Postgraduate Diploma

High Performance in Sports: Statistics, Nutrition and Mobility Training

Endorsed by the NBA

NBA

tech *technological university*

![tech technological university logo]

Postgraduate Diploma
High Performance in Sports: Statistics, Nutrition and Mobility Training

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

Website: www.techtitute.com/in/postgraduate-diploma-high-performance-sports-statistics-nutrition-training

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01
Introduction

With the Postgraduate Diploma in High Performance in Sports: Statistics, Nutrition and Mobility Training the student will have the knowledge and skills necessary to achieve success in the world of high-performance training.

A unique opportunity to specialize in a booming sector with a high demand for professionals.

The most up-to-date academic training provided by outstanding teachers experienced in the world of sports and academics"

In this Postgraduate Diploma you will find detailed training on key aspects of sports performance, treated with a unique didactic and depth in the current academic offer.

Each module will be taught by true specialists in the field, which guarantees the highest level of knowledge in the subject.

This Postgraduate Diploma in High Performance in Sports: Statistics, Nutrition and Mobility Training will provide the student with high quality and in-depth theoretical content in each module. One of the characteristics that differentiate this Postgraduate Diploma from others is the relationship between the different topics of the modules at a theoretical level, but above all at a practical level so that the student obtains real examples of teams and athletes of the highest sports performance worldwide, as well as from the professional world of sports, resulting in the student being able to build knowledge in the most complete way.

Another strong point of this Postgraduate Diploma in High Performance in Sports: Statistics, Nutrition and Mobility Training is the training of the student in the use of new technologies applied to Sports Performance. The student will not only learn about new technology in the field of performance, but will learn how to use it and, more importantly, how to interpret the data provided by each device to make better decisions in terms of training programming.

The teaching team of this Postgraduate Diploma in High Performance in Sports: Statistics, Nutrition and Mobility Training has made a careful selection of each of the topics of this training in order to offer the student a study 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 show you this Postgraduate Diploma with a rich content that will help you reach the elite of High Performance in Sports. In addition, 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 High Performance in Sports: Statistics, Nutrition and Mobility Training** contains the most complete and up-to-date scientific program on the market. The most important features of the program include:

- The development of numerous case studies presented by specialists in High Performance in Sports 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

- The interactive algorithm-based learning system for decision making

- Its special emphasis on innovative personal training 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

Immerse yourself in the study of this high-level Postgraduate Diploma and improve your skills in High Performance in Sports"

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 as a personal trainer, you will obtain a certificate from TECH Technological University"

The teaching staff includes professionals from the field of sports science, who bring their experience to this training 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 training 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 during the academic year. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts in High Performance in Sports with extensive experience.

