Postgraduate Diploma

Professional Cyclist Training

Endorsed by the NBA

tech global university

tech global university

Postgraduate Diploma

Professional Cyclist Training

- Modality: **online**
- Duration: **6 months**
- Certificate: **TECH Global University**
- Credits: **24 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Website: www.techtitute.com/us/sports-science/postgraduate-diploma/postgraduate-diploma-professional-cyclist-training

Index

01

Introduction

There is no more important part of an athlete's daily routine than training. In any modality or discipline, an adequate level of workload must be maintained, as well as promoting the areas that can contribute the greatest performance. Cycling is no stranger to this dynamic, since it is the job of the trainers to design a consistent and dynamic work routine to fully exploit the power and capabilities of the cyclist. This degree is the perfect opportunity to delve into this field, taking into account the Power Profile and the special situations that you must face. There are no face-to-face classes or fixed schedules, granting total freedom to assume the teaching load as best suits.

This Postgraduate Diploma will be decisive in your professional career, giving you the keys to Professional Cycling Training at the highest level"

The design of a good training routine is essential in the development and continuous improvement of every cyclist, not only for a matter of continuing to enhance their own technique, but also to maintain their form, correct possible mistakes and adapt to the different situations that later arise. you will find on the track. The architect of this fundamental piece of sports performance is the physical trainer, who must have extensive knowledge of training profiles, the level of intensity to be applied and advanced metrics to measure performance.

Without this knowledge, the trainer finds himself in a helpless situation to plan a training routine at the demanding level demanded by elite cycling. For this reason, TECH has created this Postgraduate Diploma, where experts with extensive experience and professional careers in high-class cycling teams have compiled the essential keys to organize effective and complete training sessions.

Thus, throughout the entire program, the student will immerse themselves in issues such as Cycling Training according to the category, recovery strategies, Power Profileand Power Management Chart, methods to measure strength and handling of special situations such as heat or Jet Lag. All of this with extensive top-quality multimedia material, based on the experience of teachers over the years.

In addition, to favor the maximum possible adaptation of the program to any type of work or personal responsibility, all the didactic material is available for download on the Virtual Campus. From any device with an Internet connection you can access all the content, being able to view and study it at any time you want.

This **Postgraduate Diploma in Professional Cycling Training** 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 Cycling and of high-level sport
- The graphic, schematic and practical contents with which it is designed provide advanced and practical information on those disciplines that are essential for professional practice
- Practical exercises where self-assessment can be used to improve learning
- Its special emphasis on innovative methodologies
- Theoretical lessons, questions for 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

Incorporate the most advanced performance analysis, intensity distribution and recovery planning into your own work methodology"

All the content available on the Virtual Campus is based on the professional experience of elite trainers and former cyclists, giving you a perspective of the most demanding training sessions"

