

# Postgraduate Certificate Strength Training in Situational Sports

Endorsed by the NBA





## Postgraduate Certificate Strength Training in Situational Sports

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

Website: [www.techtute.com/in/physiotherapy/postgraduate-certificate/strength-training-situational-sports](http://www.techtute.com/in/physiotherapy/postgraduate-certificate/strength-training-situational-sports)

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01

# Introduction

With this high-level program, the physiotherapist will specialize in strength training in situational sports, under the guidance of professionals with extensive experience in the field. You will have the latest news and the most advanced knowledge in the field, in a program that stands out for its learning methodology, Relearning, which facilitates the assimilation of the contents in a fast and efficient way.





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*Immerse yourself in the study of this highly scientifically rigorous Postgraduate Certificate and improve your physiotherapeutic skills in Strength Training in Situational Sports"*

Historically, situational sports have not only incorporated methodologies from other disciplines, but have also transformed the objective of these disciplines into their own, considering the reason of developing strength on an exercise, when this is only a means to their own reality. Based on this reality, it is essential that physiotherapists who treat athletes develop effective exercises to increase strength and reinforce muscle mass

Strength training for athletes is a fundamental element in the prevention and treatment of chronic non-communicable diseases. Clinical training supervised by a physiotherapist decreases muscle weakness and injury risk, as it is an effective method to increase muscle mass and strength

The teaching team of this Postgraduate Certificate in Strength Training in Situational Sports has made a careful selection of each of the topics of this program, to offer the student an educational opportunity as complete as possible and always linked to current events

Thus, at TECH we have set out to create contents of the highest teaching and educational quality that will turn our students into successful professionals, following the highest quality standards in teaching at an international level. Therefore, we offer you this Postgraduate Certificate with extensive content that will help you reach the elite in physiotherapy. In addition, as it is an online course, 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 Certificate in Strength Training in Situational Sports** 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 personal training
- ◆ The graphic, schematic and practical contents of the course are designed to provide all the essential information required for professional practice
- ◆ Exercises where the self-assessment process can be carried out to improve learning
- ◆ Algorithm-based interactive learning system for decisionmaking
- ◆ Special emphasis on innovative methodologies in physiotherapy
- ◆ 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



*Specialize and stand out in a sector with a high demand for professionals"*

“ *This course is the best investment you can make in selecting a refresher program for two reasons: in addition to updating your knowledge as a personal trainer, you will earn a degree from the leading online university in Spanish: TECH”*

Its teaching staff includes professionals 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 learning programmed to train 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 throughout the program. To do so, the professional will be assisted by an innovative interactive video system developed by renowned and experienced experts in Performance Assessment and Strength Training

*This Postgraduate Certificate allows training in simulated environments, which provide immersive learning programmed to train for real situations.*

*Increase your knowledge in Sports Performance Assessment in Strength Training with this high-level qualification.*



02

# Objectives

The main objective of this program is the development of theoretical and practical learning, so that the physiotherapist can master in a practical and rigorous way the in Sports Performance Assessment in Strength Training.





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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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- ◆ Delve into the knowledge based on the most current scientific evidence with full applicability in the practical field of strength training
- ◆ Master all the most advanced methods of strength training
- ◆ Apply with certainty the most current training methods to improve sports performance regarding strength
- ◆ Effectively master strength training for performance enhancement in time and mark sports as well as situational sports
- ◆ Master the principles governing exercise physiology, as well as biochemistry
- ◆ Delve into the principles that govern the Theory of Complex Dynamic Systems as they relate to strength training
- ◆ Successfully integrate strength training for the improvement of Motor Skills immersed in sport
- ◆ Successfully master all the knowledge acquired in the different modules in real practice





## Specific Objectives

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- ◆ Gain an in-depth understanding of the logic of movement-based training design
- ◆ Differentiate between means and methods for strength
- ◆ Detect priority movement patterns for applying force in the sport at hand
- ◆ Understand the functioning and application of technological means in the service of strength training

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*Sports requires trained professional physiotherapists, and we give you the tools you need to be among the professional elite”*

03

# Course Management

Our teaching team has a wide prestige in the sector and are professionals with years of teaching experience who have joined forces to help you give a boost to your profession. For this reason, they have developed this Postgraduate Certificate with recent updates on the subject that will allow you to train and increase your skills in the field.





