, triathlon).
- Topic 4. Determining factors in training and evaluation of strength.
- Topic 5. Determining factors in training and evaluation of speed and jumping.
- Topic 6. Determining factors in training and evaluation of aquatic sports.
- Topic 7. Optimization of training in special environments: altitude, heat, cold, circadian rhythm.
- Topic 8. Latest trends in the optimization of training and performance.

#### **4.4. Course planning and calendar**

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course will be provided on the first day of class or please refer to the Faculty of Health and Sports Sciences website and Moodle.

#### **4.5. Bibliography and recommended resources**

<http://psfunizar10.unizar.es/br13/egAsignaturas.php?id=4809>