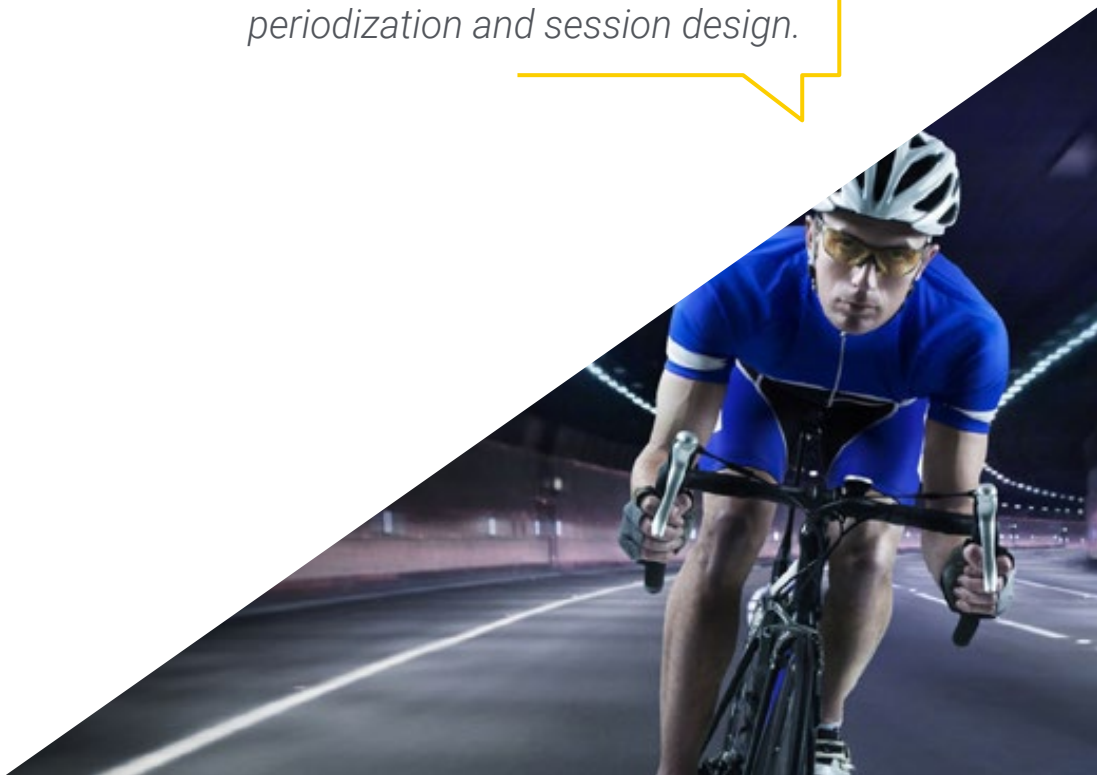
You will be able to decide where, when and how to assume all the teaching load, without having to stick to fixed schedules or face-to-face classes.

Bring outstanding strength to your training plans thanks to the skills you will acquire in periodization and session design.

The program includes a team of professionals in its teaching staff from the sector who pour the experience of their work into this training, as well as recognized specialists from leading societies and prestigious universities.The program includes a team of professionals in its teaching staff from the sector who bring the experience of their work to this program, in addition to recognized specialists from prestigious reference societies and 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 designed to learn in real situations.

The design of this program focuses on Problem-Based Learning, through which the professional must try to solve the different professional practice situations that arise throughout the academic year. To do this, , it will have the help of an innovative interactive video system made by renowned experts.



02

Objectives

The outstanding objective of this Postgraduate Diploma is to increase the skills of the trainer in the specific area of Professional Cycling Training. For this reason, a special paragraph is made in the practical experience of the teachers, because in this way the student will be able to contextualize all the methodologies and techniques acquired based on the most demanding cycling sports field.

Take your training planning and management skills to a new level thanks to the exhaustiveness with which the entire agenda has been carried out"

General Objectives

- Understand the performance factors of sport and, therefore, learn to assess the specific needs of each athlete
- Being able to plan, periodize and develop training programs for cyclists, in short, train students to practice the profession of coach
- Acquire specific knowledge related to the biomechanics of cycling
- Understand the operation of the new applications used in the quantification of loads and training prescription
- Understand the benefits of strength training and be able to apply them to concurrent training
- Acquire a specialization in cycling-oriented nutrition
- Understand the functioning of the cycling structures, as well as the modalities and categories of the competitions

Lead the most demanding Cycling Training sessions thanks to your distinctive determination and organizational skills"

Specific Objectives

Module 1. Cycling Training Planning and Scheduling

- Know and apply different Education methods
- Learn to distribute volumes and intensities, in short, periodize
- Being able to design training sessions
- Study the training loads from lower categories, amateur, professional and master

Module 2. Cycling training for power

- Acquire knowledge about power training
- Address the different metrics necessary to prescribe and quantify through potency
- Learn about performance modeling

Module 3. Strength training in the cyclist

- Understand the concept of Velocity Based Training and its relationship with the character of the effort
- Address the different devices on the market to work based on VBT
- Study the benefits of concurrent training

Module 4. Special situations of Cycling Training

- Learn to differentiate different adverse situations that affect performance
- Develop and apply strategies to optimize performance in adverse situations

