Professional Master's Degree

Strength Training for Sports Performance

Endorsed by the NBA

tech technological university

tech technological university

Professional Master's Degree

Strength Training for Sports Performance

- Modality: **online**
- Duration: **12 months**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Acceso web: www.techtitute.com/pk/sports-science/professional-master-degree/master-strength-training-sports-performance

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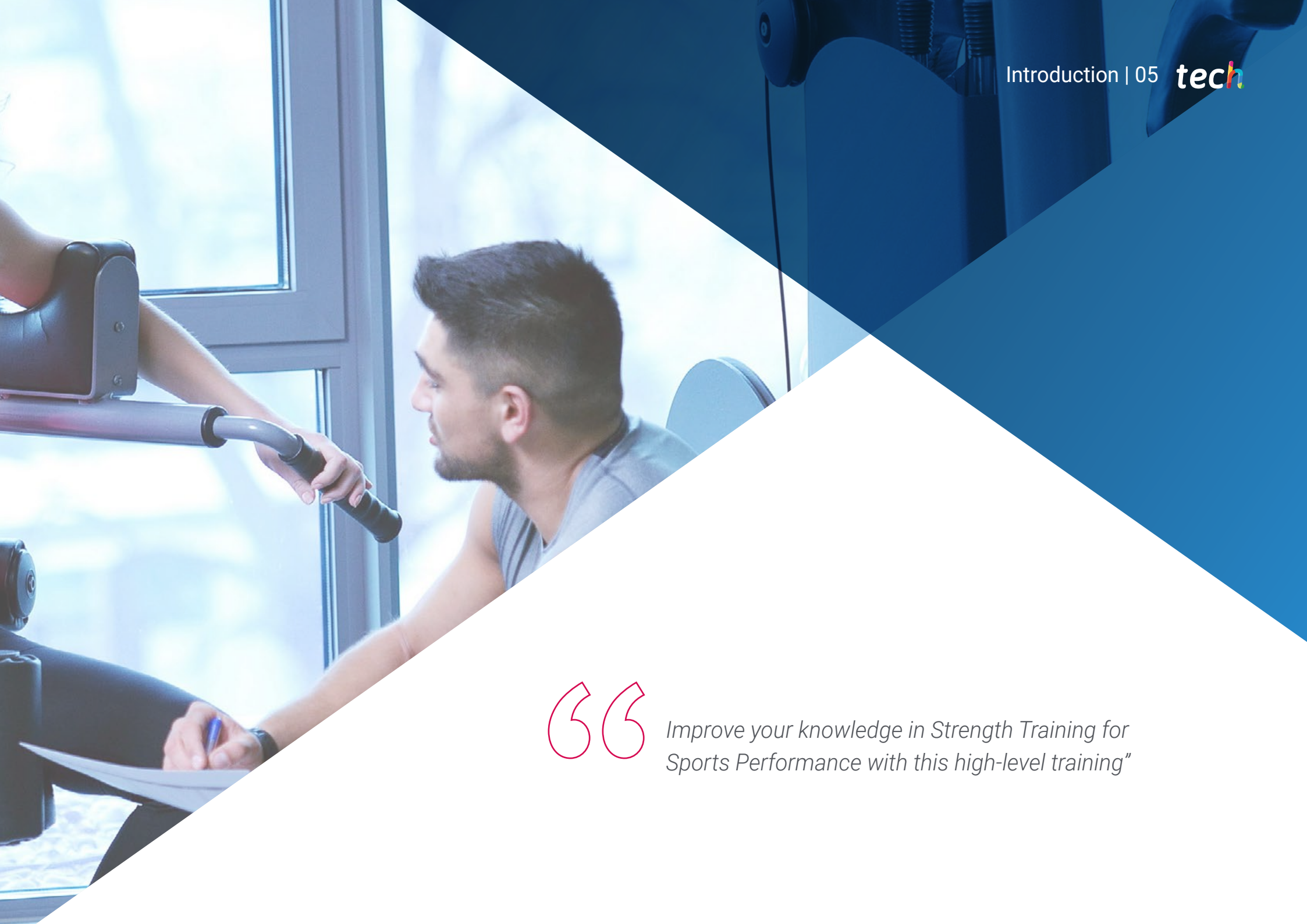
01

Introduction

In this program you will find detailed content on how to use strength training to improve performance, ranging from how it affects speed, endurance, and competitive sports, through to acceleration, direction change, etc.

