

# Postgraduate Certificate

## Physical Preparation of Handball Players

Endorsed by the NBA





## Postgraduate Certificate Physical Preparation of Handball Players

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/in/sports-science/postgraduate-certificate/physical-preparation-handball-players](http://www.techtute.com/in/sports-science/postgraduate-certificate/physical-preparation-handball-players)

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# 01

# Introduction

Success or failure in a sport often depends on the physical preparation of the players. Their ability to perform at the highest level or in a sustained manner throughout the season requires specific work to improve endurance, mobility or strength. Handball is no stranger to these demands, so professionals must be aware of the latest updates on the planning of training and the implementation of specific exercises, taking into account the characteristics of each player and their position on the court. In this line, this 100% online academic education with the most advanced content developed by elite athletes.



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*A Postgraduate Certificate that stands out for the quality of its content and a teaching staff made up of elite handball athletes"*

A correct physical preparation leads athletes to integrate training and competition rhythms much faster. To do this, it is necessary that professionals take into account their biological, psychological and social characteristics, adapting the exercises to their conditions and also to the sporting objectives set.

In this way, players will be able to enhance their individual and playing abilities in both the short and long term. These concepts are applicable to handball, so they must be mastered by professionals who wish to progress as coaches or trainers in this sport. For this reason, this Postgraduate Certificate has been developed by an excellent teaching team composed of experts from the elite of this modality.

It is, therefore, a program that takes students over 6 weeks to delve into the physical demands of the player, in the neuromuscular paradigm of training, training models for the optimization of strength, muscle power, specific resistance, mobility and coordination. In addition, thanks to the extensive Virtual Library, you will learn in a dynamic way about the needs of physical preparation in the different training categories and the planning needs of conditional training in the competitive season and in transitional periods.

Learning will be much easier thanks to the Relearning method, used by TECH in all its qualifications. A system based on the continuous repetition of the most important elements that will lead the students to consolidate them more easily and thus reduce the study load.

The professionals have an exceptional opportunity to advance their careers through a quality academic proposal that they can access whenever and wherever they wish. All they need is an electronic device with an Internet connection to view, at any time of the day, the content hosted on the virtual platform. An ideal option to combine the most demanding responsibilities with an academic option that is at the forefront.

This **Postgraduate Certificate in Physical Preparation of Handball Players** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The development of practical cases presented by experts in Handball and Sports Sciences
- ♦ The graphic, schematic, and practical contents with which they are created, provide practical information on the disciplines that are essential for professional practice
- ♦ Practical exercises where the self-assessment process can be carried out to improve learning
- ♦ Its special emphasis on innovative methodologies
- ♦ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ♦ Content that is accessible from any fixed or portable device with an Internet connection



*Thanks to the Relearning method, you will not have to invest many hours in studying and memorization. Enroll now"*

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*Do you want to consult the syllabus at any time of the day and learn at your own pace? Do it through this university program designed by TECH"*

The program's teaching staff includes professionals from the field who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive education programmed to learn in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*An academic option that will guide you in the specific physical preparation for wingers, first line players, pivots and goalkeepers.*

*You will analyze through this advanced program the physical preparation needs in the different training categories.*



# 02 Objectives

This Postgraduate Certificate has been designed to provide students with intensive learning of great direct application in the field of Physical Preparation in Handball. A teaching that will lead you to integrate the optimal training models for the improvement of strength, endurance, mobility and coordination of the players. To do this, it has the most advanced pedagogical tools of the current academic scene. A unique opportunity that only TECH, the world's largest digital university, can offer.







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*After this university qualification, you will work with greater precision on the mobility and coordination of your players”*



## General Objectives

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- ♦ Master the design and control of training at different stages
- ♦ Improve the performance of athletes
- ♦ Interpret the analysis of data obtained through new technologies
- ♦ Incorporate the nutritional planning of the athlete according to their characteristics and playing position
- ♦ Know the evolution of the handball game and tactics up to nowadays
- ♦ Analyze the multiple factors involved in the training process and in high performance players





## Specific Objectives

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- Analyze the demands of the different basic physical qualities of a handball player
- Approach physical preparation from a neuromuscular paradigm of training
- Know in depth the nature of muscular strength and power, specific resistance, mobility and coordination
- Structure physical preparation in training categories
- Master the planning, warmup phase and off-season training (off-season period)

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*Enhance the strength of athletes through the work methodologies shown in this advanced university teaching”*

03

# Course Management

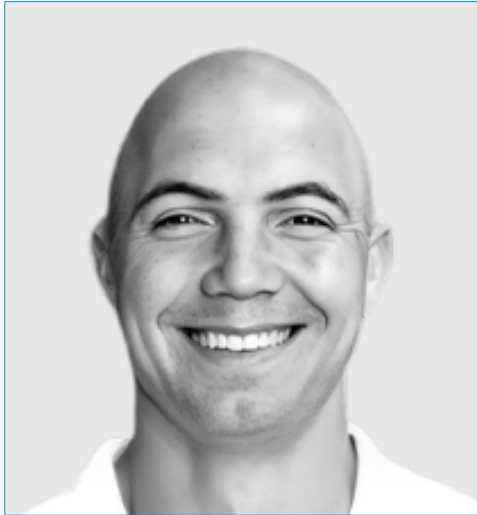
TECH has brought together in this Postgraduate Certificate an excellent teaching team made up of professionals who know perfectly the elite of national and international handball. First level figures who have developed an intensive syllabus on Physical Preparation of the players, the result of their professional experience and deep knowledge of Physical Activity and Sport. In addition, thanks to its proximity, students will be able to resolve any doubts they may have about the content of this program.