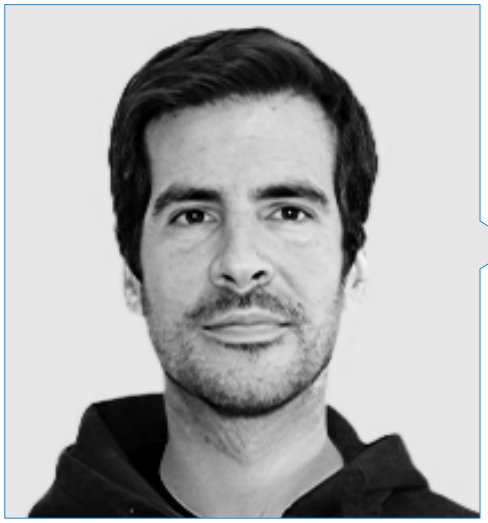
03

Course Management

All the teachers chosen by TECH for the creation of this Postgraduate Diploma a wide experience in the the highest level. In this way, all their contributions, keys and techniques are focused on the most competitive cyclists , giving the trainer a scientific and practical approach with which to improve his own planning and organization of training sessions in a distinctive way.

You will have at your disposal the best advice and work methodology available, put to the test in cycling competitions most prestigious"

Management



Dr. Sola, Javier

- CEO of Training4ll
- WT UAE team coach
- Head of Performance Massi Tactic UCI Womens Team
- Specialist in the biomechanical area of Jumbo Visma UCI WT
- WKO adviser to World Tour cycling teams
- Trainer at Coaches4coaches
- Associate Professor at Loyola University
- Bachelor of Science in Physical Activity and Sport from the University of Seville
- Postgraduate in High Performance of Cyclic Sports from the University of Murcia
- Sports Director Level III
- Numerous Olympic medals and medals at European Championships, World Cups and National Championships

Professors

Dr. Artetxe Gezuraga, Xabier

- Head of Performance of the WT Ineos Grenadier team
- Professor and director of events of the company Fundación Ciclista Euskadi
- Coach of the WT Movistar, SKY and Ineos Grenadier team
- Sports director and coach of Seguros Bilbao, Caja Rural, Euskaltel Development Team
- Coach of winners of Grand Tours, World Championships, Olympic medals and national championships
- Trainer at Coaches4coaches
- High Performance Master in Biomedicine
- Certificate World Tour Level Sports Director (UCI Sports Director)
- Sports Director Level III

D. Celdrán, Raúl

- CEO of Natur Training System
- Burgos BH ProConti Team Nutrition Manager
- Performance Manager of the professional MTB Klimatiza Team
- Trainer at Coaches4coaches
- Degree in Pharmacy from the University of Alcalá
- Master in Nutrition, Obesity and High Performance in Cyclic Sports from the University of Navarra

Dr. Moreno Morillo, Aner

- Performance Manager of the Kuwait National Cycling Team
- Assistant of the Euskaltel-Euskadi ProConti Team
- Graduated in Physical Activity and Sports Sciences from the Isabel I University
- Master's degree in CAFD research from the European University
- Master in High Performance of Cyclic Sports from the University of Murcia
- Sports Director National Level III

D. Heijboer, Mathieu

- WT Jumbo-Visma Team Performance Manager
- High level cycling coach pro cyclist
- Former Professional Cyclist
- CAFD Graduate

D.r Iriberri, Jon

- CEO of Custom4us
- Head of Biomechanics of the WT Jumbo Visma team
- Head of Biomechanics at Movistar Team
- Professor at the UCI World Center
- Bachelor of Science in Physical Activity and Sports from the University of the Basque Country
- Master in High Performance from the Colorado State University, in the USA

04

Structure and Content

Given the high level of study load that a degree of these characteristics can entail, TECH has developed all the didactic material based on the Relearning. pedagogical methodology. This implies that teaching is completely progressive and natural, without requiring the student to invest excessive study hours. Thus, you will perfect your own training technique throughout the entire program, being able to incorporate the acquired skills into your own work even before finishing.