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

This 100% online Specialist Diploma will allow you to combine your studies with your professional work while increasing your knowledge in this field.
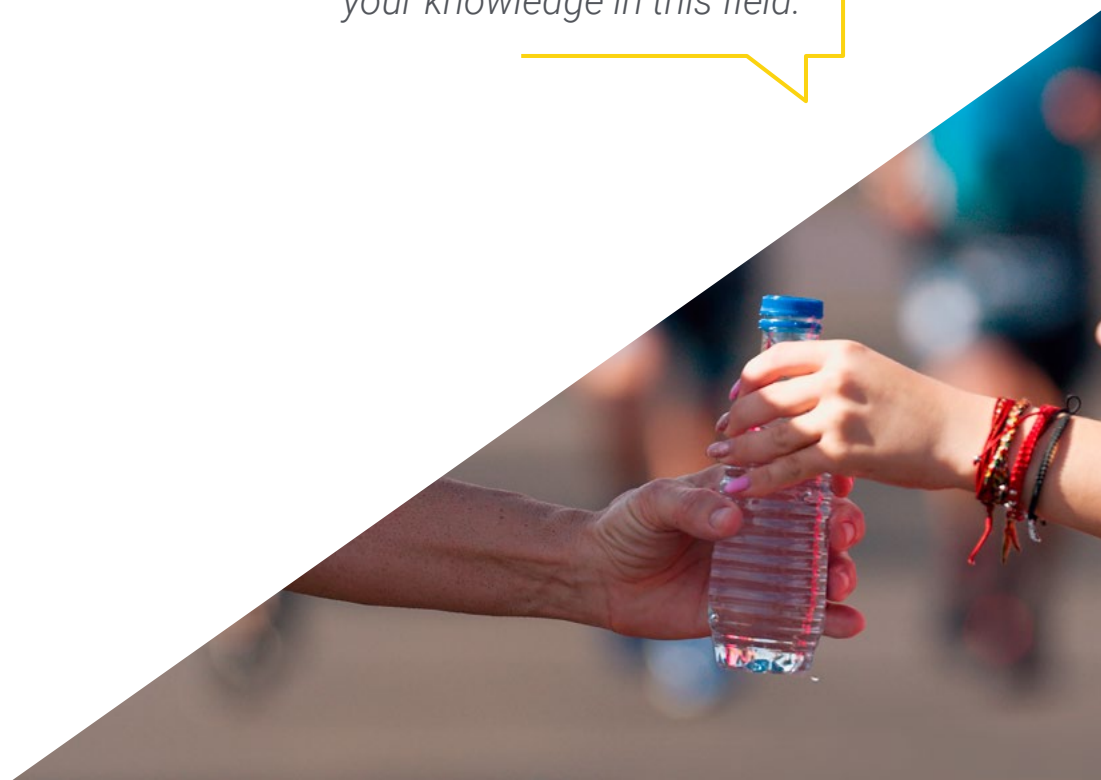
02
Objectives

The main objective of this program is to conduct theoretical and practical learning, so that the sports science professional can master in a practical and rigorous way the novelties in High Performance in Sports.

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

General Objectives

- Master and apply with certainty the most current training methods to improve sports performance
- Effectively master statistics and thus be able to make correct use of the data obtained from the athlete, as well as initiate research processes
- Acquire knowledge based on the most current scientific evidence with full applicability in the practical field
- Master all the most advanced methods of sports performance assessment
- Master the principles governing Exercise Physiology, as well as Biochemistry
- Master the principles governing Biomechanics applied directly to Sports Performance
- Master the principles governing Nutrition applied to sports performance
- Successfully integrate all the knowledge acquired in the different modules in real practice

Specific Objectives

Module 1: Statistics Applied to Performance and Research

- Develop the ability to analyze data collected in the laboratory and in the field through various assessment tools
- Describe the different types of statistical analysis and their application in various situations for the understanding of phenomena that occur during training
- Develop strategies for data exploration to determine the best models to describe them
- Establish the generalities of predictive models through regression analysis that favor the incorporation of different units of analysis in the training field
- Generate the conditions for the correct interpretation of results in different types of research

Module 2: Nutrition Applied to High Performance in Sports

- Learn the physiological and biochemical bases of energy metabolism during physical exertion
- Learn the processes and methods of nutritional evaluation of the athlete, as well as his body composition
- Learn the different options to assess the athlete's energy expenditure
- Learn all the variables regarding nutrition in sports disciplines of very different characteristics
- Familiarize yourself with the latest scientific evidence on sports supplementation
- Handle the nutritional aspects that are associated with eating disorders and sports injuries

Module 3: Mobility: from Theory to Performance

- Approach mobility as a basic physical capacity from a neurophysiological perspective
- Have a deep understanding of the neurophysiological principles that affect the development of mobility
- Apply stabilizing and mobilizing systems within the movement pattern
- Unpack and specify the basic concepts and objectives related to mobility training
- Develop the ability to design tasks and plans for the development of manifestations of mobility
- Apply the different methods of performance optimization through recovery methods
- Develop the ability to carry out a functional and neuromuscular assessment of the athlete
- Recognize and address the effects produced by an injury at the neuromuscular level in the athlete

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

03
Course Management

Our teachers, made up of experts in High Performance in Sports, are well known in the profession and are professionals with years of teaching experience who have come together to help you boost your career. To this end, they have developed this Postgraduate Diploma university with recent updates in the field that will allow you to train and increase your skills in this sector.

