



# Strength Training

Prescription and Planning

» Modality: online

» Duration: 6 weeks

» Certificate: TECH Global University

» Credits: 6 ECTS

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/sports-science/postgraduate-certificate/strength-training-prescription-planning

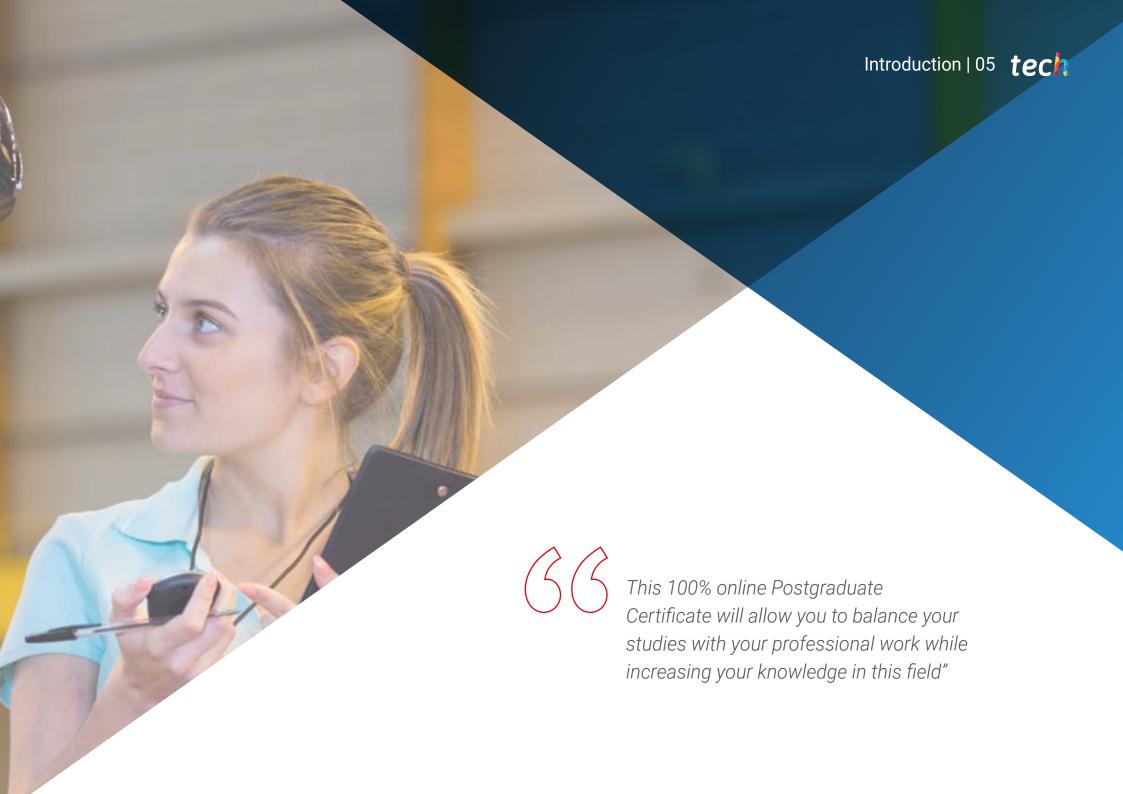
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# tech 06 | Introduction

The periodization strategy consists of a non-linear and adequate variation of the variables that determine the training load (volume, intensity, density, duration and frequency), in order to reach the highest possible level of performance in a given moment or space of time, minimizing the risk of fatigue or exhaustion. This procedure makes it possible to organize the entire training program into various structural units ranging from fundamental daily sessions or units, to microcycles, mesocycles, macrocycles and four-year or Olympic or multi-annual cycles.

This Postgraduate Certificate addresses the vital importance of strength in human performance in all its possible expressions with a unique level of theoretical and practical depth different from what has been seen so far.