Take advantage of all the high-quality multimedia material that you will find on the Virtual Campus, including interactive summaries and detailed videos created by the teachers themselves"

Module 1. Planning and programming of Cycling Training

1.1. Cyclist Training Methods
- 1.1.1. Continuous (Uniform and Variable)
- 1.1.2. Interval Fractionator
- 1.1.3. Split: Reps

1.2. Fashion Distribution
- 1.2.1 Forms of Distribution
- 1.2.2. Pyramidal
- 1.2.3. Polarization

1.3. Periodization
- 1.3.1. Traditional
- 1.3.2. By Blocks
- 1.3.3. Inverse

1.4. Recovery Strategies
- 1.4.1. Activate
- 1.4.2. Passive
- 1.4.3. Recovery Media

1.5. Design of Training Sessions for Cyclist
- 1.5.1. Heating
- 1.5.2. Main Partt
- 1.5.3. The Return to Calmness

1.6. Development of the Capabilities
- 1.6.1. VT1 Improvements
- 1.6.2. VT2 Improvements
- 1.6.3. VT2 Max Improvements
- 1.6.4. Improvement of PMax and Anaerobic Capacity

1.7. Development of Long-Term cyclist
- 1.7.1. Learning How to Train
- 1.7.2. Learning to Compete
- 1.7.3. Training to Compete

1.8. Master Cyclist Training
- 1.8.1. Competitive Demands of Master's Degrees
- 1.8.2. Competitive Calendar
- 1.8.3. Load Distribution

1.9. Under -23 Cyclist Training
- 1.9.1. Competitive Demands
- 1.9.2. Competitive Calendar
- 1.9.3. Load Distribution

1.10. Professional Cyclist Training
- 1.10.1. Competitive Demands
- 1.10.2. Competitive Calendar
- 1.10.3. Load Distribution

Module 2. Cycling Training for Power

2.1. What is Power?
- 2.1.1. Definition
- 2.1.2. What is a W?
- 2.1.3. What is a Jule?

2.2. Power Measurements
- 2.2.1. Meter Operation
- 2.2.2. Types
- 2.2.3. Dual
- 2.2.4. Pseudodual

2.3. What is FTP?
- 2.3.1. Definition
- 2.3.2. Estimation Methods
- 2.3.3. Application to Training

2.4. Determination of Strengths
- 2.4.1. Competition Analysis
- 2.4.2. Data Analysis

2.5. Power Profile
- 2.5.1. Classic Power Profile
- 2.5.2. Advanced Power Profile
- 2.5.3. Power Profile Test

2.6. Performance Monitoring
- 2.6.1. What is Performance?
- 2.6.2. MMP Monitoring
- 2.6.3. Monitoring of Physiological Parameters

2.7. Power Management Chart (PMC)
- 2.7.1. External Load Monitoring
- 2.7.2. Internal Load Monitoring
- 2.7.3. Integration of all Systems

2.8. Metrics
- 2.8.1. CP
- 2.8.2. FRC/W'
- 2.8.3. PMax
- 2.8.4. Stamina/Durability

2.9. Fatigue Resistance
- 2.9.1. Definition
- 2.9.2. Based in kJ
- 2.9.3. Based in kJ/kg

2.10. Pacing
- 2.10.1. Definition
- 2.10.2. Normative Values for Time Trials
- 2.10.3. Estimation Software

Module 3. Cyclist Strength Training

3.1. Introduction to Strength
- 3.1.1. Definition
- 3.1.2. Concepts Related to Strength Expressions
- 3.1.3. Strength and Cyclism

3.2. Benefits of Cyclist Strength Training
- 3.2.1. Molecular and Physiological Adaptation
- 3.2.2. Neural Adaptations
- 3.2.3. Efficiency Improvement
- 3.2.4. Improvement of Body Composition

3.3. Strength Measurement Methods
- 3.3.1. Lineal Measurement Systems
- 3.3.2. Dynamometer
- 3.3.3. Strength and Contact Platforms
- 3.3.4. Optical Platforms and Apps

3.4. Limitations
- 3.4.1. Concept of RM
- 3.4.2. Concept of NRM
- 3.4.3. Effort Character Concept

3.5. Speed of Execution
- 3.5.1. CE Defined by Speed of Execution
- 3.5.2. Isoinertial Force Evaluation
- 3.5.3. Strength- / Speed-/ Power Curves

3.6. Planning and Programming of Strength Training
- 3.6.1. Strength Programming
- 3.6.2. Exercise Programming
- 3.6.3. Session Programming

3.7. Strength Training on the Bike
- 3.7.1. Speeding Up
- 3.7.2. Sprints
- 3.7.3. Neruomuscular Work
- 3.7.4. Is Torque Work Equal to Strength Training?