Learn from the best professionals and become a successful professional yourself"

International Guest Director

Tyler Friedrich, Ph.D., is a leading personality in the international field of Sports Performance and Applied Sports Science. With a strong academic background, he has demonstrated an exceptional commitment to excellence and innovation, and has contributed to the success of numerous elite athletes internationally.

Throughout his career, Tyler Friedrich has deployed his expertise in a wide range of sporting disciplines, from football to swimming, volleyball to field hockey. His work in performance data analysis, especially through the Catapult athlete GPS system, and his integration of sports technology into performance programs, has established him as a leader in athletic performance optimization.

As Director of Sports Performance and Applied Sports Science, Dr. Friedrich has led strength and conditioning training, as well as the implementation of specific programs for several Olympic sports, including volleyball, rowing and gymnastics. Here, he has been responsible for integrating equipment services, sports performance in soccer and sports performance in Olympic sports. In addition, incorporating DAPER sports nutrition within an athlete performance team.

Also certified by USA Weightlifting and the National Strength and Conditioning Association, he is recognized for his ability to combine theoretical and practical knowledge in the development of high performance athletes. In this way, Dr. Tyler Friedrich has left an indelible mark on the world of Sports Performance, being an outstanding leader and driver of innovation in his field.
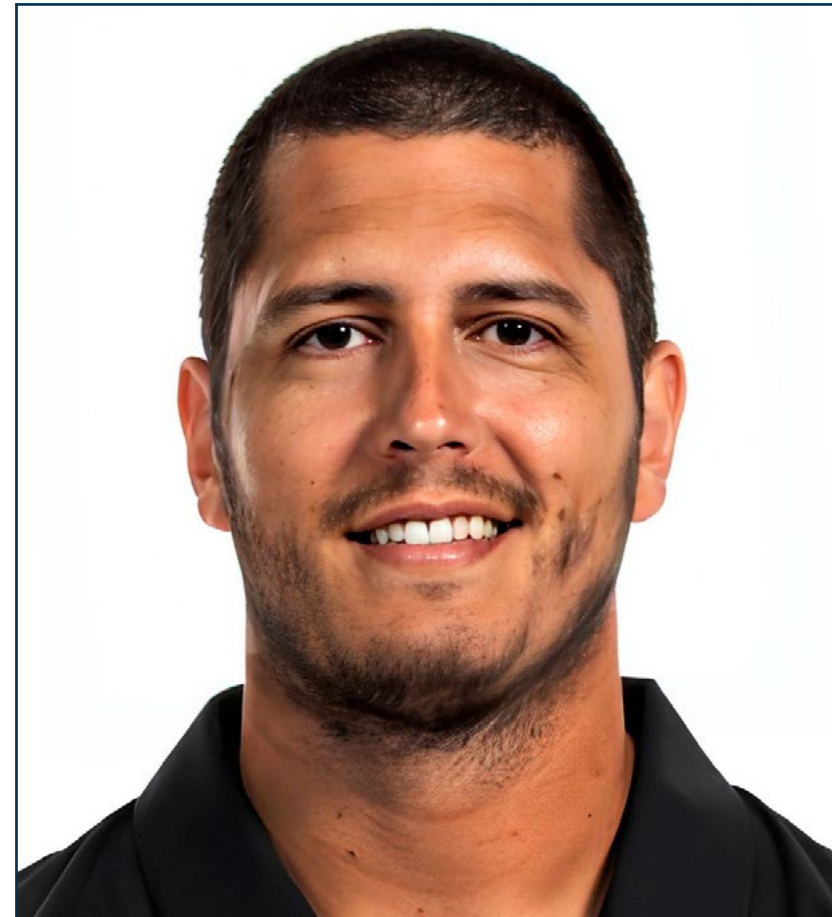
Dr. Friedrich, Tyler

- Director of Sports Performance and Applied Sports Science at Stanford University
- Sports Performance Specialist
- Associate Director of Athletics and Applied Performance at Stanford University
- Director of Olympic Sport Performance at Stanford University
- Sports Performance Coach at Stanford University
- Ph.D. in Philosophy, Health and Human Performance from Concordia University Chicago
- Master of Science in Exercise Science from the University of Dayton
- Bachelor of Science, Exercise Physiology from the University of Dayton

