



# Postgraduate Certificate

# Strength Training Methodology

» Modality: online

» Duration: 6 weeks

» Certificate: TECH Global University

» Accreditation: 6 ECTS

» Schedule: at your own pace

» Exams: online

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

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# tech 06 | Introduction

The current training methodology has long been influenced by well-defined and heterogeneous areas such as weightlifting, powerlifting, sports training, bodybuilding and physiotherapy or motor rehabilitation.

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 Methodology has made a careful selection of each of the topics of this qualification in order 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 show students this Postgraduate Certificate 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 Methodology** 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.

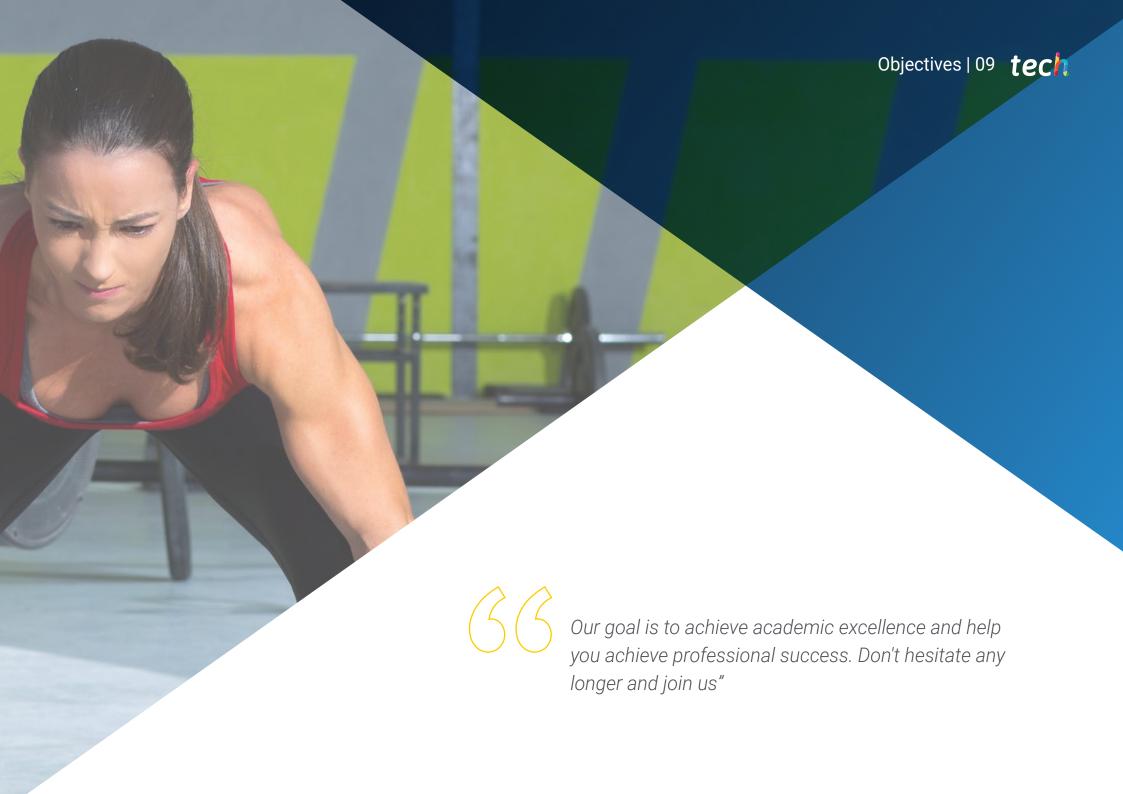
This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the course. For this, the professional will be assisted by an innovative interactive video system created by recognized experts in Strength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

Increase your knowledge of Strength Training Methodology with this high-level training.