Each subject has proven specialists in the area who provide the most relevant theoretical training as well as their extensive experience, which makes this Professional Master's Degree unique.



Improve your knowledge in Strength Training for Sports Performance with this high-level training"

In recent years, strength training has gained great momentum in the scientific community, covering multiple contexts from performance in individual, time-based sports to competitive team sports, through the entire range of sports disciplines.

This Professional Master's Degree addresses the vital importance of strength in human performance in all its possible forms, with a unique level of theoretical insight and a level of practical training that is totally different from what has been covered up to now.

Students of this Professional Master's Degree will possess differentiated training with respect to their professional colleagues, which will enable them to work in all areas of sport as specialists in Strength Training.

The teaching staff of this Professional Master's Degree in Strength Training for Sports Performance have carefully selected each of the topics in this program, in order to offer students a comprehensive study opportunity that is always linked to current events.

At TECH we have set out to create contents of the highest teaching and educational quality that will turn our students into successful professionals by following the highest international teaching standards. We, therefore, offer you this Professional Master's Degree with extensive content that will help you reach the elite in physical training. Given that it is an online Professional Master's Degree, students are not bound by fixed schedules or the need to change location; they can access the content at any time of the day, which allows them to balance their professional or personal life with their studies.

This **Professional Master's Degree in Strength Training for Sports Performance** 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 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 the study of this highly scientific and rigorous Professional Master's Degree and improve your skills in strength training for high-performance sports"

This Professional Master's Degree is the best investment you can make when selecting a refresher program for two reasons: in addition to bringing you up to date as a personal trainer, you will obtain a qualification from TECH"

This Professional Master's Degree offers training in simulated environments, which provides an immersive learning experience designed to prepare for real-life situations.

This 100% online Professional Master's Degree will allow you to combine your studies with your professional work, while increasing your knowledge in this field.

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.

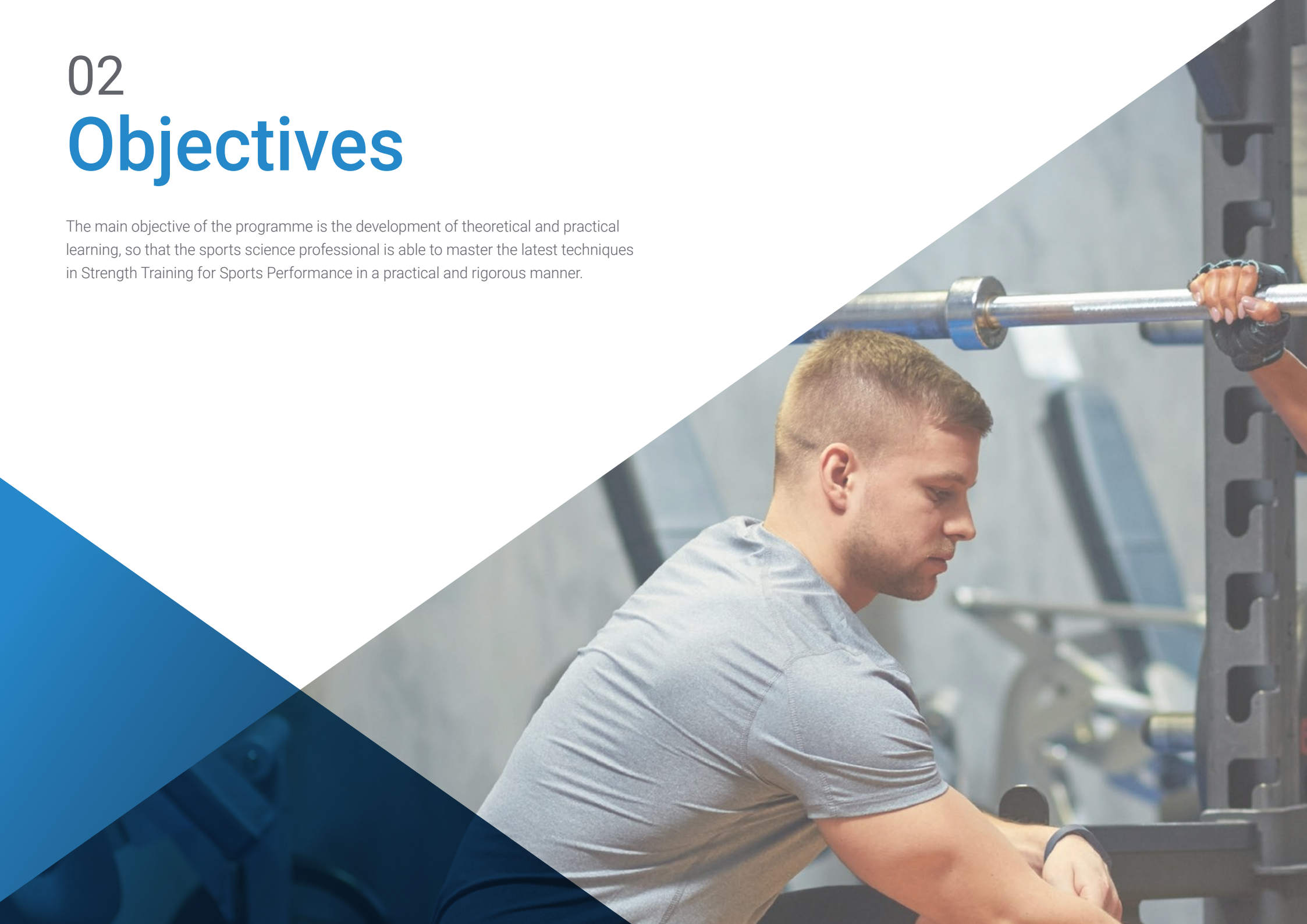
The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersion training programmed to train in real situations.