"
Thanks to TECH, you will be able to learn with the best professionals in the world"

Management
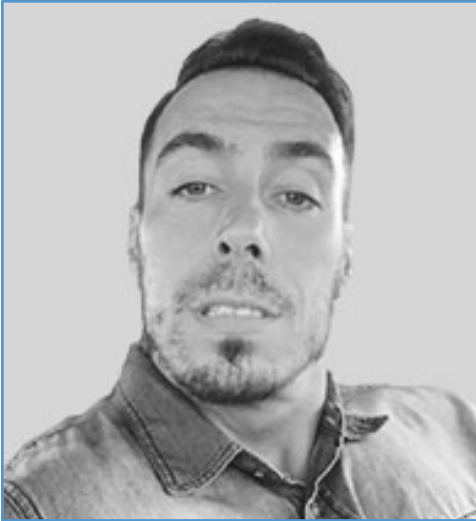
Mr. Rubina, Dardo

- 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
- Certification in Weight Management and Physical Performance Technologies
- Postgraduate course in Physical Activity in Populations with Pathologies
- Diploma in Advanced Studies (DEA) University of Castilla la Mancha
- PhD Candidate in ARD

Professors

Mr. Del Rosso, Sebastián
- Doctor in Health Sciences
- Master's Degree in Physical Education
- Reviewer of scientific publications

Mr. Represas, Gustavo
- Master's Degree in ARD COE, PhD in ARD
- Head of the Biomechanics Laboratory at CAR from 1993 to the present

Ms. González Cano, Henar
- Professor of Nutrition and Body Composition, National School of Strength and Fitness (ENFAF).
- Nutritionist and Anthropometrist of GYM SPARTA
- Nutritionist and Anthropometrist at Promentium Center
- Degree in Human Nutrition and Dietetics. Valladolid
- Master's Degree in Nutrition in Physical Activity and Sport. San Antonio de Murcia Catholic University

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 importance of the current relevance of quality training in the field of High Performance in Sports; and committed to quality teaching through new educational technologies.
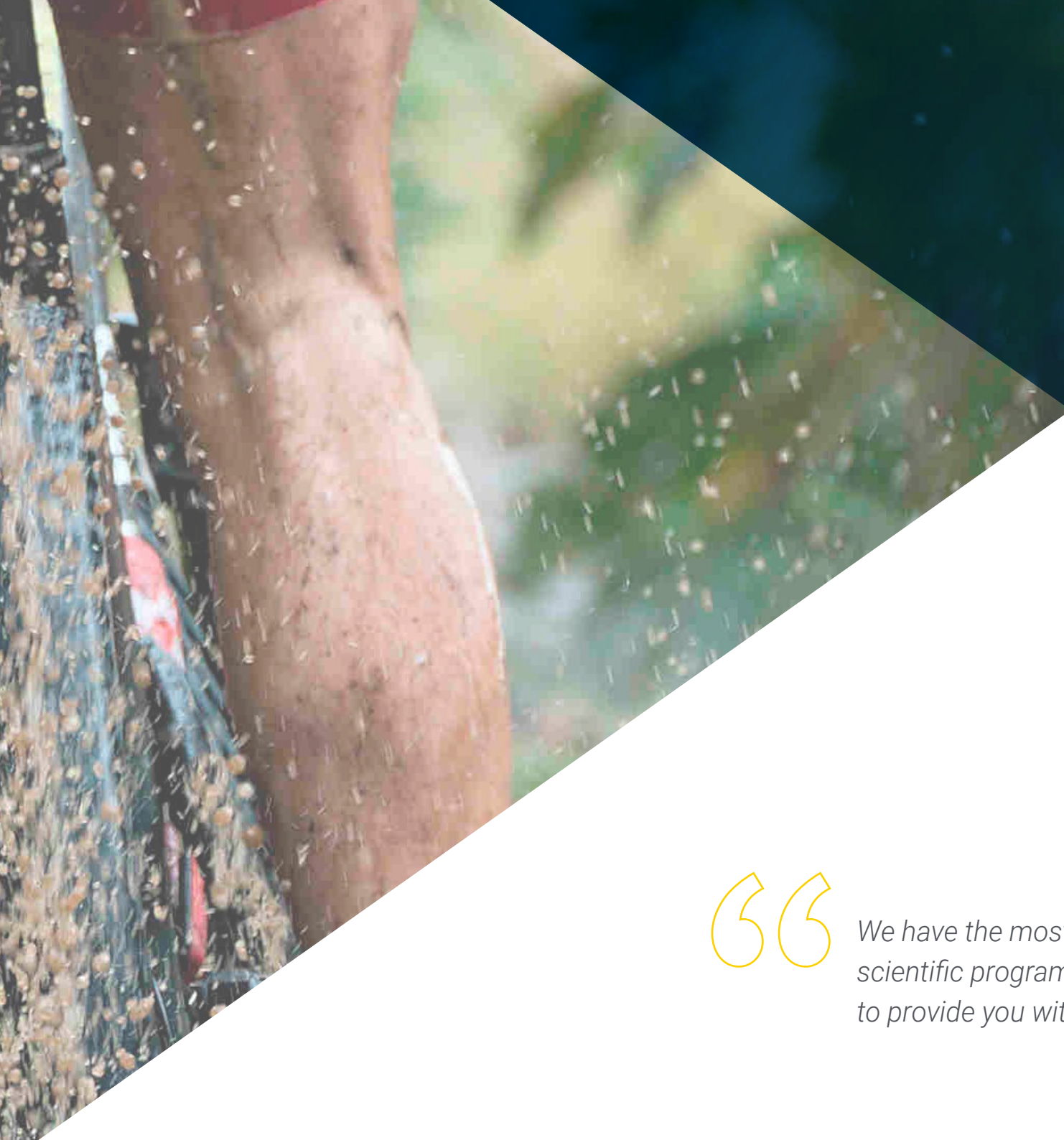
"
We have the most complete and up-to-date scientific program on the market. We want to provide you with the best training"

