

# Postgraduate Diploma

## Exercises and Techniques for Injury Recovery and Readaptation

Endorsed by the NBA





## Postgraduate Diploma Exercises and Techniques for Injury Recovery and Readaptation

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

Website: [www.techtitute.com/in/physiotherapy/postgraduate-diploma/postgraduate-diploma-exercises-techniques-injury-recovery-readaptation](http://www.techtitute.com/in/physiotherapy/postgraduate-diploma/postgraduate-diploma-exercises-techniques-injury-recovery-readaptation)

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# 01

# Introduction

There are a series of physical exercises that are recommended to achieve functional recovery of injured athletes. For this reason, their knowledge is of vital importance for those professionals dedicated to sports physiotherapy, since they are very useful to improve the health of the users of these centers, allowing their quick recovery and readaptation to sports practice.





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*At TECH we offer you this Postgraduate Diploma to improve your skills in the planning of exercises necessary for the functional recovery of injured athletes”*

The main objective of functional recovery is to train the injured subject, with body damage or dysfunction, performing three-dimensional movements, preparing the body for its reincorporation into daily activity. Therefore, knowing the most accurate exercises to achieve the readaptation of sports injuries is of great interest to physiotherapists who work professionally in the field of sports. In addition, it is of great importance that these professionals are constantly updating their knowledge to keep abreast of the main developments in this sector.

In this sense, this program will show what functional rehabilitation consists of, how the proprioception mechanism is produced, as well as the joint receptors and the control capacity at a neuromuscular level. In addition, the characteristics of the central nervous system and how it intervenes in motor control will be discussed, as well as therapeutic Pilates as a technique for the improvement and evolution of functional capacity in cases such as low back pain, cervical pain, multiple sclerosis, arthritis, after hip, shoulder and knee prosthesis implantation, rotator cuff recovery, after arthroscopic surgery, sprains, scoliosis, impingement, stroke, Parkinson's disease, etc.

On the other hand, it should be noted that an adequate and proportionate intake of nutrients will determine a better or worse state of health and, therefore, a greater or lesser regenerative capacity of the organism. Therefore, it is essential to have adequate knowledge of nutrition, which will allow you to improve your advice to athletes.

In addition, the university's program will be enriched by the inclusion of highly regarded international NBA faculty. Students will have the opportunity to learn from renowned experts, gaining first-hand knowledge on how to plan exercises and techniques for sports injury recovery. This initiative will allow students to have a broader vision of the sports world and acquire practical skills that will allow them to excel in their field.

One of the main advantages of this program is that, as it is an online Postgraduate Diploma, the student is not conditioned by fixed schedules or the need to move to another physical location, but can access the contents at any time of the day, balancing their work or personal life with their academic life.

This **Postgraduate Diploma in Exercises and Techniques for Injury Recovery and Readaptation** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The development of numerous case studies presented by specialists in sports rehabilitation
- ♦ The graphic, schematic, and practical contents with which they are created contain information that is indispensable for professional practice
- ♦ Exercises where to carry out the self-evaluation process to improve learning
- ♦ The interactive learning system based on algorithms for decision making
- ♦ Its special emphasis on innovative methodologies in sports rehabilitation
- ♦ Theoretical lessons, questions to the Postgraduate Diploma, discussion forums on controversial topics and individual reflection papers
- ♦ Content that is accessible from any fixed or portable device with an Internet connection



*Expand your knowledge and learn from the experience of renowned international lecturers, who will share their unique approach to injury recovery and rehabilitation techniques”*

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*This Postgraduate Diploma is the best investment you can make in the selection of a refresher program for two reasons: in addition to updating your knowledge in sports rehabilitation, you will obtain a degree for: TECH”*

Its teaching staff includes professionals belonging to the field of physiotherapy, who bring to this training the experience of their work, in addition to recognized specialists from leading societies and prestigious universities.

Its 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 an immersive education programmed to learn in real situations.

The design of this program focuses on Problem-Based Learning, whereby the physiotherapist must try to solve the different professional practice situations that arise throughout the program. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts in injury rehabilitation and functional recovery exercises.

*This Postgraduate Diploma offers training in simulated environments, which provides an immersive learning experience designed to train for real-life situations.*

*This 100% online Postgraduate Diploma will allow you to balance your studies with your professional work while expanding your knowledge in this field.*



# 02 Objectives

The main objective of this program is the development of theoretical and practical learning, so that the Physiotherapist can master sports rehabilitation in a practical and rigorous way.