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

## Management



### Dr. Rubina, Dardo

- ◆ CEO of Test and Training
- ◆ EDM Physical Training Coordinator
- ◆ Physical trainer of the EDM First Team
- ◆ Master's Degree in (ARD) COE
- ◆ EXOS CERTIFICATION
- ◆ Specialist in Strength Training for the Prevention of Injuries, Functional and Physical-Sports Rehabilitation
- ◆ Specialist in Strength Training Applied to Physical and Sports Performance
- ◆ Specialist in Applied Biomechanics and Functional Evaluation
- ◆ Certification in Weight Management and Physical Performance Technologies
- ◆ Postgraduate course in Physical Activity in Populations with Pathologies
- ◆ Postgraduate diploma in Injury Prevention and Rehabilitation
- ◆ Functional Assessment and Corrective Exercise Certificate
- ◆ Certificate in Functional Neurology
- ◆ Diploma in Advanced Studies (DEA) University of Castilla la Mancha
- ◆ PhD Candidate in (ARD)



## Professors

### Mr. Vaccarini, Adrián

- ◆ Degree in sports medicine
- ◆ Head of the Applied Sciences Department of the Peruvian soccer federation
- ◆ Physical trainer of the Peruvian National Soccer Team (present in the last World Cup)

### Mr. Palarino, Matías

- ◆ Degree in Physical Activity and Sport
- ◆ Physical Trainer in Professional Soccer
- ◆ Physical Trainer in Field Hockey
- ◆ Physical Trainer in Rugby
- ◆ Extensive teaching experience in physical preparation and load control courses

### Mr. Vilariño, Leandro

- ◆ Degree in Physical Activity and Sport
- ◆ Teacher at the Peruvian Federation of Soccer
- ◆ Teacher of the Postgraduate Diploma in Sports Medicine
- ◆ Physical trainer in professional soccer in the Argentine and Bolivian leagues

### Mr. Tinti, Hugo

- ◆ Degree in Physical Activity and Sport
- ◆ Master's Degree in Big Data
- ◆ Specialist in Technologies and Injury Prevention in Soccer
- ◆ Specialist in load management

04

# Structure and Content

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





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*We have the most complete and up-to-date academic program on the market. We want to provide you with the best qualification”*

## Module 1. Strength Training in Situational Sports

- 1.1. Basic Fundamentals
  - 1.1.1. Functional and Structural Adaptations
    - 1.1.1.1. Functional Adaptations
    - 1.1.1.2. Load-Pause Ratio (Density) as a Criterion for Adaptation
    - 1.1.1.3. Strength as a Base Quality
    - 1.1.1.4. Mechanisms or Indicators for Structural Adjustments
    - 1.1.1.5. Utilization, Conceptualization of the Muscular Adaptations Provoked, as an Adaptive Mechanism of the Imposed Load. (Mechanical Stress, Metabolic Stress, Muscle Damage)
  - 1.1.2. Motor Unit Recruitment
    - 1.1.2.1. Recruitment Order, Central Nervous System Regulatory Mechanisms, Peripheral Adaptations, Central Adaptations Using Tension, Speed or Fatigue as a Tool for Neural Adaptation.
    - 1.1.2.2. Order of Recruitment and Fatigue During Maximum Effort
    - 1.1.2.3. Recruitment Order and Fatigue During Sub-Maximum Efforts
    - 1.1.2.4. Fibrillar Recovery
- 1.2. Specific Fundamentals
  - 1.2.1. Movement as a Starting Point
  - 1.2.2. Quality of Movement as a General Objective for Motor Control, Motor Patterning and Motor Programming
  - 1.2.3. Priority Horizontal Movements
    - 1.2.3.1. Accelerating, Braking, Change of Direction With Inside Leg and Outside Leg, Maximum Absolute Speed and/or Sub-Maximum Speed Technique, Correction and Application According to the Specific Movements in Competition
  - 1.2.4. Priority Vertical Movements
    - 1.2.4.1. *Jumps, Hops, Bounds*. Technique, Correction and Application According to the Specific Movements in Competition
- 1.3. Technological Means for the Assessment of Strength Training and External Load Control
  - 1.3.1. Introduction to Technology and Sport
  - 1.3.2. Technology for Strength and Power Training Assessment and Control
    - 1.3.2.1. Rotary Encoder (Operation, Interpretation Variables, Intervention Protocols, Application)
    - 1.3.2.2. Load Cell (Operation, Interpretation Variables, Intervention Protocols, Application)
    - 1.3.2.3. Strength Platforms (Operation, Interpretation Variables, Intervention Protocols, Application)
    - 1.3.2.4. Electric Photocells (Operation, Interpretation Variables, Intervention Protocols, Application)
    - 1.3.2.5. Contact Mat (Operation, Interpretation Variables, Intervention Protocols, Application)
    - 1.3.2.6. Accelerometer (Operation, Interpretation Variables, Intervention Protocols, Application)
    - 1.3.2.7. Applications for Mobile Devices (Operation, Interpretation Variables, Intervention Protocols, Application)
  - 1.3.3. Intervention Protocols for the Assessment and Control of Training
- 1.4. Controlling the Internal Load
  - 1.4.1. Subjective Load Perception by Rating the Perceived Exertion
    - 1.4.1.1. Subjective Perception of Load to Estimate Relative Load (% 1MR)
  - 1.4.2. Scope
    - 1.4.2.1. As Exercise Control
      - 1.4.2.1.1. Repetitions and PRE
      - 1.4.2.1.2. Repetitions in Reserve
      - 1.4.2.1.3. Scale of Speed
    - 1.4.2.2. Controlling the Overall Effect of a Session
    - 1.4.2.3. As a Tool for Periodization
      - 1.4.2.3.1. Use of (APRE) Self-Regulated Progressive Resistance Exercise, Interpretation of the Data and its Relation to the Correct Dosage of the Load in the Session
  - 1.4.3. Recovery Quality Scale, Interpretation and Practical Application in the Session (TQR 0-10)
  - 1.4.4. As a Tool for Daily Practice
  - 1.4.5. Application
  - 1.4.6. Recommendations