3.8. Concurrent Cyclist Training
- 3.8.1. Definition
- 3.8.2. Strategies to Maximize Adaptations
- 3.8.3. Advantages and Disadvantages

3.9. Recommended Exercises
- 3.9.1. Generalities
- 3.9.2. Specific
- 3.9.3. Session Example

3.10. CoreTraining
- 3.10.1. Definition
- 3.10.2. Benefits
- 3.10.3. Mobility Exercises
- 3.10.4. Types of Exercise

Module 4. Special situations of Cycling Training

4.1. Heat
- 4.1.1. Heat Performance
- 4.1.2. Responses to Training and Adaptation Protocols
- 4.1.3. Moist Heat vs. Dry Heat
- 4.1.4. Strategies to Foster Benefits

4.2. Altitude
- 4.2.1. Performance and Altitude
- 4.2.2. Responders and no responders
- 4.2.3. Benefits of Altitude

4.3. Train High-Live Low
- 4.3.1. Definition
- 4.3.2. Advantages
- 4.3.3. Inconveniences

4.4. Live High-Train Low
- 4.4.1. Definition
- 4.4.2. Advantages
- 4.4.3. Inconveniences

4.5. Live High-Compete High
- 4.5.1. Definition
- 4.5.2. Advantages
- 4.5.3. Inconveniences

4.6. Hypoxia
- 4.6.1. Definition
- 4.6.2. Advantages
- 4.6.3. Inconveniences

4.7. Intermittent Hypoxia
- 4.7.1. Definition
- 4.7.2. Advantages
- 4.7.3. Inconveniences

4.8. Atmospheric Pollutants
- 4.8.1. Plollution and Performance
- 4.8.2. Adaptation Strategies
- 4.8.3. Training Inconveniences

4.9. Jet Lag and performance
- 4.9.1. Jet Lag and performance
- 4.9.2. Adaptation Strategies
- 4.9.3. Supplementation

4.10. Adaptability to Nutritional Changes
- 4.10.1. Definition
- 4.10.2. Performance Loss
- 4.10.3. Supplementation

You will be able to continue investigating and delving into the topics that generate the most interest through the multiple complementary readings provided"

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.