The faculty of this Postgraduate Certificate in Strength Training Prescription and Planning has made a careful selection of each of the topics of this qualification to offer the student an educational opportunity as complete as possible and always linked to current events.

As such, TECH Technological University has set out to create contents of the highest teaching and educational quality that will turn students into successful professionals, following the highest quality standards in teaching at an international level. Therefore, we is shown students this program with a rich content that help you reach the elite of physical training. 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 Prescription and Planning** 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 decision making
- Special emphasis on innovative methodologies in personal training
- 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 this
Postgraduate Certificate of high
scientific rigor and improve your
skills in strength training for highperformance sports"



This Postgraduate Certificate 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 certificate from the world's largest online university: TECH Global 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.

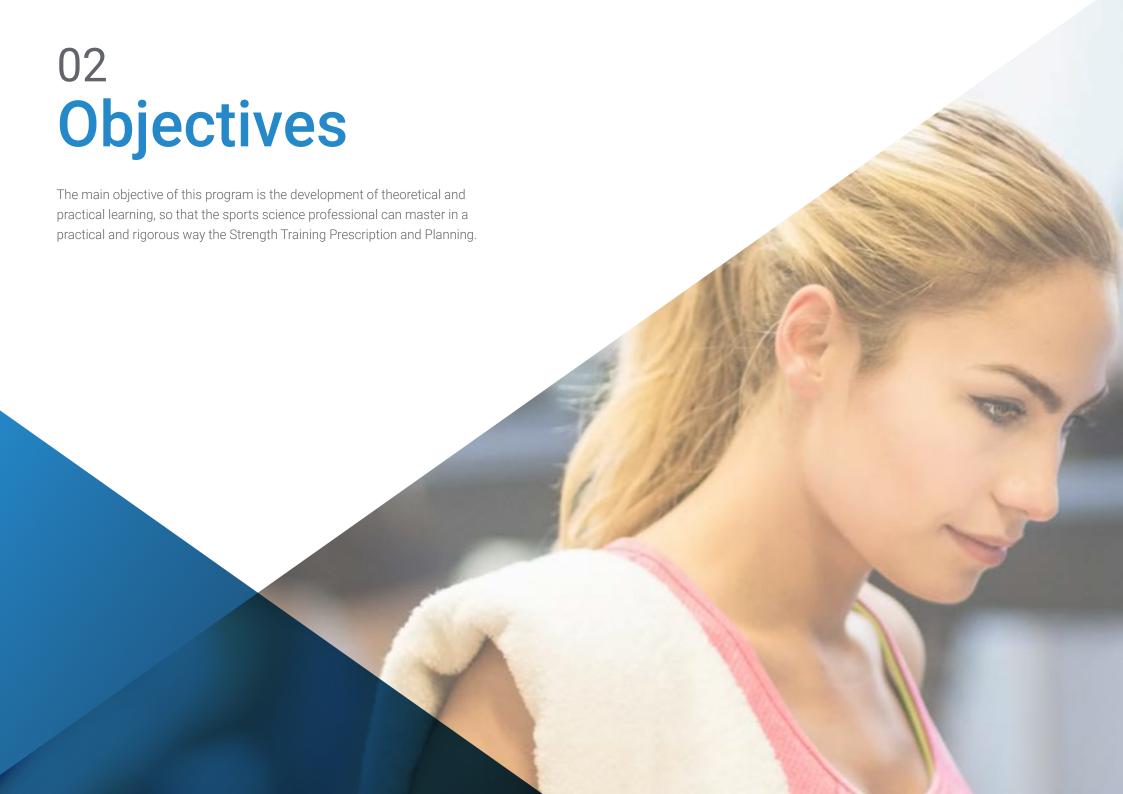
The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive education programmed to learn in real situations.

