



## Postgraduate Certificate

## Power Cycling Training

» Modality: online

» Duration: 6 weeks

» Certificate: TECH Technological University

» Dedication: 16h/week

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/sports-science/postgraduate-certificate/power-cycling-training

# Index

> 06 Certificate

> > p. 28





## tech 06 | Introduction

Although there are still some old school cyclists who prefer to use their own sensations as a reference, there is no doubt that power training has gained a lot of importance, being one of the keys to the winners of the great cycling events. With the potentiometer installed on the bike, the athlete will be guided by individual thresholds.

In fact, the Functional Power Threshold (FTP) is positioned as the reference value par excellence

However, it is clear that it is one thing to install the potentiometer on the bike and quite another to work properly with it. This is the reason for this Diploma, which is a valuable opportunity for cyclists to update their training by watts with all the guarantees and, thus, increase their performance.

Thus, sports professionals will analyze in detail the operation of the power meter, determining its different types. They will then go on to establish methods of estimating the Functional Power Threshold and examine its application to training. Focusing also on power profiling or performance monitoring, students will develop in line with the latest advances in this field.

To benefit from this extensive specialization, all they will need is an Internet connection. This will become the passport to a large digital library of interactive lessons and resources on the field which will be of enormous value to you in your sporting activity.

This **Posgraduate Certificate in Power Cycling Training** contains the most complete and up-to-date scientific program on the market. The most important features include:

- The development of practical cases presented by rendering experts
- The graphic, schematic and practical contents of the program provide Sports 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 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



If you wanted to analyze the operation of power meters and their different types, this is the perfect qualification"

## Introduction | 07 tech



Thanks to this Diploma you will have all the keys to monitor your performance, examining the monitoring of physiological parameters or MMP monitoring"

The program's teaching staff includes professionals from the sector who contribute their work experience to this educational program, as well as renowned 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, by means of which the professional must try to solve the different professional practice situations that are presented throughout the academic course. This will be done with the help of an innovative system of interactive videos made by renowned experts.

You will cover all the essential metrics in this area, such as FRC, Pmax or CP.

This is a comprehensive diploma course that will take you deep into the estimation software.





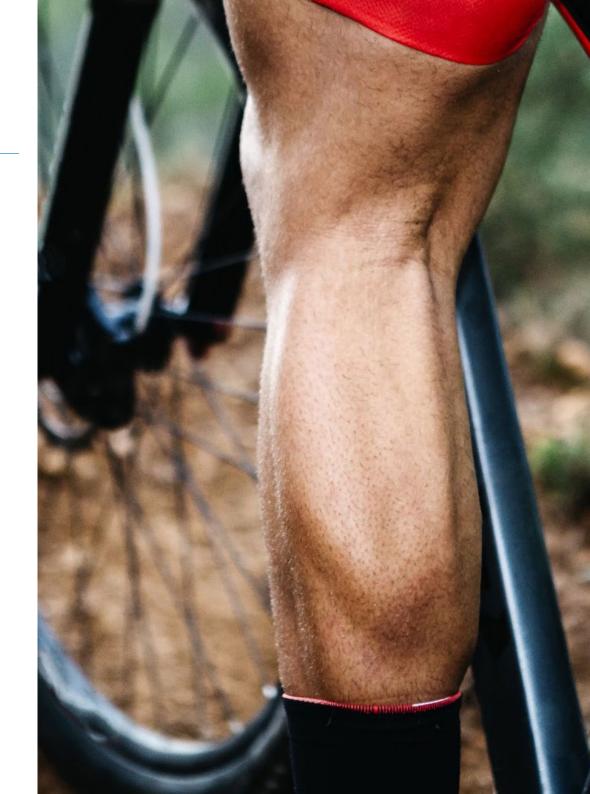


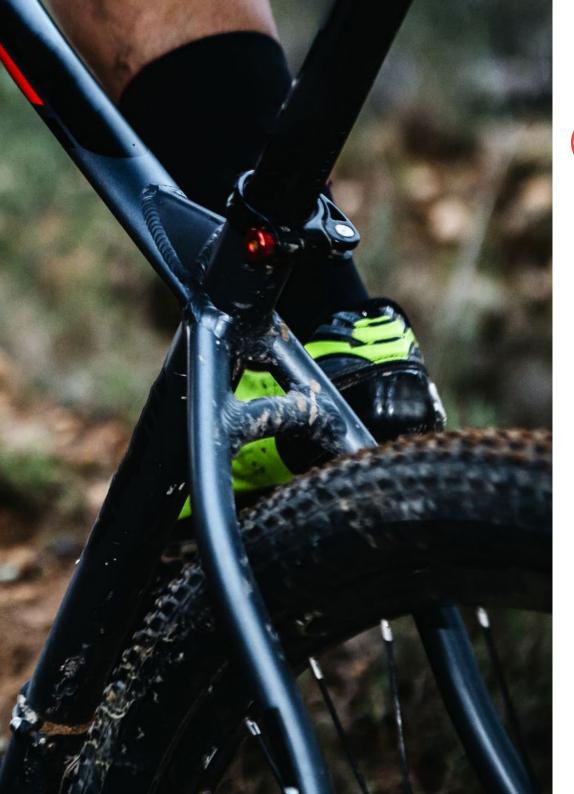
## tech 10 | Objectives



## **General Objectives**

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







## **Specific Objectives**

- To acquire knowledge about power training
- Address the different metrics needed to prescribe and quantify through power
- Learn about performance modeling