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







# tech 10 | Objectives



## **General Objectives**

- Delve into the knowledge based on the most current scientific evidence with full applicability in the practical field regarding 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, 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**

- Gain in-depth knowledge of the different methodological proposals of strength training and their applicability to the field of practice
- Select the most appropriate methods for specific needs
- Recognize and safely apply the different methods proposed in the literature



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





# tech 14 | Course Management

## Management



## Mr. Rubina, Dardo

- Specialist in High Performance Sports
- CEO of Test and Training
- Physical Trainer at Moratalaz Sports Schoo
- 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 Universit

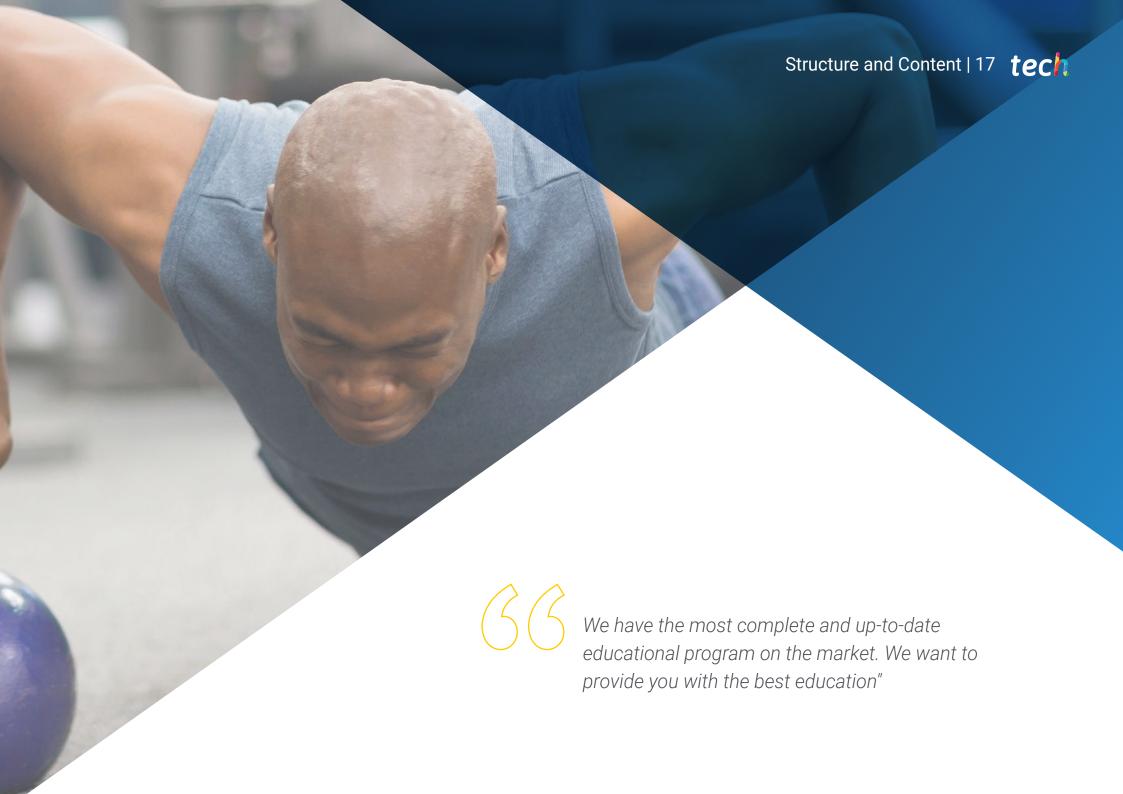
#### **Professors**

## Mr. Masse, Juan Manuel

- Physical trainer for high performance athletes
- Director of the Athlon Science Study Group
- Physical trainer for several professional soccer teams in South America