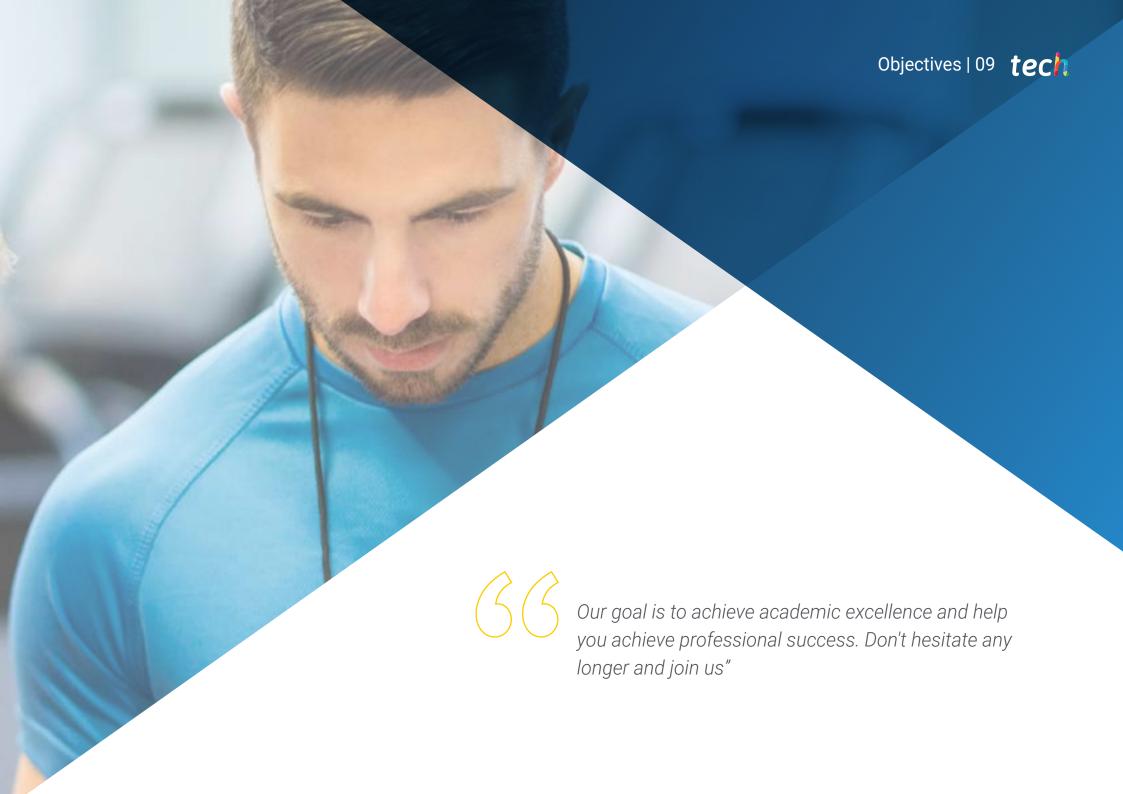
This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the program. For this, the professional will be assisted by an innovative interactive video system created by recognized experts in Strength Training Prescription and Planning and with great experience.

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

Increase your knowledge in Strength Training Prescription and Planning with this high-level training Postgraduate Certificate.





