

Postgraduate Diploma

Physical Preparation, Injury Prevention and Nutrition in Handball Players

Endorsed by the NBA





Postgraduate Diploma Physical Preparation, Injury Prevention and Nutrition in Handball Players

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Schedule: at your own pace
- » Exams: online

Website: www.techtitute.com/us/sports-science/postgraduate-diploma/postgraduate-diploma-physical-preparation-injury-prevention-nutrition-handball-players

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01

Introduction

Cruciate ligament ruptures, dislocated shoulders or hand or foot sprains are among the main conditions that a handball player may suffer throughout their sports career. The exquisite work of physical preparation for its prevention, as well as a correct feeding are key to reduce the probabilities of suffering serious injuries. A task that requires a deep knowledge of the player's biomechanics, specific training strategies or sports nutrition. For this reason, TECH has brought together the most advanced information in this 100% online program, taught by former elite athletes and experts in Physical Activity and Sports Science. An outstanding faculty, which provides a rigorous advanced syllabus through the most innovative teaching resources.





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Become a specialist in physical preparation, injury prevention and nutrition of handball players in just 6 months”

Undoubtedly, one of the worst nightmares of an athlete is to suffer an injury that keeps them off the field for a long period of time or that the recovery is not effective and they suffer an early relapse. However, thanks to scientific studies that delve into biomechanics, the improvement of specific physical preparation strategies and advances in nutrition, this risk is diminished.

In this sense, it is essential that professionals who wish to practice as coaches and/or technicians in Handball have the most relevant and current information in this field. Given the importance of such work, TECH has created this Postgraduate Diploma in Physical Preparation, Injury Prevention and Nutrition in Handball Players, taught with consecrated elite athletes of this sport and experts in the field of handball.

It is a 6-month academic itinerary, which will lead the graduate to obtain the most advanced knowledge on the development of useful strength, physical endurance, the preparation of the player from basic categories or the most frequent injuries and their approach. In addition, this syllabus with a theoretical-practical perspective will provide the most current software used for nutritional planning and will delve into the energy requirements for Handball.

In addition, thanks to the Relearning system, based on the reiteration of content during this learning period, the graduate will be able to easily consolidate key concepts and will not have to invest a large number of hours in study and memorization.

This is an excellent opportunity to progress professionally in this field through a flexible and convenient program. Students only need a cell phone, tablet or computer with an Internet connection to be able to view the content of this program at any time. An ideal academic option for those seeking to combine their daily personal activities with a cutting-edge university education.

This **Postgraduate Diploma in Physical Preparation, Injury Prevention and Nutrition in Handball Players** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The development of case studies presented by experts in Handball and Sports Sciences
- ♦ The graphic, schematic and eminently practical contents with which it is conceived gather scientific and practical information on those disciplines that are indispensable for professional practice
- ♦ Practical exercises where self-assessment can be used 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



No attendance, no classes with fixed schedules. This academic option gives you more freedom to self-manage your study time. Enroll now”

“

Delve into the biomechanics of handball and the etiology of the main injuries that occur in this sport”

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 course. For this purpose, students will be assisted by an innovative interactive video system created by renowned experts.

With the Relearning system of this program you will reduce the long hours of study so frequent in other methodologies.

The scientific studies of this program will show you the latest evidence for the approach to the most frequent sports injuries in Handball. Enroll now.



02 Objectives

The three factors that mark the sports career of an athlete are physical preparation, injury prevention and nutrition. For this reason, TECH has designed this Postgraduate Diploma aimed at providing the professional with the most advanced learning in these areas. For this, this academic institution offers a syllabus with a theoretical-practical approach, which will allow you to integrate the main training techniques, work methodologies and tools used to carry out a correct nutritional planning.