# tech 18 | Structure and Content

## Module 1. Strength Training Methodology

- 1.1. Training Methods derived from Powerlifting
  - 1.1.1. Functional Isometrics
  - 1.1.2. Forced Repetitions
  - 1.1.3. Eccentrics in Competition Exercises
  - 1.1.4. Main Characteristics of the Most Commonly Used Methods in Powerlifting
- 1.2. Methods of Training from Weightlifting
  - 1.2.1. Bulgarian Method
  - 1.2.2. Russian Method
  - 1.2.3. Origin of the Popular Methodologies in the School of Olympic Lifting
  - 1.2.4. Differences Between the Bulgarian and Russian Concepts
- 1.3. Zatiorsky's Methods
  - 1.3.1. Maximum Effort Method (ME)
  - 1.3.2. Repeated Effort Method (RE)
  - 1.3.3. Dynamic Effort Method (DE)
  - 1.3.4. Load Components and Main Characteristics of Zatsiorsky's Methods
  - 1.3.5. Interpretation and Differences in Mechanical Variables (Force, Power and Speed) between ME, RE and DE and their Internal Response
- 1.4. Pyramidal Methods
  - 1.4.1. Classic Ascending
  - 1.4.2. Classic Descending
  - 1.4.3. Double
  - 1.4.4. Skewed Pyramid
  - 1.4.5. Truncated Pyramid
  - 1.4.6. Flat or Stable Pyramid
  - 1.4.7. Load Components (Volume and Intensity) of the Different Proposals of the Pyramidal Method



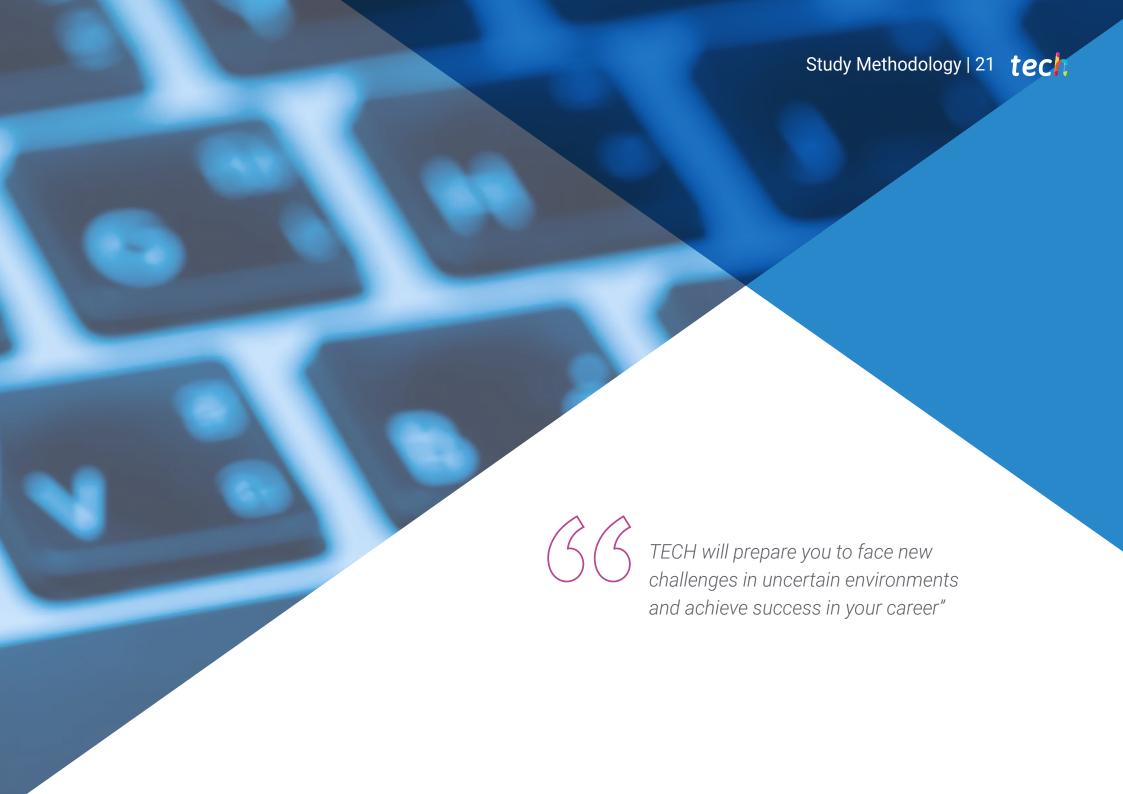
- Training Methods From Bodybuilding
  - 1.5.1. Superseries
  - 1.5.2. Triseries
  - 1.5.3. Compound Series
  - 1.5.4. Giant Series
  - 1.5.5. Congestive Series
  - 1.5.6. Wave-Like Loading
  - 1.5.7. ACT (Anti-Catabolic Training)
  - 1.5.8. Bulk
  - 1.5.9. Cluster
  - 1.5.10 10x10 Satziorsky
  - 1.5.11 Heavy Duty
  - 1.5.12 Ladder
  - 1.5.13. Characteristics and Load Components of the Different Methodological Proposals of Training Systems Coming From Bodybuilding
- Methods from Sports Training
  - 1.6.1. Plyometry
  - 1.6.2. Circuit Training
  - 1.6.3. Cluster Training
  - 1.6.4. Contrast
  - 1.6.5. Main Characteristics of Strength Training Methods Derived from Sports Training
- Methods from Unconventional Training and Crossfit
  - 1.7.1. EMOM (Every Minute on the Minute)
  - 1.7.2. Tabata
  - 1.7.3. AMRAP (As Many Reps as Possible)
  - 1.7.4. For Time
  - 1.7.5. Main Characteristics of Strength Training Methods Derived from Crossfit Training
- Velocity-Based Training (VBT)
  - 1.8.1. Theoretical Foundation
  - 1.8.2. Practical Considerations
  - 1.8.3. Own Data