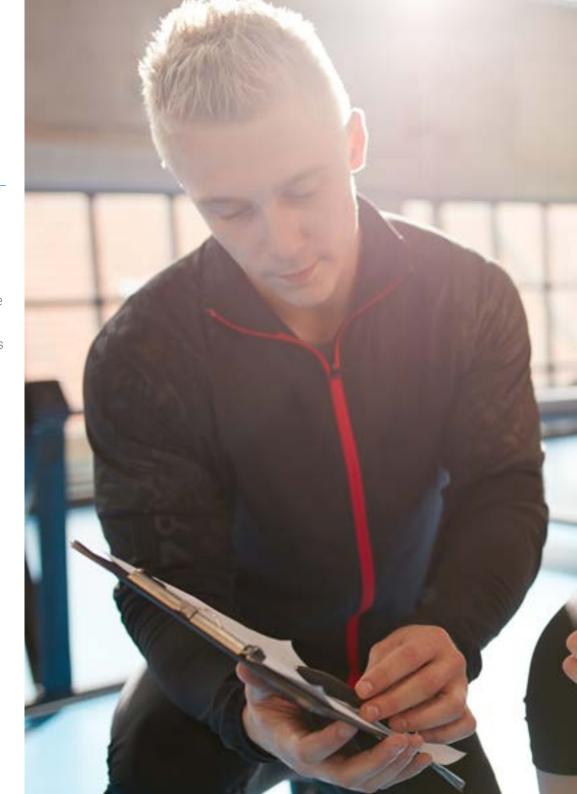


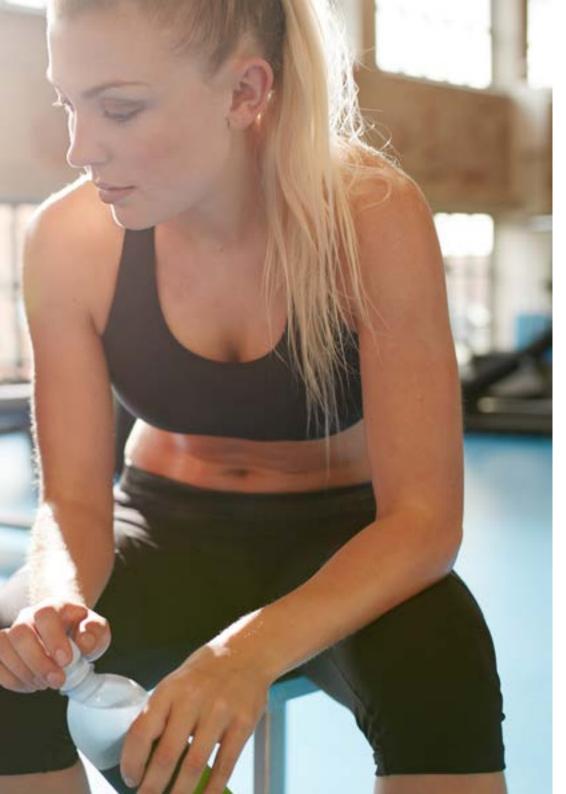
# tech 10 | Objectives



### **General Objectives**

- 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 educational 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 and biochemistry
- Deepen in the principles governing 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**

- Specialize and interpret the key aspects of strength training
- In-depth knowledge of the different components of the load
- Delve into key aspects of planning, periodization and load monitoring
- Gain in-depth knowledge of the different session set-up schemes
- Manage the most common prescribing, monitoring and adjustment models



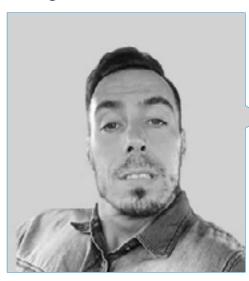
The sports field requires prepared professionals and we give you the keys to position yourself among the professional elite"