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*Our goal is to achieve academic excellence and help you achieve professional success. Don't hesitate any longer and join us”*



## General Objectives

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- ♦ Acquire specialized knowledge in sports rehabilitation, injury prevention and functional recovery
- ♦ Assess the athlete from the point of view of physical, functional and biomechanical condition to detect aspects that hinder recovery or favor relapses in the injury
- ♦ Design both specific readaptation and recovery work, as well as individualized integral work
- ♦ Acquire a specialization in the pathologies of the locomotor system with the highest incidence in the population as a whole
- ♦ Be able to plan prevention, rehabilitation and functional rehabilitation programs
- ♦ Deepen in the characteristics of the different types of injuries most frequently suffered by athletes nowadays
- ♦ Assess the subject's nutritional needs and make nutritional recommendations and nutritional supplements to support the recovery process
- ♦ Evaluate and monitor the evolutionary process of recovery and/or rehabilitation of an athlete's or user's injury
- ♦ Acquire skills and abilities in sports readaptation, prevention and recovery
- ♦ Differentiate from an anatomical point of view the different parts and structures of the human body
- ♦ Improve the injured athlete's physical condition as part of the integral work with the objective of achieving a better and more efficient recovery after the injury
- ♦ Use coaching techniques to address general psychological aspects of the athlete or injured subject that favor an effective approach from the personal training work
- ♦ Understanding marketing as a key tool for success in personal training in the field of rehabilitation, prevention and functional recovery



*The sports field requires prepared professionals and we give you the keys to position yourself among the professional elite"*



## Specific Objectives

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### Module 1. Exercise for the Readaptation of Sports Injuries

- ♦ Establish exercise and physical activity as a strategy for improving health
- ♦ Classify the different types of exercises according to the planning of the personalized training to be performed
- ♦ Differentiate the different types of specific physical exercises according to the muscles or muscle groups to be readapted
- ♦ Manage the different techniques applied in the treatment of injuries produced in sports practice
- ♦ Employ proprioceptive re-education in the whole process of rehabilitation and recovery, as well as for a lower prevalence of injury recurrence
- ♦ Plan and design specific programs and protocols with preventive effects
- ♦ Manage the different types of sports and essential sports practices as adjuvants during the process of functional rehabilitation and recovery

### Module 2. Exercise for Functional Recovery

- ♦ Analyze the different possibilities offered by functional training and advanced rehabilitation and advanced rehabilitation
- ♦ Apply the Pilates method as an integral system for the rehabilitation of the locomotor system in functional recovery
- ♦ Plan specific Pilates exercises and programs for the different zones of the locomotor apparatus with and without apparatus

### Module 3. Nutrition for Functional Recovery and Rehabilitation

- ♦ Approach the concept of integral nutrition as a key element in the rehabilitation and functional recovery process
- ♦ Distinguish the different structures and properties of both macronutrients and micronutrients
- ♦ Prioritize the importance of both water intake and hydration in the recovery process
- ♦ Analyze the different types of phytochemicals and their essential role in improving the state of health and regeneration of the organism

03

# Course Management

Our teaching team, experts in sports rehabilitation, have a wide prestige in the profession and are professionals with years of teaching experience who have come together to help you give a boost to your profession. To this end, they have developed this Postgraduate Diploma with the latest developments in the field that will allow you to train and increase your skills in this sector.



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*Learn from the best professionals and become a successful professional yourself”*

## International Guest Director

Charles Loftis, M.D., is a renowned specialist who serves as a sports performance therapist for the Portland Trail Blazers in the NBA. His impact on the world's premier basketball league has been significant, bringing distinguished expertise in creating strength and conditioning programs.

Prior to joining the Trail Blazers, he was the head strength and conditioning coach for the Iowa Wolves, implementing and overseeing the development of a comprehensive program for the players. In fact, his experience in the field of sports performance began with the establishment of XCEL Performance and Fitness, of which he was founder and head coach. There, Dr. Charles Loftis worked with a wide range of athletes to develop strength and conditioning programs, as well as work on sports injury prevention and rehabilitation.

His academic background in the field of chemistry and biology provides him with a unique perspective on the science behind sports performance and physical therapy. As such, he holds CSCS and RSCC designations from the National Strength and Conditioning Association (NSCA), which recognize his knowledge and skills in the field. He is also certified in PES (Performance Enhancement Specialist), CES (Corrective Exercise Specialist) and dry needling.