- 1.5. Resources for Strength Training
  - 1.5.1. Role of Resources in Designing a Method
  - 1.5.2. Resources at the Service of a Method and in Function of a Central Sporting Objective
  - 1.5.3. Types of Resources
  - 1.5.4. Movement Patterns and Activations as a Central Axis for Choosing Resources and Method Implementation
- 1.6. Building a Method
  - 1.6.1. Defining the Types of Exercises
    - 1.6.1.1. Cross-Connectors as a Guide to the Movement Target
  - 1.6.2. Exercise Evolution
    - 1.6.2.1. Modification of the Rotational Component and the Number of Supports According to the Plane of Motion
  - 1.6.3. Exercise Organization
    - 1.6.3.1. Relationship With Priority Horizontal and Vertical Movements (2.3 and 2.4)
- 1.7. Practical Implementation of a Method (Planning)
  - 1.7.1. Logical Implementation of the Plan
  - 1.7.2. Implementation of a Group Session
  - 1.7.3. Individual Programming in a Group Context
  - 1.7.4. Strength in Context Applied to the Game
  - 1.7.5. Periodization Proposal
- 1.8. ITU I (Integrating Thematic Unit)
  - 1.8.1. Training Construction for Functional and Structural Adaptations and Recruitment Order
  - 1.8.2. Constructing a Training Monitoring and/or Assessment System
  - 1.8.3. Movement-Based Training Construction for the Implementation of Fundamentals, Means and External and Internal Load Control
- 1.9. ITU II (Integrating Thematic Unit)
  - 1.9.1. Construction of a Group Training Session
  - 1.9.2. Construction of a Group Training Session in Context Applied to the Game
  - 1.9.3. Construction of a Periodization of Analytical and Specific Loads