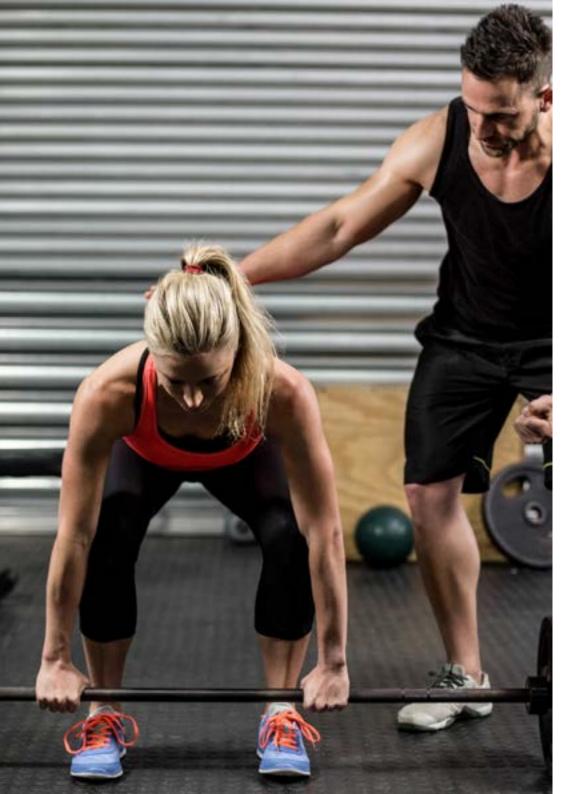
# tech 14 | Course Management

#### Management



#### Dr. Rubina, Dardo

- CEO of Test and Training
- Physical Trainer at Moratalaz Sports School.
- Teacher of Physical Education in Football and Anatomy. CENAFE Schools Carlet
- Coordinator of Physical Preparation in Field Hockey. Club Gimnasia y Esgrima de Buenos Aires
- Doctorate in High Performance Sports
- Postgraduate Certificate in Advanced Research Studies (DEA), University of Castilla la Mancha
- Master's Degree in High Performance Sports by the Autonomous University of Madrid
- Postgraduate in Physical Activity in Populations with Pathologies by the University of Barcelona
- Competitive Bodybuilding Technician. Extremadura Federation of Bodybuilding and Fitness
- Expert in Sports Scouting and Quantification of Training Load (specialization in Soccer), Sports Sciences. University of Melilla
- Expert in Advanced Weight Training by IFBB
- Expert in Advanced Nutrition by IFBB
- Specialist in Physiological Assessment and Interpretation of Physical Fitness by Bio
- Certification in Technologies for Weight Control and Physical Performance. Arizona State University