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This is a program that will provide you with the keys to improve the physical and sporting performance of your handball players”



General Objectives

- ♦ 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
- ♦ Get to know the evolution of the handball game and tactics up to the present day
- ♦ Analyze the multiple factors involved in the training process and in high-performance players



Thanks to this qualification, you will be able to make the most appropriate decisions in the event of a player's injury during the game and its subsequent treatment"





Specific Objectives

Module 1. Physical Preparation in Handball Players

- ♦ 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, warm-up phase and off-season training

Module 2. Injury Prevention in Handball Players

- ♦ Know the concepts of sports injuries, treatment and readaptation
- ♦ Study the etiology and causes of handball injuries
- ♦ Handle injury emergencies produced in training or in competition
- ♦ Analyze the most frequent injuries of all parts of the body of Handball players

Module 3. Nutrition in Handball Players

- ♦ Study the main concepts of sports nutrition
- ♦ Calculate the BM and the body composition of athletes
- ♦ Know in depth the demands and learn to plan the periodized intake of macro and micronutrients
- ♦ Master the variables of sweating and hydration rates
- ♦ Know about sports supplementation and prohibited supplements
- ♦ Analyze the latest trends in sports nutrition
- ♦ Apply software tools for the planning and control of nutritional intake and hydration of athletes

03

Structure and Content

Video summaries of each topic, detailed videos, specialized readings and case studies make up the didactic content of this Postgraduate Diploma. Resources that expand and enrich a syllabus designed to offer students the most rigorous information on physical preparation, injury prevention and nutrition in handball players. A study plan of 540 intensive teaching hours that will allow students to progress in the professional world of this sport.



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You have access to an extensive Virtual Library 24 hours a day, from any electronic device with an Internet connection”

Module 1. Physical Preparation in 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 Grappling
 - 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 Cooling Down
 - 1.8.3. Pre-Match Activation and Strengthening
- 1.9. The Off-Season Training
 - 1.9.1. Effects of Not Training Long Term.
 - 1.9.2. Levels of Approach in Strength Work
 - 1.9.3. Levels of Approach in Endurance Work
- 1.10. Planning
 - 1.10.1. Model Individualization
 - 1.10.2. Adaptation to the Game System
 - 1.10.3. Preparation Model for Short Competitions

Module 2. Injury Prevention in Handball Players

- 2.1. Sports Injuries, Treatment and Rehabilitation
 - 2.1.1. Acute Injuries
 - 2.1.2. Overuse injuries
 - 2.1.3. Concepts of Treatment, Rehabilitation and Prevention
- 2.2. Etiology and Causes of Injuries in Handball
 - 2.2.1. Biomechanics of Handball
 - 2.2.2. Frequent Injuries in Handball
 - 2.2.3. Injuries by Playing Position
- 2.3. Acute Management of Injuries and Emergency Situations
 - 2.3.1. Basic Concepts
 - 2.3.2. Action in the Event of a Sports Injury
 - 2.3.3. Regulations on Injuries in Handball
- 2.4. Shoulder and Shoulder Blade Injuries
 - 2.4.1. Etiology
 - 2.4.2. Treatment and Rehabilitation
 - 2.4.3. Prevention
- 2.5. Elbow Injuries
 - 2.5.1. Etiology
 - 2.5.2. Treatment and Rehabilitation
 - 2.5.3. Prevention

- 2.6. Hand and Finger Injuries
 - 2.6.1. Etiology
 - 2.6.2. Treatment and Rehabilitation
 - 2.6.3. Prevention
- 2.7. Back Injuries
 - 2.7.1. Etiology
 - 2.7.2. Treatment and Rehabilitation
 - 2.7.3. Prevention
- 2.8. Hip Injuries
 - 2.8.1. Etiology
 - 2.8.2. Treatment and Rehabilitation
 - 2.8.3. Prevention
- 2.9. Knee Injuries
 - 2.9.1. Etiology
 - 2.9.2. Treatment and Rehabilitation
 - 2.9.3. Prevention
- 2.10. Ankle and Foot Injuries
 - 2.10.1. Etiology
 - 2.10.2. Treatment and Rehabilitation
 - 2.10.3. Prevention