With all of this, Dr. Charles Loftis is a vital member of the NBA community, working directly with both the strength and performance of elite athletes and the necessary prevention and rehabilitation of various types of sports injuries.



## Dr. Loftis, Charles

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- ♦ Sports Performance Specialist with the Portland Trail Blazers-Oregon, United States
- ♦ Head strength and conditioning coach for the Iowa Wolves
- ♦ Founder and head trainer at XCEL Performance and Fitness
- ♦ Head performance coach for the Oklahoma Christian University men's basketball team
- ♦ Physical Therapist at Mercy
- ♦ Dr. in Physical Therapy from Langston University
- ♦ B.Sc. in Chemistry and Biology from Langston University

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*Thanks to TECH you will be able to learn with the best professionals in the world”*

## International Guest Director

Isaiah Covington is a highly skilled performance coach with extensive experience in treating and addressing various injuries in elite athletes. In fact, his professional career has been directed towards the **NBA**, one of the most important sports leagues in the world. He is the **performance coach of the Bolton Celtics**, one of the top teams in the Eastern Conference and one of the most promising teams in the United States.

His work in such a demanding league has made him specialize in maximizing the **physical and mental potential** of players. Key to this has been his past experience with other teams, such as the Golden State Warriors and the Santa Cruz Warriors. This has allowed him to work also in the field of sports injuries, deepening in the **prevention and rehabilitation** of the most frequent injuries in elite athletes.

In academia, his interests have been in the fields of kinesiology, exercise science and high performance sport. All of this has led him to excel prolifically in the NBA, working day in and day out with some of the most important basketball players and coaching staff in the world.





## Mr. Covington, Isaiah

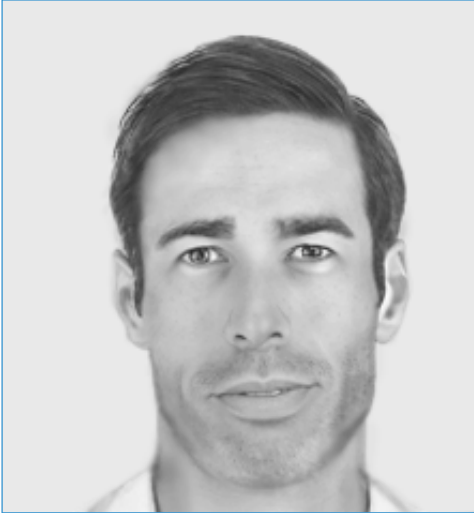
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- ♦ Boston Celtics Performance Coach - Massachusetts, U.S.A.
- ♦ Golden State Warriors Performance Coach
- ♦ Santa Cruz Warriors Head Performance Coach
- ♦ Performance Coach at Pacers Sports & Entertainment
- ♦ B.S. in Kinesiology and Exercise Science from the University of Delaware
- ♦ Specialization in Training Management
- ♦ Master's Degree in Kinesiology and Exercise Science, Long Island University
- ♦ Master's Degree in High Performance Sport from the Catholic University of Australia

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*Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice”*

## Management



### Dr. González Matarín, Pedro José

- Health Science Researcher and professor
- Technical researcher of Health Education in Murcia
- Teacher and researcher at the University of Almeria
- Teacher and researcher at the University of Almeria
- High Performance Coach
- Doctor in Health Sciences
- Graduate in Physical Education
- Master's Degree in Functional Recovery in Physical Activity and Sport
- Master's Degree in Regeneration Medicine
- Master's Degree in Physical Activity and Health
- Master in Dietetics and Diet Therapy
- Member of SEEDO and AEEM



04

# Structure and Content

The structure of the contents has been designed by a team of professionals knowledgeable about the implications of training in daily practice, aware of the relevance of the current relevance of quality training in the field of sports rehabilitation; and committed to quality teaching through new educational technologies.