#### **Professors**

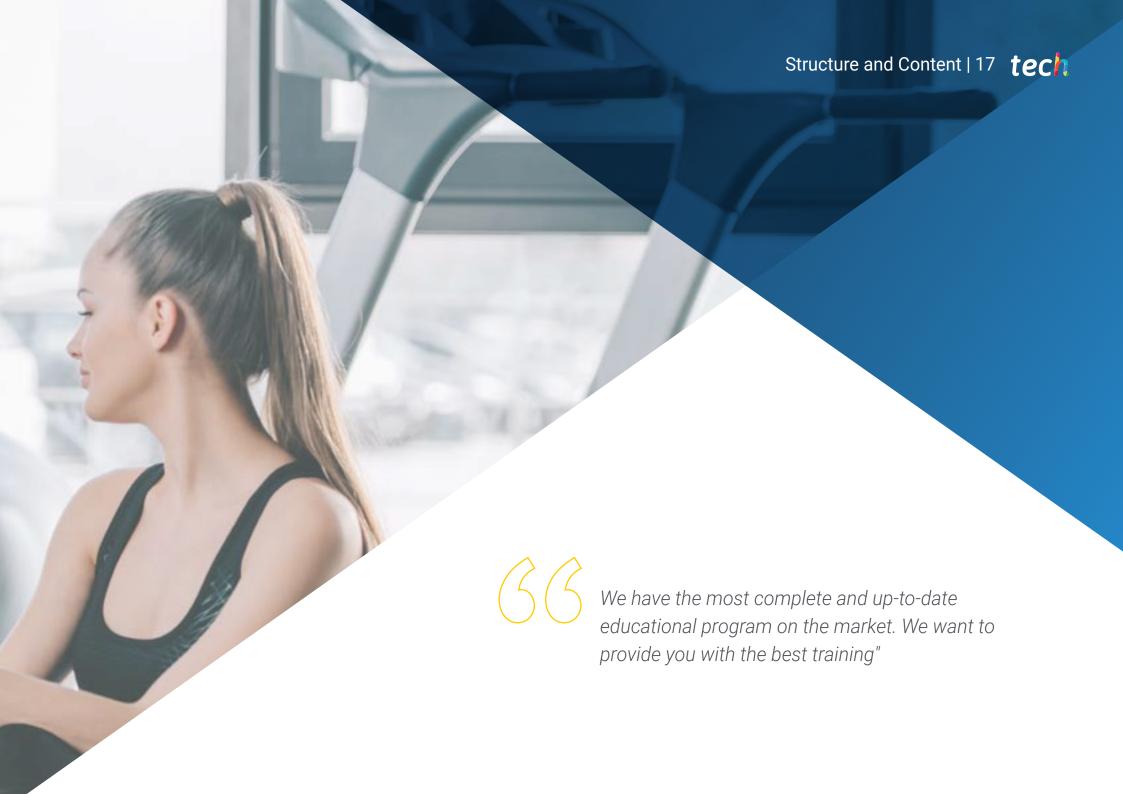
#### Mr. Carbone, Leandro

- CEO of LIFT, a training and coaching company
- Head of the Department of Sports Evaluations and Exercise Physiology WellMets Institute of Sports and Medicine in Chile
- CEO/ Manager at Complex I
- University Professor
- External Consultant for Speed4lift, a leading company in sports technology
- Bachelor's Degree in Physical Activity from the University of Salvador
- Specialist in Exercise Physiology from the National University of La Plata
- MCs. Strength and Conditioning at Greenwich University, UK.

#### Mr. Garzon Duarte, Mateo

- Independent physical trainer
- Assistant and substitute teacher of Biochemistry and Training at Universidad del Salvador
- Physical trainer and coordinator at SportsLab, a high performance sports center specialized in tennis
- MGD -Customized Training. S&C Coach
- Bachelor's Degree in Physical Activity and Sport from the Universidad del Salvador
- Certified Strength and Condit Specialist by CSCS, CSCS
- Professional Massage Therapist by the Centro Médico Escuelaioning





# tech 18 | Structure and Content

#### Module 1. Strength Training Prescription and Planning

- 1.1. Introduction and Definition of Concepts
  - 1.1.1. General Concepts
    - 1.1.1.1. Planning, Periodization, Prescription
    - 1.1.1.2. Qualities, Methods, Objectives
    - 1.1.1.3. Complexity, Risk and Uncertainty
    - 1.1.1.4. Complementary Pairs
- 1.2. Exercises
  - 1.2.1. General vs Specific
  - 1.2.2. Simple vs Complex
  - 1.2.3. Thrust vs Ballistic
  - 1.2.4. Kinetics and Kinematics
  - 1.2.5. Basic Patterns
  - 1.2.6. Order, Emphasis, Importance
- 1.3. Programming Variables
  - 1.3.1. Intensity
  - 1.3.2. Effort
  - 1.3.3. Intension
  - 1.3.4. Volume
  - 1.3.5. Density
  - 1.3.6. Weight
  - 1.3.7. Dose
- 1.4. Periodization Structure
  - 1.4.1. Microcycle
  - 1.4.2. Mesocycle
  - 1.4.3. Macrocycle
  - 1.4.4. Olympic Cycles
- 1.5. Structure of the Sessions
  - 1.5.1. Hemispheres
  - 1.5.2. Entries
  - 1.5.3. Weider
  - 1.5.4. Patterns
  - 1.5.5. Muscle