Your sports goals will be much closer thanks to the advances in your training that you will apply with this program"





## tech 14 | Course Management

#### Management



#### Mr. Sola, Javier

- CEO of Training4ll
- Coach of the WT UAE team
- Head of Performance Massi Tactic UCI Women's Team
- Biomechanics Area Specialist for Jumbo Visma UCI UCI WT
- WKO advisor for World Tour cycling teams
- Trainer at Coaches 4 Coaches
- Associate Professor at Loyola University
- Graduate in Physical Activity and Sport Sciences from the University of Seville
- Postgraduate Certificate in High Performance Cycling Sports from the Murcia University.
- Level III Sports Director
- Numerous Olympic medals and medals in European Championships, World Cups and National Championships

#### **Professors**

#### Mr. Moreno Morillo, Aner

- Kuwait National Cycling Team Performance Manager
- Assistant of Euskaltel-Euskadi ProConti Team
- National Sports Director Level III
- Graduate in Physical Activity and Sport Sciences from the Isabel I University.
- Master's Degree in CAFD Research from the European University.
- Master's Degree in High Performance Cycling Sports from the Murcia University.

#### Mr. Heijboer, Mathieu

- Performance manager of the WT Jumbo-Visma team.
- Coach of high level cyclists
- Former professional cyclist
- Degree in Physical Activity and Sport Sciences (CAFD)







## tech 18 | Structure and Content

#### Module 1. Power Cycling Training

- 1.1. What is power?
  - 1.1.1. Definition
  - 1.1.2. What is a W
  - 1.1.3. What is a Joule
- 1.2. Power meters
  - 1.2.1. Meter operation
  - 1.2.2. Types
  - 1.2.3. Dual
  - 1.2.4. Psuedodual
- 1.3. What is FTP?
  - 1.3.1. Definition
  - 1.3.2. Estimation Methods
  - 1.3.3. Application to training
- 1.4. Determination of strengths
  - 1.4.1. Regression Analysis
  - 1.4.2. Data Analysis
- 1.5. Power profile
  - 1.5.1. Classical power profile
  - 1.5.2. Advanced power profile
  - 1.5.3. Power profile test
- 1.6. Performance Monitoring
  - 1.6.1. What is performance?
  - 1.6.2. MMP monitoring
  - 1.6.3. Monitoring of physiological parameters
- 1.7. Power Management Chart (PMC)
  - 1.7.1. External load monitoring
  - 1.7.2. Internal load monitoring
  - 1.7.3. Integration of all systems





## Structure and Content | 19 tech

- 1.8. Metrics
  - 1.8.1. CP
  - 1.8.2. FRC/w'
  - 1.8.3. Pmax
  - 1.8.4. Stamina/Durability
- 1.9. Fatigue resistance
  - 1.9.1. Definition
  - 1.9.2. Based on KJ
  - 1.9.3. Based on KJ/kg
- 1.10. Pacing
  - 1.10.1. Definition
  - 1.10.2. Normative values for time trials
  - 1.10.3. Estimation software



A program whose syllabus will make you stand out thanks to the most updated knowledge on the power cycling training market. Access it with your tablet or PC!"





## tech 22 | Methodology

#### 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.



### Methodology | 25 tech

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.



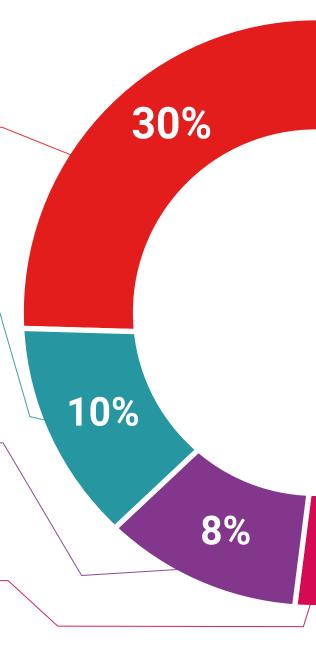
#### **Practising Skills and Abilities**

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.

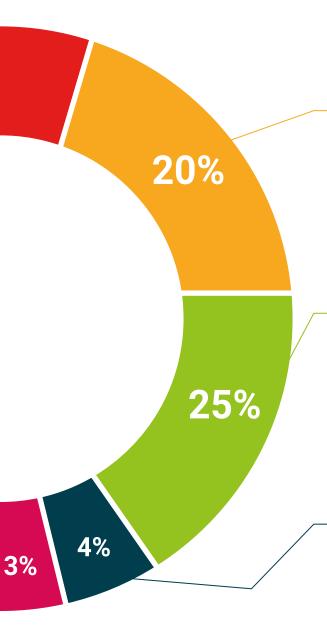


#### **Additional Reading**

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.



## Methodology | 27 tech



#### **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**

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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.





## tech 30 | Certificate

This **Postgraduate Certificate in Power Cycling Training** 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 Certificate** issued by TECH Technological University via tracked delivery\*.

The diploma 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 Power Cycling Training

Official No of Hours: 150 h.

#### Endorsed by the NBA





<sup>\*</sup>Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

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health information tutors
education information teaching
guarantee accreditation teaching
institutions technology learning



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