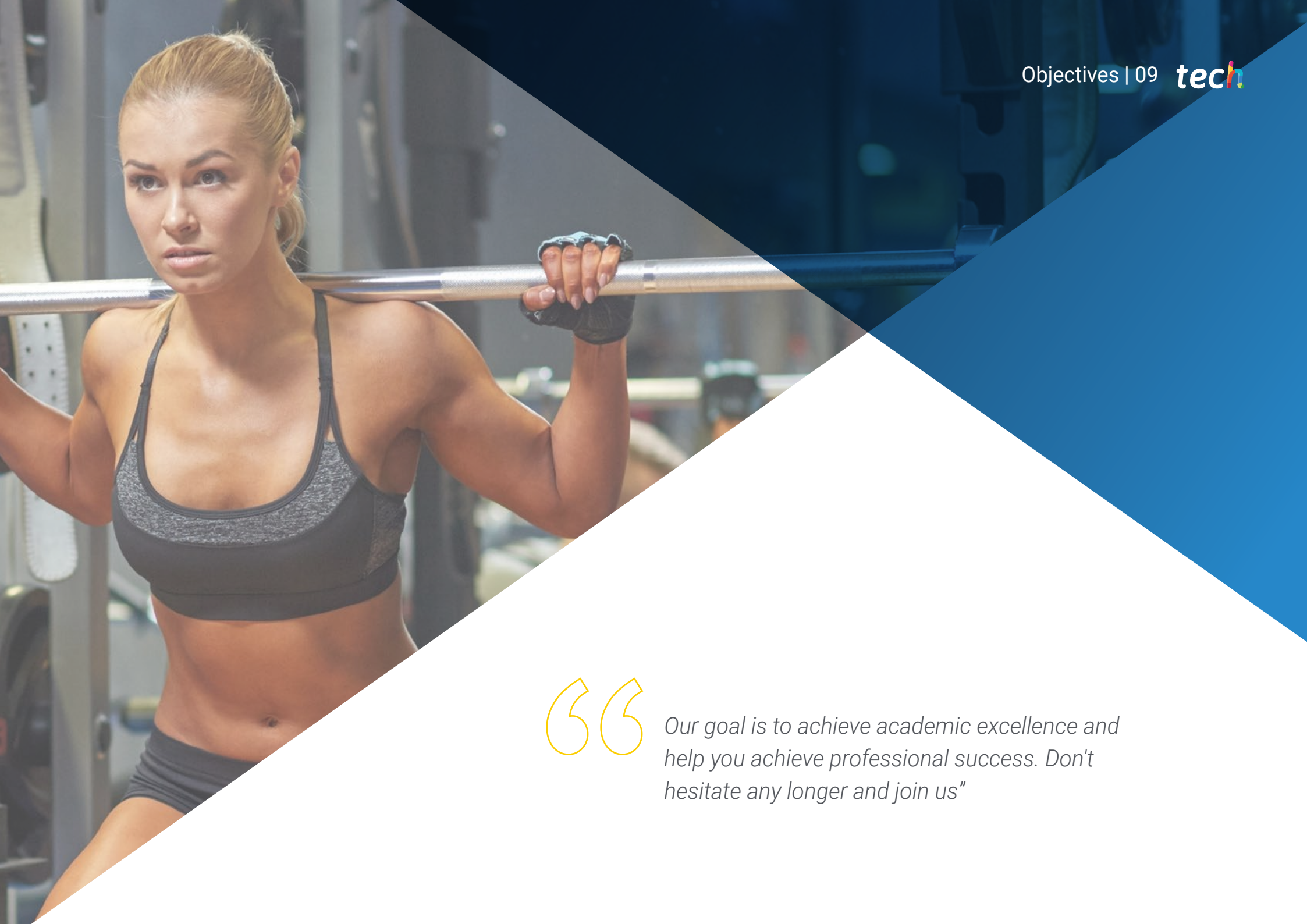
This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the program. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts in Strength Training for Sports Performance.