Module 2 Nutrition Applied to High Performance in Sports

Module 3 Mobility: from Theory to Performance

3.1.   Neuromuscular System

3.1.1.   Neurophysiological Principles: Inhibition and Excitability

3.1.1.1. Adaptations of the Nervous System

3.1.1.2. Strategies to Modify Corticospinal Excitability

3.1.1.3. Keys to Neuromuscular Activation

3.1.2.   Somatosensory Information Systems

3.1.2.1. Information Subsystems

3.1.2.3. Types of Reflexes

3.1.2.2.1. Monosynaptic Reflexes

3.1.2.2.2. Polysynaptic Reflexes

3.1.2.2.3 Muscle-Tendinous-Articular Reflexes

3.1.2.3. Responses to Dynamic and Static Stretches

3.2.   Motor Control and Movement

3.2.1.   Stabilizing and Mobilising Systems

3.2.1.1. Local System: Stabilizer System

3.2.1.2. Global System: Mobilizing System

3.2.1.3. Respiratory Pattern

3.2.2.   Movement Pattern

3.2.2.1. Co-Activation

3.2.2.2. Joint by Joint Theory

3.2.2.3. Primary Motion Complexes

3.3.   Understanding Mobility

3.3.1.   Key Concepts and Beliefs in Mobility

3.3.1.1. Manifestations of Mobility in Sport

3.3.1.2. Neurophysiological and Biomechanical Factors Influencing Mobility Development

3.3.1.3. Impact of Mobility on Strength Development

3.3.2.   Objectives of Training Mobility in Sport

3.3.2.1. Mobility in the Training Session

3.3.2.2. Benefits of Mobility Training

3.3.3.   Mobility and Stability by Structures

3.3.3.1. Foot-Ankle Complex