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*We have the most complete and up-to-date scientific program on the market. We want to put the best education within your reach”*

## Module 1. Exercise for the Readaptation of Sports Injuries

- 1.1. Physical Activity and Physical Exercise for Health Improvement
- 1.2. Classification and Selection Criteria for Exercises and Movements
- 1.3. Principles of Sports Training
  - 1.3.1. Biological Principles
    - 1.3.1.1. Functional Unit
    - 1.3.1.2. Multilaterality
    - 1.3.1.3. Specificity
    - 1.3.1.4. Overload
    - 1.3.1.5. Supercompensation
    - 1.3.1.6. Individualization
    - 1.3.1.7. Continuity
    - 1.3.1.8. Progression
  - 1.3.2. Pedagogical Principles
    - 1.3.2.1. Transfer
    - 1.3.2.2. Efficacy
    - 1.3.2.3. Voluntary Stimulation
    - 1.3.2.4. Accessibility
    - 1.3.2.5. Periodization
- 1.4. Techniques Applied to the Treatment of Sports Injuries
- 1.5. Specific Action Protocols
- 1.6. Phases of the Process of Organic Recovery and Functional Recovery
- 1.7. Design of Preventive Exercises
- 1.8. Specific Physical Exercises by Muscle Groups
- 1.9. Proprioceptive Reeducation
  - 1.9.1. Bases of Proprioceptive and Kinesthetic Training
  - 1.9.2. Proprioceptive Consequences of Injury
  - 1.9.3. Development of Sport Proprioception
  - 1.9.4. Materials for Proprioception Work
  - 1.9.5. Phases of Proprioceptive Re-education
- 1.10. Sports Practice and Activity During the Recovery Process

## Module 2. Exercise for Functional Recovery

- 2.1. Functional Training and Advanced Rehabilitation
  - 2.1.1. Function and Functional Rehabilitation
  - 2.1.2. Proprioception, Receptors and Neuromuscular Control
  - 2.1.3. Central Nervous System: Integration of Motor Control
  - 2.1.4. Principles for the Prescription of Therapeutic Exercise
  - 2.1.5. Restoration of Proprioception and Neuromuscular Control
  - 2.1.6. The 3-Phase Rehabilitation Model
- 2.2. The Science of Pilates for Rehabilitation
- 2.3. Principles of Pilates
- 2.4. Integration of Pilates in Rehabilitation
- 2.5. Methodology and Equipment Necessary for Effective Practice
- 2.6. Cervical and Thoracic Spine
- 2.7. The Lumbar Spine
- 2.8. Shoulder and Hip
- 2.9. Knee
- 2.10. Foot and Ankle

### Module 3. Nutrition for Functional Recovery and Rehabilitation

- 3.1. Integral Nutrition as a Key Element in Injury Prevention and Recovery
- 3.2. Carbohydrates
- 3.3. Proteins
- 3.4. Fats
  - 3.4.1. Saturation
  - 3.4.2. Unsaturated
    - 3.4.2.1. Monounsaturated
    - 3.4.2.2. Polyunsaturated
- 3.5. Vitamins
  - 3.5.1. Water soluble
  - 3.5.2. Fat soluble
- 3.6. Minerals
  - 3.6.1. Macrominerals
  - 3.6.2. Microminerals
- 3.7. Fibre
- 3.8. Water
- 3.9. Phytochemicals
  - 3.9.1. Phenols
  - 3.9.2. Tioles
  - 3.9.3. Terpenes
- 3.10. Food Supplements for Prevention and Functional Recovery



*A unique, key, and decisive educational experience to boost your professional development"*



# 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"*

## At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Physiotherapists/kinesiologists learn better, faster, and more sustainably over time.

*With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.*



According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions of professional physiotherapy practice.

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*Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method”*

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

1. Physiotherapists/kinesiologists who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the physiotherapist/kinesiologist 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.



## Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.



*The physiotherapist/kinesiologist will learn through real cases and by solving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.*

At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology we trained more than 65,000 physiotherapists/kinesiologists with unprecedented success in all clinical specialties, regardless of the workload. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

*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.*

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.

The overall score obtained by our learning system is 8.01, according to the highest international standards.



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 really 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.



#### Physiotherapy Techniques and Procedures on Video

TECH brings students closer to the latest techniques, the latest educational advances and to the forefront of current Physiotherapy techniques and procedures. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch them as many times as you want.



#### 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 unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".



#### 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.





#### Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### 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.



#### Classes

There is scientific evidence on the usefulness of learning by observing experts. The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in 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.



# 06 Certificate

The Postgraduate Diploma in Exercises and Techniques for Injury Recovery and Readaptation 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 Diploma in Exercises and Techniques for Injury Recovery and Readaptation** 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 certificate 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 Exercises and Techniques for Injury Recovery and Readaptation**

Official N° of Hours: **450 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.

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



## Postgraduate Diploma Exercises and Techniques for Injury Recovery and Readaptation

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## Exercises and Techniques for Injury Recovery and Readaptation

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