- The Isometric Method
  - 1.9.1. Concepts and Physiological Fundamentals of Isometric Stresses
  - 1.9.2. Yuri Verkhoshanski Proposal
- 1.10. Methodology of Repeat Power Ability (RPA) From Alex Natera
  - 1.10.1. Theoretical Basis
  - 1.10.2. Practical Applications
  - 1.10.3. Continuous Vs. Own Data
- 1.11. Training Methodology Proposed by Fran Bosch
  - 1.11.1. Theoretical Basis
  - 1.11.2. Practical Applications
  - 1.11.3. Continuous Vs. Own Data
- 1.12. Cal Dietz and Matt Van Dyke's Three-Phase Methodology
  - 1.12.1. Theoretical Basis
  - 1.12.2. Practical Applications
- 1.13. New Trends in Quasi-- Isometric Eccentric Training
  - 1.13.1. Neurophysiological Rationale and Analysis of Mechanical Responses Using Position Transducers and Force Platforms for Each Strength Training Approach



A unique, key, and decisive educational experience to boost your professional development"



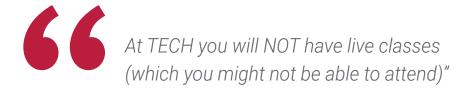


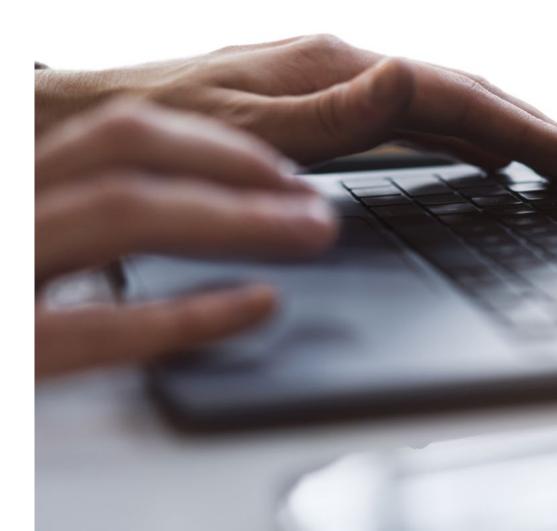
## The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist.

The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.







## The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.



TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want"

# tech 24 | Study Methodology

#### Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.