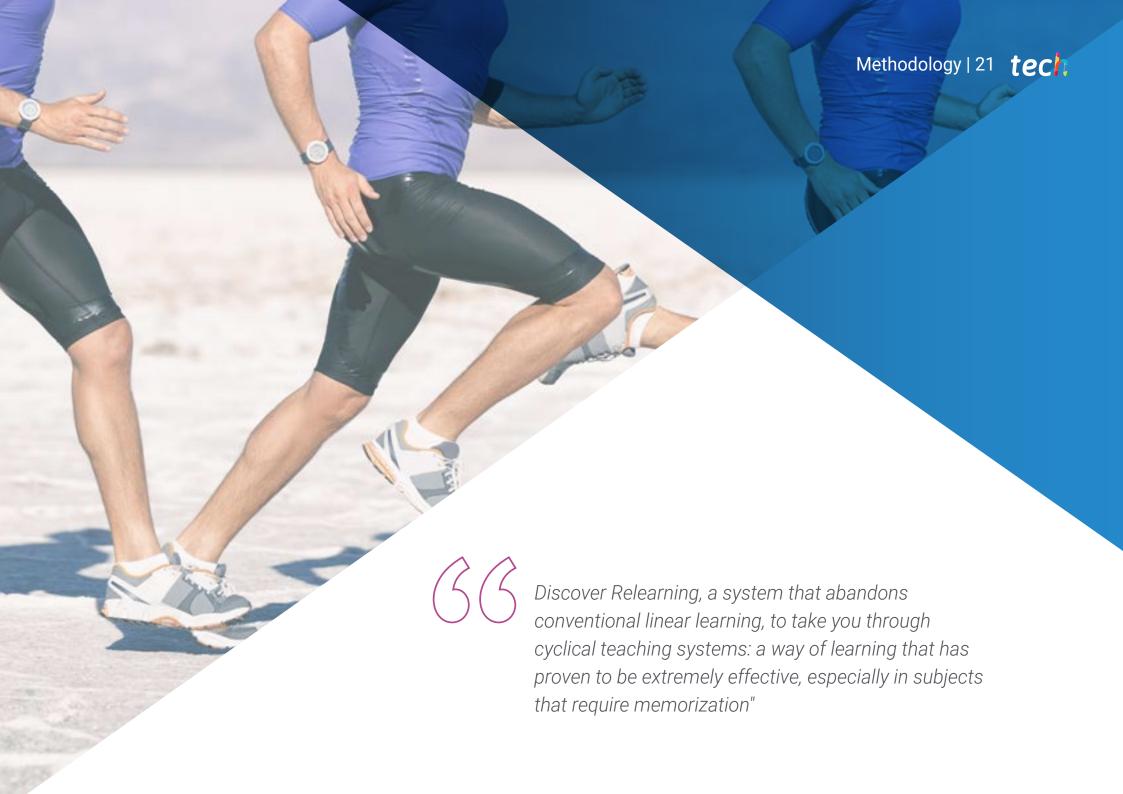


- 1.6. Prescription
  - 1.6.1. Load-Effort Tables
  - 1.6.2. Based on %
  - 1.6.3. Based on Subjective Variables
  - 1.6.4. Based on Speed (VBT)
  - 1.6.5. Others
- 1.7. Prediction and Monitoring
  - 1.7.1. Speed-Based Training
  - 1.7.2. Areas of Repetition
  - 1.7.3. Load Areas
  - 1.7.4. Time and Reps
- 1.8. Planning
  - 1.8.1. Series Repetition Schemes
    - 1.8.1.1. Plateau
    - 1.8.1.2. Step
    - 1.8.1.3. Waves
    - 1.8.1.4. Steps
    - 1.8.1.5. Pyramids
    - 1.8.1.6. Light-Heavy
    - 1.8.1.7. Cluster
    - 1.8.1.8. Rest-Pause
  - 1.8.2. Vertical Planning
  - 1.8.3. Horizontal Planning
  - 1.8.4. Classifications and Models
    - 1.8.4.1. Constant
    - 1.8.4.2. Lineal
    - 1.8.4.3. Reverse Linear
    - 1.8.4.4. Blocks
    - 1.8.4.5. Accumulation
    - 1.8.4.6. Undulating
    - 1.8.4.7. Reverse Undulating
    - 1.8.4.8. Volume-Intensity

