



**BARÇA  
INNOVATION HUB**  
Universitas

**PROFESSIONAL DIPLOMA**  
**STRENGTH AND**  
**CONDITIONING FOR**  
**FOOTBALL**

**100% ONLINE**

**9 MONTHS**

LEARN FROM THE BEST | ENJOY A UNIQUE EDUCATIONAL EXPERIENCE | BECOME PART OF A GLOBAL NETWORK

# INFORMATION

## LEARN TO:

Understand the different theoretical movements which underly the new training paradigms.

Create action plans based on an understanding of player complexity.

Optimize the choice of different methodologies which can be applied to the training process, focusing on the formative process of players.

Design strategies that favor a collective training process with regard to our game, focusing on player development.

Improve critical analysis by completing a training program on the different professional roles of sports science and health.

Improve sports performance and injury prevention through a deepened understanding of the methodology to use in strength training and muscle power programs.

Apply the appropriate methodology to the design of the post-injury rehabilitation process in situations where strength development plays a significant role.

Have a broad understanding of the emerging methodologies of strength training in order to explore these with the benefit of a solid scientific foundation.

Understand the role of macronutrients for football performance.

Use the appropriate tools to develop effective leadership in the management of groups and individuals.



**DELIVERY MODE ONLINE**

**DURATION 9 MONTHS**

**ACADEMIC DEGREE EXECUTIVE EDUCATION**

**DELIVERED IN ENGLISH AND SPANISH**

# PROFESSORS



## **Paco Seirul-lo Vargas**

Head of FC Barcelona's Methodology area.



## **Isaac Guerrero**

Technical Director / Head of the Methodology Area at FC Barcelona Football Academy. FC Barcelona Knowledge Area.



## **Denis Silva**

Head Coach of FC Barcelona's U19A.



## **Xavier Damunt**

Head of Improvement Area at Barça Academy. FC Barcelona's Knowledge Area.



## **Marcel Sans**

Methodology Coach of FC Barcelona's U19B.



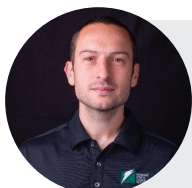
## **Daniel Romero Rodriguez**

Physiotherapist. Physical trainer and rehabilitator of competitive high performance athletes. Performance, prevention and post-injury rehabilitation advisor for various professional football players.



## **Francesc Cos**

Former Head of Strength Training for FC Barcelona's first team football squad (2004-2016). Former Director of the Performance area of Barça Innovation Hub (2016-2018). Currently Director of Performance of the New York City (MLS).



## **Ian Rollo**

Principal Scientist for the Gatorade Sports Science Institute. Visiting Research Fellow Loughborough University UK. Exercise Physiologist, SENr Sport and Exercise Nutritionist.



## **Ana Merayo García**

Sports Psychologist. Instructor. Coordinator of the SAIE (Service for Comprehensive Athlete Care) at Masia 360, FC Barcelona.

# PROGRAM

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## 1. The Basics Of Our Style Of Play

MODULE 1: The science behind Barça Football

MODULE 2: The elements involved

MODULE 3: The defining concepts of Barça Football

MODULE 4: The game as a process

## 2. What To Train

MODULE 1: Optimizing training

MODULE 2: Cognitive elements of the player

MODULE 3: Group elements of the team

MODULE 4: The phases of play

## 3. How To Train It

MODULE 1: Train-optimize

MODULE 2: The training session

MODULE 3: Training specific to Barça Football I

MODULE 4: Training specific to Barça Football II

## 4. Neuromuscular basis for strength training

**MODULE 1: Characteristics of the musculoskeletal system.**

Unit 1: Movement from the central nervous system.

Unit 2: Function of the skeletal muscles.

**MODULE 2: Muscle action and its relationship to sports.**

Unit 1: Types of muscle action.

Unit 2: Interrelationship of muscle action in movement and posture maintenance.

**MODULE 3: Systemic changes in detraining and immobilisation.**

Unit 1: Detraining in relation to the skeletal muscle.