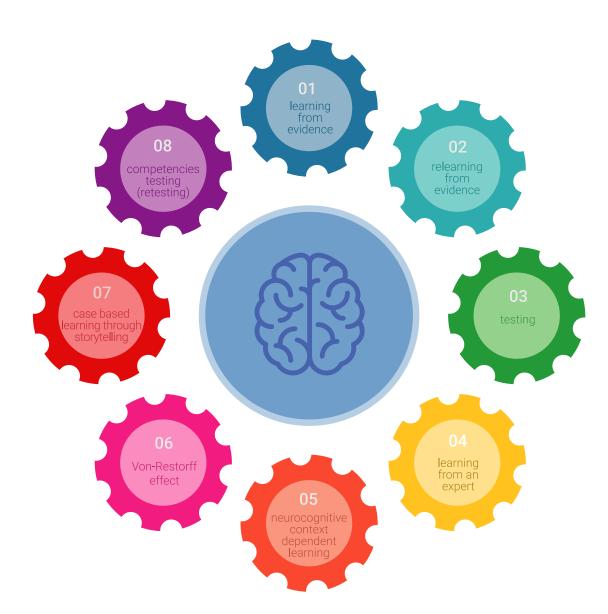
## Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

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





## A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.



The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule"

### The effectiveness of the method is justified by four fundamental achievements:

- 1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that assess real situations and the application of knowledge.
- **2.** Learning is solidly translated into practical skills that allow the student 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.

## Study Methodology | 27 tech

## The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

The students' assessment of the quality of teaching, quality of materials, course structure and objectives is excellent. Not surprisingly, the institution became the best rated university by its students on the Trustpilot review platform, obtaining a 4.9 out of 5.

Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.

You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.

As such, the best educational materials, thoroughly prepared, will be available in this program:



#### **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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



#### **Practicing Skills and Abilities**

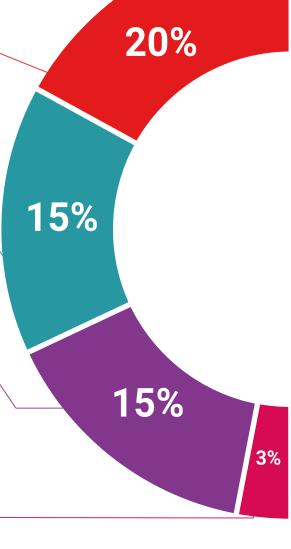
You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



#### **Interactive Summaries**

We present 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".





#### **Additional Reading**

Recent articles, consensus documents, international guides... In our virtual library you will have access to everything you need to complete your education.

#### **Case Studies**

Students will complete a selection of the best case studies in the field. Cases that are presented, analyzed, and supervised by the best specialists in the world.



## **Testing & Retesting**

We periodically assess and re-assess your knowledge throughout the program. We do this on 3 of the 4 levels of Miller's Pyramid.



#### Classes

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

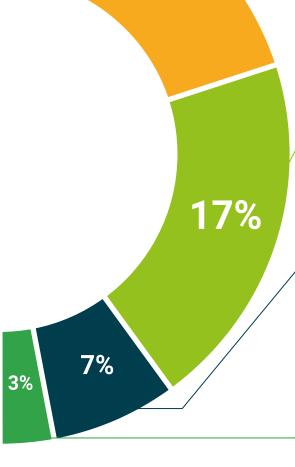


Learning from an expert strengthens knowledge and memory, and generates confidence for future difficult decisions.

#### **Quick Action Guides**

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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.







# tech 32 | Certificate

This private qualification will allow you to obtain a **Postgraduate Certificate in Strength Training Methodology** 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 Methodology

Modality: online

Duration: 6 weeks

Accreditation: 6 ECTS

Endorsed by the NBA





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

#### Postgraduate Certificate in Strength Training Methodology

This is a private qualification of 180 hours 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 2024





# Postgraduate Certificate Strength Training

Methodology

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