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

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

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

Relearning Methodology

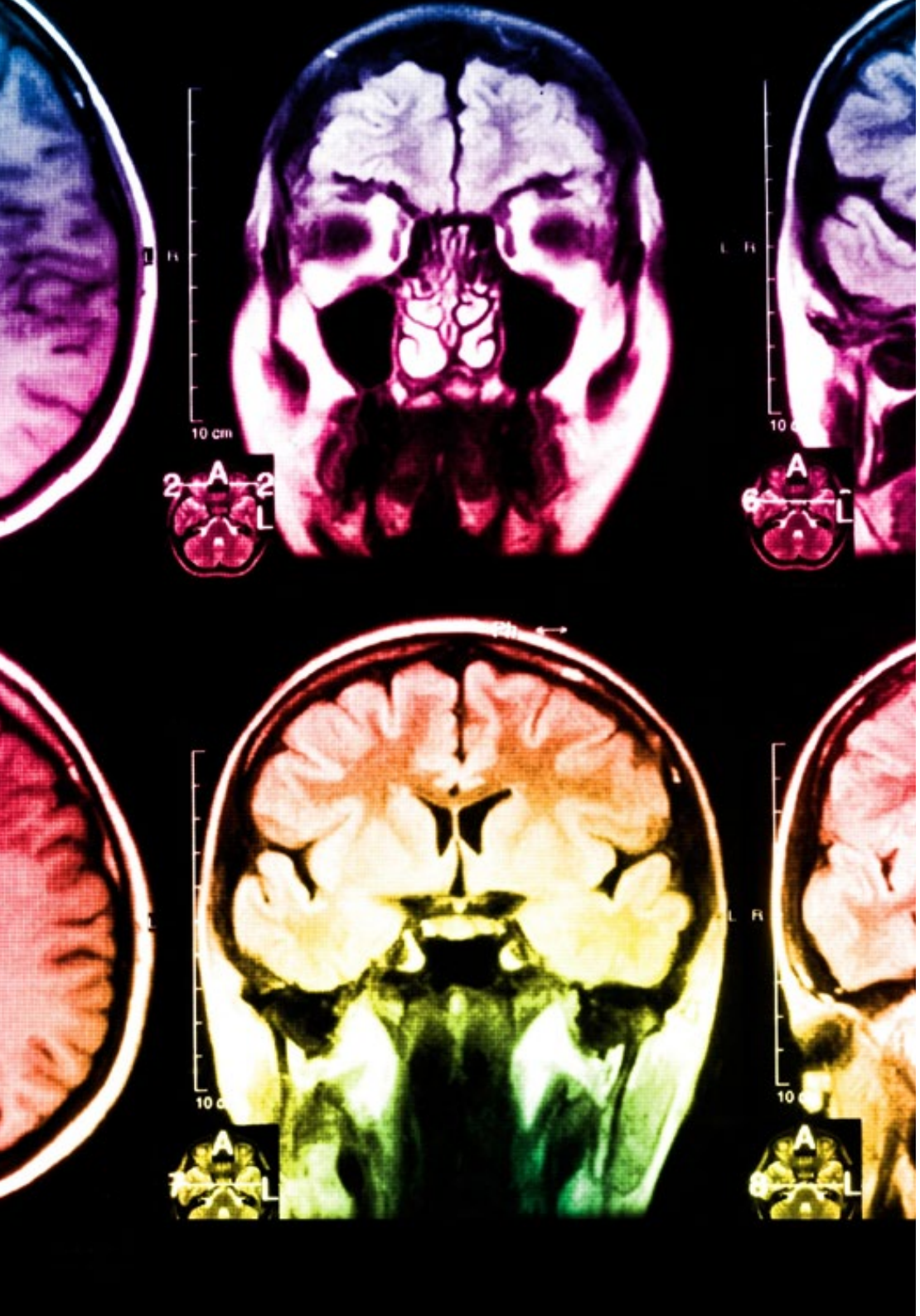
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

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

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

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

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



In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically. With this methodology, we have trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, markets, and financial instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

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

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

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

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

Study Material

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

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

Classes

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

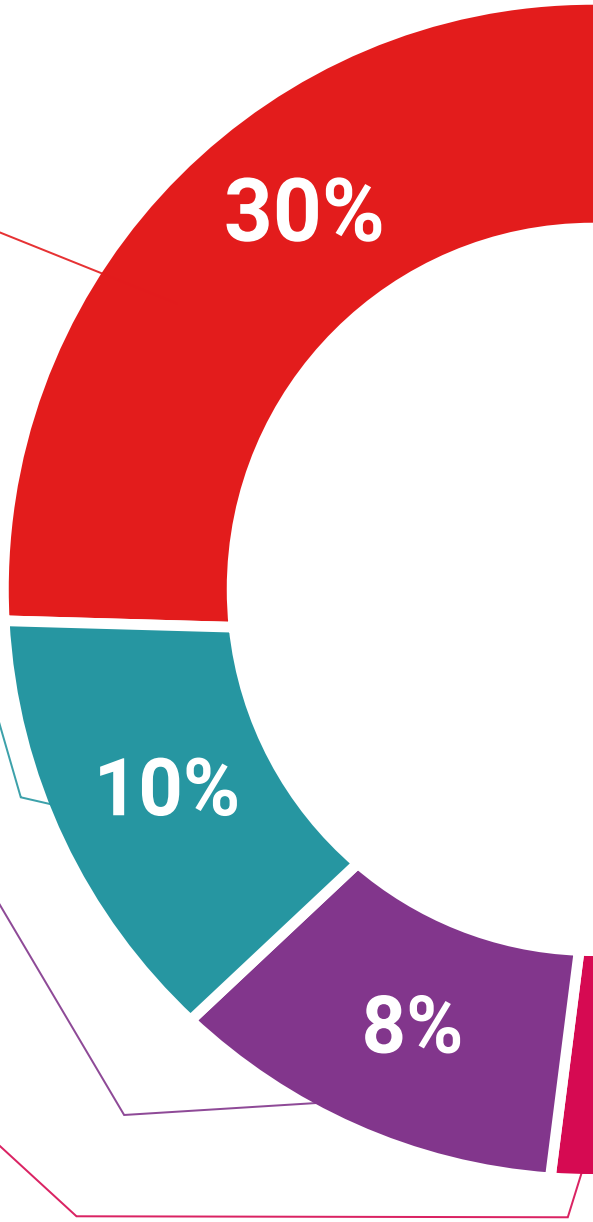
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