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

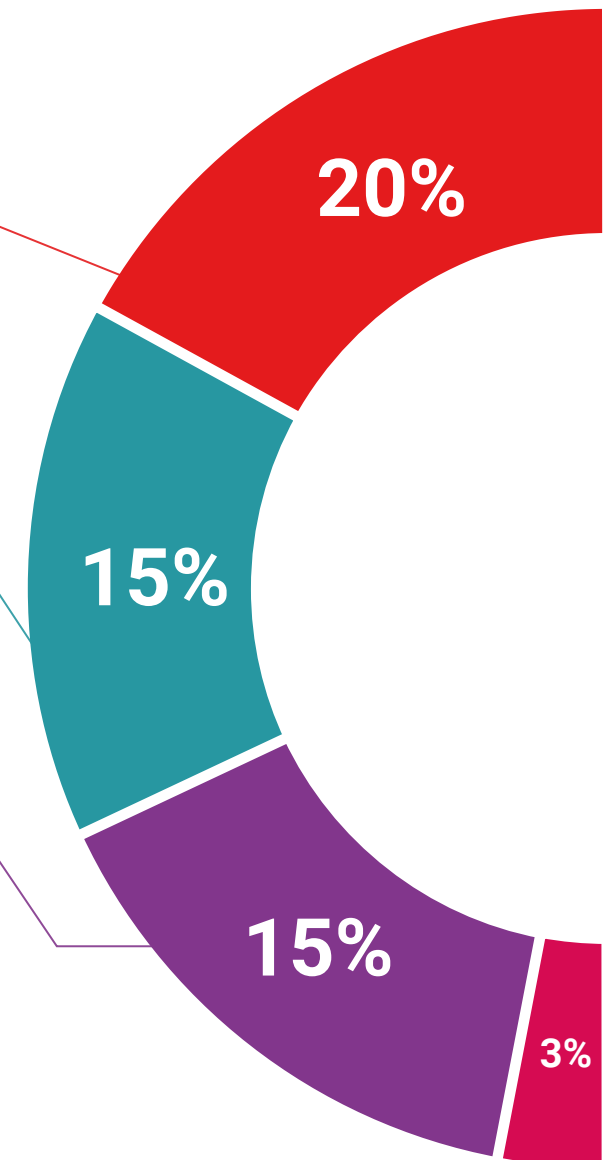
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

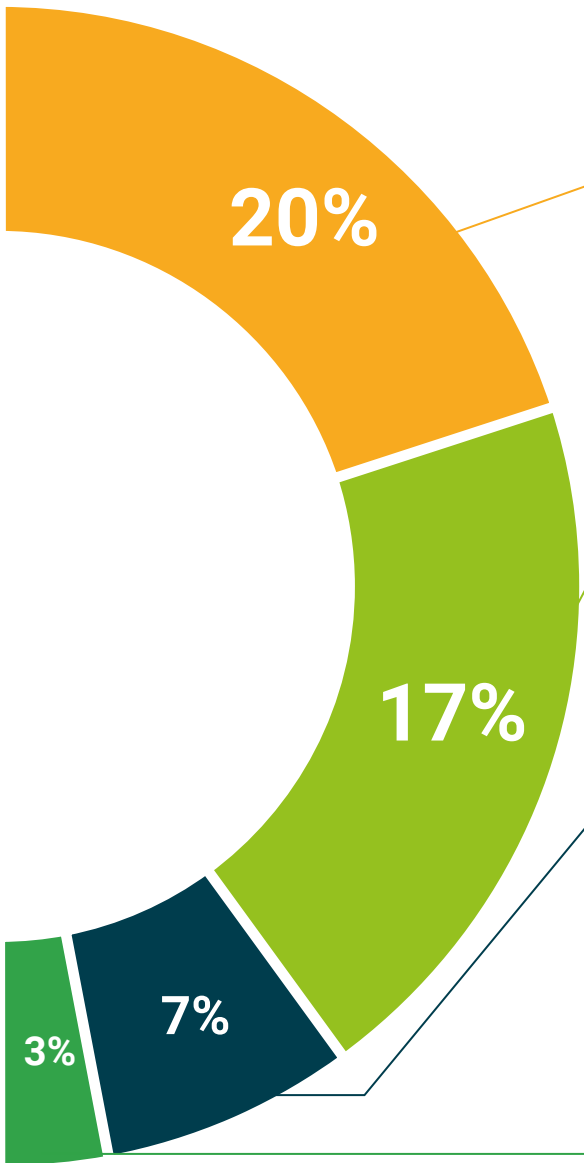
This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".



#### 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

This Postgraduate Certificate in Strength Training in Situational Sports guarantees, 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 Strength Training in Situational Sports** contains the most complete and up-to-date scientific program 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 Strength Training in Situational Sports**

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.

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



## Postgraduate Certificate Strength Training in Situational Sports

- » Modality: online
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