3.3.3.2. Knee-Hip Complex

3.3.3.3. Spine-Shoulder Complex

3.4.   Training Mobility

3.4.1.   Fundamental Block

3.4.1.1. Strategies and Tools to Optimize Mobility

3.4.1.2. Specific Pre-Exercise Scheme

3.4.1.3. Specific Post-Exercise Scheme

3.4.2.   Mobility and Stability in Basic Movements

3.4.2.1. Squat & Dead Lift

3.4.2.2. Acceleration & Multidirection

3.5.   Methods of Recovery

3.5.1.   Proposal for Effectiveness Based on Scientific Evidence

3.6.   Methods for Training Mobility

3.6.1.   Tissue-Centered Methods: Passive Tension and Active Tension Stretching

3.6.2.   Methods Focused on Arthro-Coinematics: Isolated Stretching and Integrated Stretching

3.6.3.   Eccentric Training

A unique, key and decisive training 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.

"
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.

"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.

01 learning from evidence

02 relearning from evidence

03 testing

04 learning from an expert

05 neurocognitive context dependent learning

06 Von-Restorff effect

07 case based learning through storytelling

08 competencies testing (retesting)
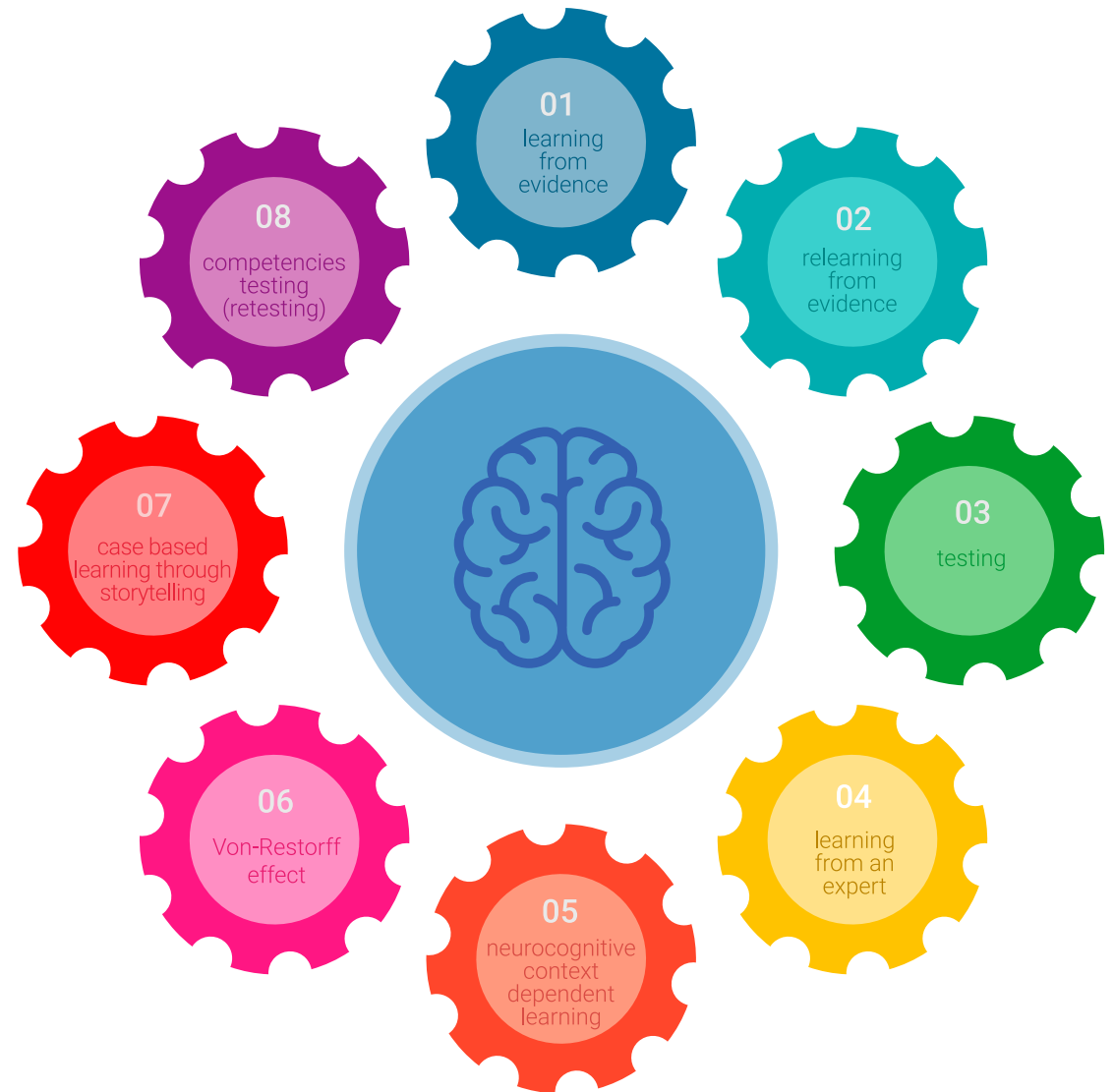
In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically. With this methodology, we have trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, 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.

