

COURSE GUIDE

2021/22

Faculty

135 - Faculty of Education and Sport. Physical Activity and Sport Sciences Dep

Cycle

Not Applicable

Degree

GDEPOR10 - Bachelor's Degree In Sports Science

Year

Third year

COURSE

25768 - Performance-oriented Sports Coaching

Credits, ECTS: 6

COURSE DESCRIPTION

This subject aims to delve into aspects related to sports training, with special emphasis on advanced training systems and the study and implementation of different training plan models

COMPETENCIES/LEARNING RESULTS FOR THE SUBJECT

Transversal competences:

G017. Understanding the scientific literature in the field of physical activity and sport in vernacular languages &#8203;&#8203;and in other languages of scientific and technological scope (it will be worked, evaluated and marked)

Learning outcomes G017: Students will be able to extract the relevant conclusions from the scientific literature and make a presentation by groups of a set of scientific articles on the same subject.

G018: Knowing how to use information and communication technologies (ICT) to the sport sciences area (it will be worked and evaluated, not marked)

Learning outcomes G018: Students will be able to use computer programs (Powerpoint and Excel, specifically) to orally defend their training plan project for an annual sports season.

Specific competences:

G010. To plan, develop and control the training process in training and performance

G011. To apply anatomical, physiological, biomechanical, behavioral and social principles to the field of sports training

Subject skills:

1. To apply the adaptation, recovery and load control processes in the training process.
2. To analyze the limiting factors of performance in different sports and to structure your organization for training.
3. To know and to apply advanced training systems aimed at improving sports performance.
4. To apply the most appropriate planning models depending on the characteristics of the sport and the athlete.

Learning results:

- Students should be able to summarize, understand and make a presentation on a specific topic of the scientific literature.
- The students should be able to analyse, complete an annual training plan and present on an specific sports modality

CONTENIDOS TEÓRICO-PRÁCTICOS

Block 1: General aspects of training

Topic 1: Sports training from a systematic and scientific point of view

- 1.1. Principles of the scientific method
- 1.2. Adaptation of the scientific method to sports training
- 1.3. Systems theory applied to sports training

Topic 2: Sports fatigue

- 2.1. Fatigue Occurrence Locations
- 2.2. Mechanisms of fatigue production
- 2.3. Fatigue perception
- 2.4. Overtraining detection

Thematic Block 2: Training of motor skills

Topic 3: Strength training

- 3.1. Factors involved in muscle strength
- 3.2. F-t and f-v curves
- 3.3. Concept of effective force
- 3.4. Energy cost of the different strength training sessions

- 3.5. Components of Strength Training Load
- 3.6. Training systems
- 3.7. Strength planning
- 3.8. Strength assessment
- 3.9. Practical sessions

- Topic 4: Endurance training
- 4.1. Endurance structure
  - 4.2. Base endurance structure
  - 4.3. Specific endurance structure
  - 4.4.1.Characteristics of RCD, RMD, RLD I, II, III, IV
  - 4.4. Training systems
  - 4.5. The training of the basic endurance and the Specific endurance
  - 4.6. Assessment of endurance
  - 4.7. Practical sessions

Block 3: Training planning

- Topic 5: Planning models
- 5.1. Historical synthesis
    - 5.1.1. Pioneers
    - 5.1.2. Traditional Planning
    - 5.1.3. Contemporary Planning
  - 5.2. Application of training loads
    - 5.2.1. Distribution of training by levels
    - 5.2.2. Diluted load application
    - 5.2.3. Accentuated load application
    - 5.2.4. Concentrated load application
  - 5.3. Fundamental differences in planning structures

- Topic 6: Practical application of training planning
- 6.1. Identification of the training contents corresponding to the different levels of training
  - 6.2. Development of training microcycles
  - 6.3. Elaboration of theoretical macrocycles with the three planning models
  - 6.4. Final work: Elaboration of the planning of a sport season

TEACHING METHODS

The theoretical contents of the subject will be developed through master classes (face-to-face or online depending on the circumstances). For each of the topics developed, students must complete practical sessions to deepen their knowledge and its implementation. Likewise, they must complete two projects by groups: one in reference to the reading of scientific literature on a specific subject and another referring to the analysis of a sport / sports specialty of their choice and the programming of a season of the same and defend them orally in class

TYPES OF TEACHING

Types of teaching	M	S	GA	GL	GO	GCL	TA	TI	GCA
Hours of face-to-face teaching	30		30						
Horas de Actividad No Presencial del Alumno/a	45		45						