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*Consecrated athletes of the Handball elite provide you with the most current information on the physical preparation of players"*

## Management



### Dr. Lozano, Demetrio

- ♦ Former professional handball player
- ♦ Professor at the National School of Handball Coaches of the Royal Spanish Handball Federation
- ♦ PhD in Physical Activity and Sport Sciences from the University of Lleida
- ♦ Degree in Physical Activity and Sport Sciences from the University of Barcelona
- ♦ Professional Master's Degree in High Performance by the University of Barcelona
- ♦ World Handball Champion with the Spanish National Team in the 2005 World Cup in Tunisia
- ♦ Triple Olympic Handball Medalist at Atlanta 1996, Sydney 2000 and Beijing 2008

## Professors

### Dr. Cartón Llorente, Antonio

- ♦ National Handball, Triathlon and Weightlifting coach
- ♦ Handball player in the highest Spanish category
- ♦ Professor at the University San Jorge
- ♦ PhD in Health Sciences
- ♦ Degree in Physical Activity and Sports Science
- ♦ Degree in Physiotherapy



# 04

## Structure and Content

The academic path of this university program will lead students to achieve an excellent learning on the physical preparation of the handball player, which will allow them to integrate into their regular sessions, the innovative practical applications of this preparation depending on the position of the athlete. For this purpose, it has a multitude of additional didactic content, accessible 24 hours a day, 7 days a week.







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*An intensive study plan that acquires greater dynamism thanks to the multimedia didactic resources of this program”*

## Module 1. Physical Preparation of Handball Players

- 1.1. Physical Demands of Handball
  - 1.1.1. Explosive Strength and Strength Endurance
  - 1.1.2. Distances and Intensities of Displacements
  - 1.1.3. Mobility, Coordination and Agility
- 1.2. Neuromuscular Training Paradigm
  - 1.2.1. Conditional vs. Functional Criteria
  - 1.2.2. Development of Useful Force
  - 1.2.3. Application of the Model to Handball
- 1.3. Muscular Strength and Power
  - 1.3.1. Throwing, Jumping and Wrestling
  - 1.3.2. Accelerations, Decelerations and Change of Direction
  - 1.3.3. Load Assessment and Control
- 1.4. Specific Resistance
  - 1.4.1. Ability to Repeat Power Actions
  - 1.4.2. Types of Fatigue and Metabolic Pathways
  - 1.4.3. Load Assessment and Control
- 1.5. Mobility and Coordination
  - 1.5.1. Muscle Imbalances in Handball
  - 1.5.2. Muscle Chains in Specific Gestures
  - 1.5.3. Appraisal and Compensatory Work
- 1.6. Physical Preparation in Basic Categories
  - 1.6.1. Maturative Age and Peak Growth Rate
  - 1.6.2. Physical Conditioning in Early Ages
  - 1.6.3. Growth Syndromes and their Early Detection
- 1.7. Practical Applications by Specific Positions
  - 1.7.1. Specific Physical Preparation for First Line and Pivots
  - 1.7.2. Specific Physical Preparation for Wingers
  - 1.7.3. Specific Physical Preparation for Goalkeepers





- 1.8. Warming Up
  - 1.8.1. Objectives and Structure
  - 1.8.2. Strategies for Activation and Return to Calmness
  - 1.8.3. Activation and Pre-game Potentiation
- 1.9. The Off-season Training (*Off-season* Period)
  - 1.9.1. Effects of Long Duration Detraining
  - 1.9.2. Levels of Approximation in Strength Work
  - 1.9.3. Approximation Levels in Endurance Work
- 1.10. Planning
  - 1.10.1. Individualization of the Model
  - 1.10.2. Adaptation to the Game System
  - 1.10.3. Model of Preparation for Short Competitions

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*Go further into the neuromuscular paradigm of Handball training during the 150 teaching hours of this program”*

# 05 Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.





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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

### Case Study to contextualize all content

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

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*At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world"*



*You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.*



### A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.

“*Our program prepares you to face new challenges in uncertain environments and achieve success in your career*”

*The student will learn to solve complex situations in real business environments through collaborative activities and real cases.*

The case method is the most widely used learning system in the best faculties in the world. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question we face in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.

## Relearning Methodology

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

*In 2019, we obtained the best learning results of all online universities in the world.*

At TECH, you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only one in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.





In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

With this methodology, we have trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, markets, and financial instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

*Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.*

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.



This program offers the best educational material, prepared with professionals in mind:



### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



### Practising Skills and Abilities

They will carry out activities to develop specific competencies and skills in each thematic area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





#### Case Studies

Students will complete a selection of the best case studies chosen specifically for this situation. Cases that are presented, analyzed, and supervised by the best specialists in the world.



#### Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



# 06 Certificate

The Postgraduate Certificate in Physical Preparation of Handball Players guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.



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*Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork”*

This **Postgraduate Certificate in Physical Preparation of Handball Players** contains the most complete and up-to-date scientific on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Certificate** issued by **TECH Technological University** via tracked delivery\*.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Certificate, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Certificate in Physical Preparation of Handball Players**

Official N° of Hours: **150 h.**

**Endorsed by the NBA**



\*Apostille Convention. In the event that the student wishes to have their paper certificate issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.



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