20%

25%

4%

3%
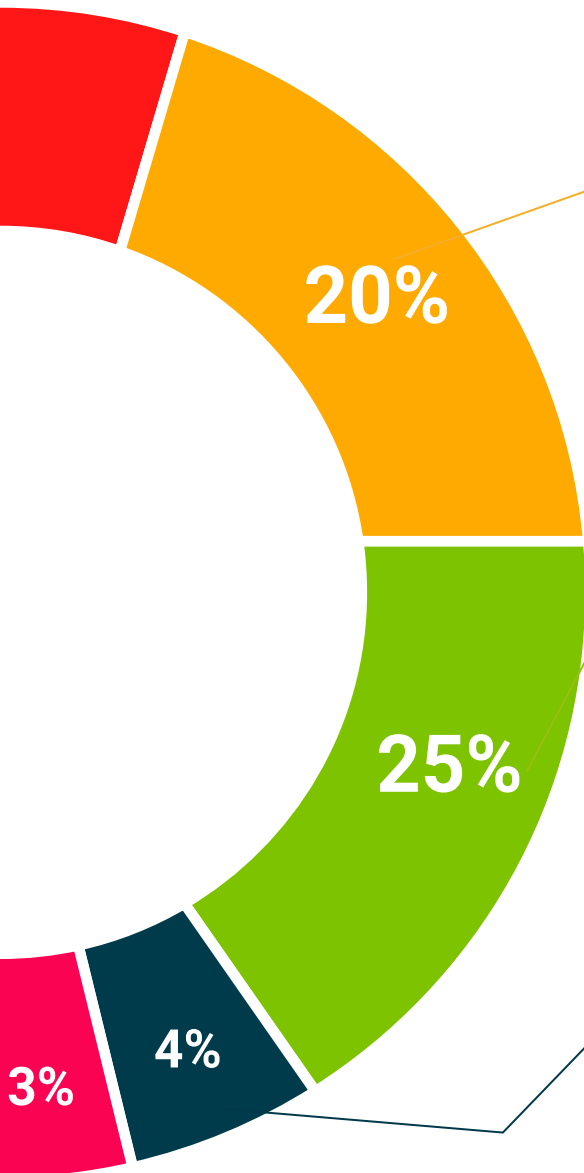
Case Studies

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.

Certificate

This Postgraduate Diploma in High Performance in Sports: Statistics, Nutrition and Mobility Training guarantees you, in addition to the most rigorous and updated training, access to a Postgraduate Diploma issued by TECH Technological University.

Successfully complete this program and receive your university degree without travel or laborious paperwork"

This **Postgraduate Diploma in High Performance in Sports: Statistics, Nutrition and Mobility Training** contains the most complete and updated scientific program 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 professionals career evaluation committees.

Title: **Postgraduate Diploma in High Performance in Sports: Statistics, Nutrition and Mobility Training**

Official Nº of hours: **450 h.**

Endorsed by the NBA

tech technological university

Awards the following
CERTIFICATE
to

Mr./Ms. _____, with identification number _____.
For having passed and accredited the following program

POSTGRADUATE DIPLOMA
in
High Performance in Sports: Statistics, Nutrition and Mobility Training

This is a qualification awarded by this University, equivalent to 450 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country.   Unique TECH Code: AFWORD23S   techtitute.com/certificates

*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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