



# Syllabus: Performance and injury "prevention" in indoor team sports: (...)



## (...) Control and monitoring of the load

### **Certificate in Strength and Conditioning for Indoor Team Sports**

At present, some 800 million people play volleyball at least once a week worldwide. Volleyball is played mainly in Western Europe, North America and India and encompasses more than 220 affiliated national federations, while basketball is played by some 450 million people worldwide in 213 national federations divided into 5 continental federations. Basketball is particularly popular in the USA and China, as well as throughout continental Europe and South America, making it one of the world's most popular sports, while futsal and handball are played by some 30 million and 19 million people respectively. Therefore, it is evident the relevance of indoor team sports and the high impact in different fields such as political, social, economic and cultural at a global level.

Team sports in general, and indoor team sports in particular, have generally based their training methods on the general training theory used for individual sports, particularly athletics. Given the obvious differences between the two types of sports, it seems logical to propose a new approach that is better adapted to the characteristics and needs of team sports. In this sense, a change of paradigm that leads coaches and professionals in the sports field in a more appropriate direction is unavoidable. To do this, we must understand the characteristics of indoor team sports, based on the paradigm of complexity, and thus propose a methodology that

empowers the player and all their structures and capabilities as the cornerstone of this proposal.

The high neuromuscular, bioinformational and physiological requirements imposed by competition in indoor team sports, coupled with increasingly dense competitive schedules, place a high burden on athletes. Understanding the effect of training and competitive load results on sports performance and injury prevention is therefore a crucial issue for coaches, physical trainers, sports scientists and sports medicine professionals. In this sense, technological developments have provided all these professionals with new tools allowing them to control, assess and monitor the load in order to optimise the training process, performance and injury prevention, among other aspects.

## SYLLABUS

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≡ Objectives

≡ Target audience

≡ Skills

≡ Expert Instructor

≡ Bibliography

≡ Criteria for participation and approval

## TOPICS

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≡ **Module 1. Control and Monitoring of Training and Competitive Load to Optimise Performance.**  
≡ **Applicati**

≡ **Module 2. Control and Monitoring of Training and Competitive Load to Reduce Injury Risk.**  
≡ **Application**

≡ **Module 3. Application of Inertial Systems to Assess the Conditional and Bioenergetic Structure of**  
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— Module 4. The Concept of "Responder" and "Non-responder" in Training. Recovery Strategies to  
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# Objectives

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By establishing objectives, we give ourselves a clear idea of what we want to achieve once the teaching and learning process of this course has finished. But our aims are even more specific: we also want to establish what you will need to accomplish in order for this new knowledge to contribute to your educational goals.

To achieve these objectives, you must complete the entire process laid out in the different stages of the course.

Thus, if you work in the way suggested, you will be well-positioned to meet the following objectives:

## General objective

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To understand the characteristics of indoor team sports based on the complexity paradigm, defining a methodology specific to these sports that considers the player (made up of a hyper-complex structure) as the key element from which to guide the training process towards achieving the two key objectives of sports training: optimising performance and preventing injuries in indoor team sports.

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## Target audience

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This certificate will give the graduate the ability to perform with knowledge, skills and abilities in the field of training and performance in indoor team sports, being able to design training tasks that allow them to optimise the sporting performance of the player and the team, recognising the basic pillars of the paradigm of complexity applied to these sports.

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# Skills

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The skills we hope you will develop throughout this course are:

## General skills

- 1** **Group and collaborative work:** the ability to work with colleagues in order to accomplish shared goals and to achieve the synergy typical of a high performance group.
- 2** **The capacity of analysis/reflection:** the capacity to methodically examine the different aspects of a certain reality or situation and to carry out an assessment of that situation.
- 3** **Creativity and innovative, knowledge-based solutions:** the capacity to find alternative solutions to existing problems based on formal knowledge.
- 4** **Definition:** the ability to provide new alternative solutions to existing problems based on formal knowledge.

## Specific skills

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The ability to holistically train the player and the team to face the complex demands of indoor team sports with a greater

probability of success, recognising their main elements,  
characteristics and properties.

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# Expert Instructor

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Jairo Vázquez Guerrero

## **Bio**

Physical trainer of the first basketball team of FC Barcelona. Previously, physical trainer of the Spanish basketball team in different categories. Doctor in Physical Activity and Sports Sciences (INEFC Barcelona). Professional Master's in High Performance in Team Sports (INEFC Barcelona) and Master's in Sports Performance: Technification and High Level (RETAN).

Performance and Injury Prevention in Indoor Team Sports: Load Control and Monitoring.

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# Bibliography

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**Corraze, J.** (1987) Las bases neuropsicológicas del movimiento [The neuropsychological basis of movement]. Paidotribo, Barcelona.

**Cratty, B.** (1974). Motricidad y psiquismo [Motor function and the psyche]. Miñón, Madrid.

Le Boulch, J. (1975). Hacia una ciencia del movimiento humano [Towards a science of human movement]. Paidós, Buenos Aires.

**Le Boulch, J.** (1989). El deporte educativo; psicokinética y aprendizaje motor [Educational sports; the mind in movement and motor learning]. Paidós, Buenos Aires.

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# Criteria for participation and approval

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## Participation criteria

During the month of course, the student is expected to:

- Browse the multimedia contents of each of the modules that make up the course.
- Solve the evaluations assigned in each module.
- Carry out the proposed activities, whether group or individual.
- Take the final exam.

## Approval criteria

For the approval of the course, the student is required to complete the (4) proposed activities in the course and pass the final exam. The student must obtain a final score of 70% or more. This grade will be the average between the activities and the final exam.

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# Module 1. Control and Monitoring of Training and Competitive Load to Optimise Performance. Applicati

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## Module 2. Control and Monitoring of Training and Competitive Load to Reduce Injury Risk. Application

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