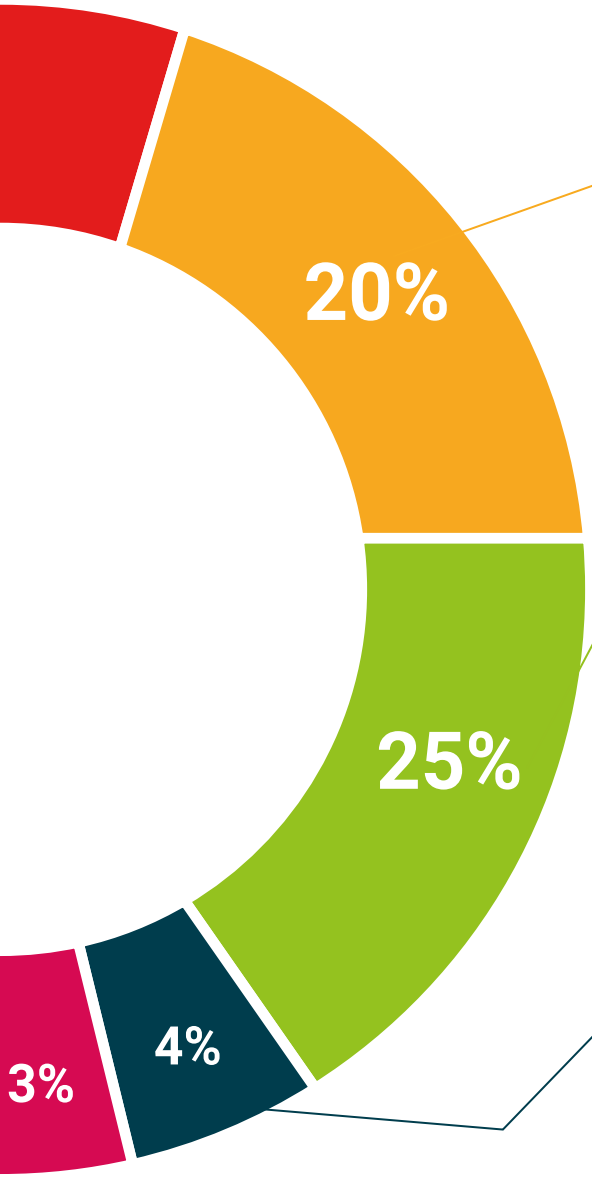
Practising Skills and Abilities

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

Additional Reading

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





Case Studies

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

Interactive Summaries

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

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

Testing & Retesting

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

06

Certificate

The Postgraduate Diploma in Professional Professional Cyclist Training guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Global University.

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

This program will allow you to obtain your **Postgraduate Diploma in Professional Cyclist Training** endorsed by **TECH Global University**, the world's largest online university.

TECH Global University is an official European University publicly recognized by the Government of Andorra (***official bulletin***). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Professional Cyclist Training**

Modality: **online**

Duration: **6 months**

Accreditation: **24 ECTS**


tech global university

Mr./Ms. _____, with identification document _____
has successfully passed and obtained the title of:

Postgraduate Diploma in Professional Cyclist Training

This is a program of 600 hours of duration equivalent to 24 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Rector

The Official Online University of the NBA

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 diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.

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