**Legend:**

M: Lecture-based	S: Seminar	GA: Applied classroom-based groups
GL: Applied laboratory-based groups	GO: Applied computer-based groups	GCL: Applied clinical-based groups
TA: Workshop	TI: Industrial workshop	GCA: Applied fieldwork groups

Evaluation methods

- End-of-course evaluation

Evaluation tools and percentages of final mark

- Written test, open questions 40%
- Exercises, cases or problem sets 25%
- Teamwork assignments (problem solving, Project design) 25%
- Oral presentation of assigned tasks, Reading 10%

ORDINARY EXAMINATION PERIOD: GUIDELINES AND OPTING OUT

Final evaluation, which includes:  
 Theoretical examination of the contents (40%)  
 Complete practical dossiers by groups (25%)

Preparation by groups of a training plan of a full sport season in a specific sport including an analysis of the characteristics of said sport (25%)  
Completion of a presentation in infographic format (10%)

The passed sections will be saved for the extraordinary evaluation

It is necessary to pass all the sections of the evaluation in order to pass the subject in both the ordinary and extraordinary call.

Students who do not publicly present their planning project and the presentation of scientific articles will have to carry them out individually and defend them orally on a date to be agreed.

To resign from the evaluation call, it will be enough to not appear for the final test.

If the the evaluation has to be non-presential, organizational adaptations will be made following the recommendations of the Teaching Adaptation Plan 2021-2022 in the corresponding calendar and schedule

### EXTRAORDINARY EXAMINATION PERIOD: GUIDELINES AND OPTING OUT

Final evaluation, which includes:

Theoretical examination of the contents (40%)

Complete dossiers by groups (25%)

Preparation by groups of a training plan of a full sport season in a specific sport including an analysis of the characteristics of said sport (25%)

Completion of a presentation in infographic format (10%)

It is necessary to pass all the sections of the evaluation in order to pass the subject in both the ordinary and extraordinary call.

Students who do not publicly present their planning project and the presentation of scientific articles will have to carry them out individually and defend them orally on a date to be agreed.

To resign from the evaluation call, it will be enough to not appear for the final test.

If the the evaluation has to be non-presential, organizational adaptations will be made following the recommendations of the Teaching Adaptation Plan 2021-2022 in the corresponding calendar and schedule

### MANDATORY MATERIALS

-Yan Le Meur infographics: <http://ylmsportscience.com>

### BIBLIOGRAFÍA

#### Basic bibliography

- Cometti, G. (1988). Los métodos modernos de musculación. Barcelona: Paidotribo
- González Badillo y GOROSTIAGA (1994). Metodología del entrenamiento para el desarrollo de la fuerza. Madrid: Master en Alto Rendimiento COE/UAM
- NAVARRO, F. (1998). La resistencia. Madrid: Gymnos
- NAVARRO, F. (1994). Principios del entrenamiento y estructuras de la planificación deportiva. Madrid: Master en alto rendimiento deportivo COE/UAM

#### Detailed bibliography

- Bompa, T. : Theory and methodology of training. Kendall-Hunt. Iowa. 1990
- Brüggemann, P., Grosser, M. y Zintl, F. : Alto rendimiento deportivo. Planificación y desarrollo. Martinez Roca. Barcelona. 1989
- García Manso, J.M., Navarro,M. y Ruiz, J.A. : Planificación del entrenamiento deportivo. Gymnos. Madrid. 1996
- García Manso, J.M. : Alto rendimiento deportivo. La adaptación y la excelencia deportiva. Gymnos. Madrid. 1999
- García Manso, J.M., Navarro,M., Ruiz, J.A. y Acero, R. : La velocidad. Gymnos. Madrid. 1998
- García Manso, J.M. : La fuerza. Gymnos. Madrid. 1999
- Matveiev, L. : El proceso del entrenamiento deportivo. Stadium. Buenos Aires. 1982
- Navarro, F. : La resistencia. Gymnos. Madrid. 1998
- Verjoshanski, I.V. : Entrenamiento deportivo. Planificación y programación. Martinez Roca. Barcelona. 1990
- Volkov, M.V. : Los procesos de recuperación en el deporte. Stadium. Buenos Aires. 1984

#### Journals

Revista de entrenamiento deportivo (RED)  
SDS (Scuolla dello sport)

Web sites of interest

- Grupo Sobreentrenamiento: <http://www.sobreentrenamiento.com/>
- EF Deportes: <http://www.efdeportes.com>
- Sport Science: <http://www.sportsci.org>
- Pub Med: <http://www.ncbi.nlm.nih.gov/sites/entrez?db=pubmed>

OBSERVATIONS