Module 3. Nutrition in Handball Players

- 3.1. Sports Nutrition
 - 3.1.1. Basic Concepts and Historical Background
 - 3.1.2. The Digestive System
 - 3.1.3. Classification of Nutrients and Foods
- 3.2. Concept of Sports Nutrition
 - 3.2.1. Areas Where Sports Nutrition Works
 - 3.2.2. Basic Physiology of Exercise Related to Sports Nutrition
 - 3.2.3. Reference Standards
- 3.3. Energy Requirements
 - 3.3.1. Energy Needs
 - 3.3.2. Basal Metabolism, Physical Activity and Thermal Effect of Food
 - 3.3.3. Basic Calculations

- 3.4. Body Composition
 - 3.4.1. Methods of Evaluation of Body Composition
 - 3.4.2. Assessment of Body Composition in Sport
 - 3.4.3. Body Composition in Handball
- 3.5. Macronutrients
 - 3.4.1. Carbohydrates in Sports
 - 3.5.2. Proteins in Sports
 - 3.5.3. Fats in Sports
- 3.6. Micronutrients
 - 3.6.1. Vitamins in Sports
 - 3.6.2. Minerals in Sports
 - 3.6.3. Antioxidants in Sports
- 3.7. Hydration
 - 3.7.1. General Recommendations
 - 3.7.2. Sweat Rate
 - 3.7.3. Repositioning Rules and Appropriate Times
- 3.8. Nutritional Supplements and Ergogenic Aids in Sports
 - 3.8.1. Definition of Concepts
 - 3.8.2. How to Use Them in Sports
 - 3.8.3. Scientific Evidence
- 3.9. Improvement of Body Composition in Athletes
 - 3.9.1. Nutritional Strategies to Improve Body Composition
 - 3.9.2. Methods for Assessing Nutritional Intake
 - 3.9.3. Common Errors
- 3.10. Nutritional Planning
 - 3.10.1. Types of Nutritional Planning
 - 3.10.2. Dietary Planning in Athletes
 - 3.10.3. Dietary Software and Computer Tools

04

Study Methodology

TECH is the world's first university to combine the **case study** methodology with **Relearning**, a 100% online learning system based on guided repetition.

This disruptive pedagogical strategy has been conceived to offer professionals the opportunity to update their knowledge and develop their skills in an intensive and rigorous way. A learning model that places students at the center of the educational process giving them the leading role, adapting to their needs and leaving aside more conventional methodologies.



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TECH will prepare you to face new challenges in uncertain environments and achieve success in your career”

The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist.

The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.

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*At TECH you will NOT have live classes
(which you might not be able to attend)”*



The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.

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TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want”

Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.



Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

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



A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.



The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule”

The effectiveness of the method is justified by four fundamental achievements:

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that assess real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.

The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

The students' assessment of the quality of teaching, quality of materials, course structure and objectives is excellent. Not surprisingly, the institution became the best rated university by its students on the Trustpilot review platform, obtaining a 4.9 out of 5.

Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.

You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.



As such, the best educational materials, thoroughly prepared, will be available in this program:



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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



Practicing Skills and Abilities

You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



Interactive Summaries

We present 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".



Additional Reading

Recent articles, consensus documents, international guides... In our virtual library you will have access to everything you need to complete your education.





Case Studies

Students will complete a selection of the best case studies in the field. Cases that are presented, analyzed, and supervised by the best specialists in the world.



Testing & Retesting

We periodically assess and re-assess your knowledge throughout the program. We do this on 3 of the 4 levels of Miller's Pyramid.



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 for future difficult decisions.



Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical and effective way to help students progress in their learning.



05 Certificate

The Postgraduate Diploma in Physical Preparation, Injury Prevention and Nutrition in Handball Players guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma 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 Diploma in Physical Preparation, Injury Prevention and Nutrition in 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 Diploma** issued by **TECH Technological University** via tracked delivery*.

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

Title: **Postgraduate Diploma in Physical Preparation, Injury Prevention and Nutrition in Handball Players**

Modality: **online**

Duration: **6 months**



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

future
health confidence people
education information tutors
guarantee accreditation teaching
institutions technology learning
community commitment
personalized service innovation
knowledge present
online development languages
virtual classroom



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Physical Preparation, Injury
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tech technological
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