Unit 2: Muscle hypertrophy.

**MODULE 4: Assessment of muscular properties in relation to sport.**

Unit 1: Surface electromyography.

Unit 2: Tensiomyography.

## 5. Strength training methodology: its application in the improvement of sports performance and post-injury rehabilitation for competition

MODULE 1: Contextualization: how can we adapt strength training to team sports?

MODULE 2: Strength workload methodology in situation sports.

MODULE 3: Integrating strength workload into planning and programming of situation sports.

MODULE 4: Strength in the design of sports specific tasks. Examples based on football.

# PROGRAM

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## 6. Strength and muscle power as a key feature of rehabilitation from sports injuries

**MODULE 1: Analysis of injury in sports: injury mechanisms and associated risk factors.**

**MODULE 2: Sports injuries and their relationship with the quality of strength.**

**MODULE 3: Strength manifestations and muscle power in the post-injury rehabilitation process.**

**MODULE 4: New paradigms in strength training: muscle building through vascular occlusion.**

## 7. Technology, strength training and muscle power

**MODULE 1: Technology, equipment and general strength training.**

Unit 1: Equipment for the general orientation workload with respect to the specific nature of sports.

Unit 2: Other equipment related to the general orientation loads.

**MODULE 2: Technology, equipment and specific strength training in relation to sports.**

Unit 1: Equipment for directed and specific orientation workloads related to the specific abilities of sports.

Unit 2: GPS technology and its relationship to the evaluation and control of strength in training and competition.

**MODULE 3: Technology in strength and muscle power evaluation.**

Unit 1: Use of lineal and rotating encoders for the evaluation of strength and muscle power.

Unit 2: Integrated systems in muscle assessment.

**MODULE 4: Interactive technology and strength training.**

Unit 1: Gamification in sports.

Unit 2: Interactive methodologies related to gamification.

## 8. Macronutrients and fluid for football

**MODULE 1: The role of carbohydrate in the players diet**

Unit 1: Introduction to carbohydrate

Unit 2: Carbohydrate for football

**MODULE 2: The role of protein in a players diet**

Unit 1: Introduction to protein

Unit 2: Protein for football

**MODULE 3: The role of fat in a players diet**

Unit 1: Introduction to fats

Unit 2: Fats for football

**MODULE 4: Fluid**

Unit 1: An introduction to fluid and electrolytes

Unit 2: Fluid and electrolytes for football

# PROGRAM

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## **9. Basic coaching skills**

**MODULE 1: Leadership**

**MODULE 2: Communicational Tools**

**MODULE 3: Motivational Climates**

**MODULE 4: Coaches and their Environment**

# EXPERIENCE

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All your learning experience will take place in an online platform where you will find all the resources you need to study:

## LECTURES

which address the main topics.

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## VIDEOS

that deepen some subjects of the readings.

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## ACTIVITIES

to apply the content addressed in each module.

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## RUBRICS

that will evaluate you in each module.

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## ONLINE EXPERT

In every course, you will have the support and virtual follow-up of a subject-matter expert. This online expert will perform interventions throughout the different modules to ensure your learning, as well as the interaction with the rest of your peers.

In addition, he will be available in the forum and by internal messaging so that you can appeal to him as many times as you need.

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## FORUMS

where you can interact with your colleagues.

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## SELF-ASSESSMENTS

which will help you measure your learning progress.

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# BENEFITS

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**World-class content, designed by experts and sports-industry oriented for an immediate impact.**

**Round-the-clock access to study material, wherever you want and from any device.**

**Custom feedback for every individual and teamwork activity.**

**Spaces of discussion and interaction with industry professionals from all over the world.**

**Certificate of participation for each course, issued by Barça Innovation Hub - Universitas. If you pass each of the courses that make up the program, and complete and pass the comprehensive final exam, you will also receive a verified certificate of completion for the entire program, with confirmation of identity, issued by Barça Innovation Hub - Universitas.**





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# CREATING A NEW GENERATION OF SPORTS PROFESSIONALS