- 1.9. Adaptation
  - 1.9.1. Dose-Response Model
  - 1.9.2. Robust-Optimal
  - 1.9.3. Fitness- Fatigue
  - 1.9.4. Micro Doses
- 1.10. Assessments and Adjustments
  - 1.10.1. Self-Regulated Load
  - 1.10.2. Adjustments Based on VBT
  - 1.10.3. Based on RIR and RPE
  - 1.10.4. Based on Percentages
  - 1.10.5. Negative Pathway







# 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.

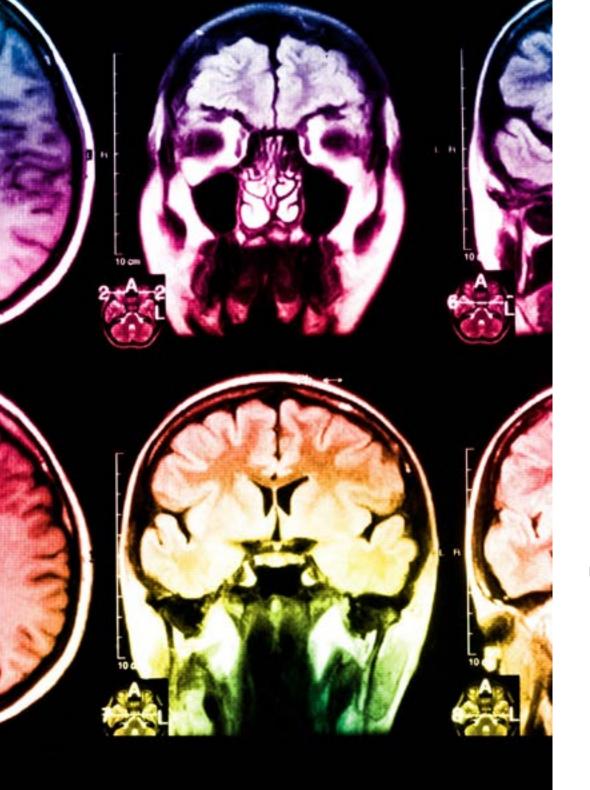
We enhance the Case Study with the best 100% online teaching method: Relearning.

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.



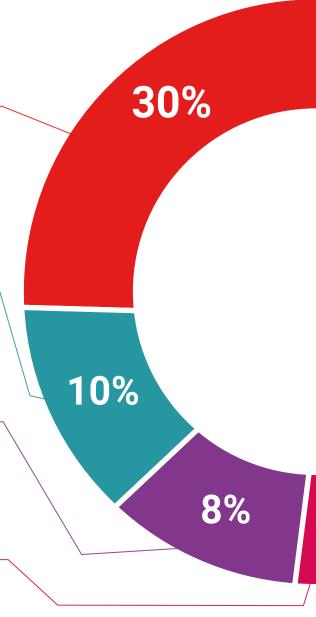
#### **Practising Skills and Abilities**

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.

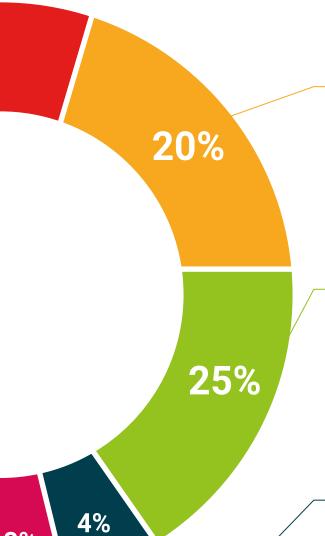


#### **Additional Reading**

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 | Diploma

This private qualification will allow you to obtain a **Postgraduate Certificate in Strength Training Prescription and Planning** 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** private qualification 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 Certificate in Strength Training Prescription and Planning

Modality: online

Duration: 6 weeks

Accreditation: 6 ECTS





#### Postgraduate Certificate in Strength Training Prescription and Planning

has successfully passed and obtained the title of

This is a private qualification of 180 hour s of duration equivalent to 6 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 202 4





# Postgraduate Certificate Strength Training Prescription and Planning

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