02

Objectives

The main objective of the programme is the development of theoretical and practical learning, so that the sports science professional is able to master the latest techniques in Strength Training for Sports Performance in a practical and rigorous manner.





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

General Objectives

- Gain in-depth 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 training 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 involved in sport
- Successfully master all the knowledge acquired in the different modules in real practice

Specific Objectives

- Specialize and interpret key aspects of biochemistry and thermodynamics
- Gain in-depth knowledge of the energy metabolic pathways and their exercise-mediated modifications and their role in human performance
- Specialize in key aspects of the neuromuscular system, motor control and its role in physical training
- In-depth knowledge of muscle physiology, the process of muscle contraction and the molecular basis of this process
- Delve into the functioning of the cardiovascular and respiratory systems and oxygen utilization during exercise
- Manage the general causes of fatigue and the impact this has on the different types and forms of exercises
- Identify the different physiological breakthroughs and their practical application
- Understand in-depth the relationship that exists between strength and skills
- Identify the main skills in sports in order to analyze them, understand them and then enhance them through training
- Organize and systematize the skill development process
- Link and relate field and gym work to enhance skills
- Master specific knowledge about the theory of systems in sports training
- Analyze the different components that are interrelated in strength training and their

application in situational sports

- Guide strength training methodologies towards a perspective that addresses the specific demands of sport
- Develop a critical view of the reality of strength training for athletic and non-athletic populations
- Specialize and interpret the key aspects of strength training
- In-depth knowledge of the different components of the load
- Delve into key aspects of load planning, periodization and monitoring
- Gain in-depth knowledge of the different session set-up schemes
- Manage the most common prescribing, monitoring and adjustment models
- Gain in-depth knowledge of the different methodological proposals for strength training and their application in practice
- Select the most appropriate methods for specific needs
- Recognize and safely apply the different methods proposed in the literature
- Master Strength Training theoretical terms
- Master Power Training theoretical terms
- Master Hypertrophic Training methodology
- Master Physiological aspects of Hypertrophic Training
- Know and interpret the key aspects of the techniques for speed and changing direction
- Compare and differentiate the speed of situational sport with respect to the track and field model
- Gain an in-depth understanding of the mechanical aspects that may influence performance impairment and the mechanisms which can cause injury in sprinting
- Analytically apply the different means and methods of strength training to develop sprinting skills
- Specialize in the different types of assessment used and their applicability in training
- Select the most appropriate tests for your specific needs
- Correctly and safely administer the protocols of the different tests and the interpretation of the data collected
- In-depth study and application of different technologies used for assessment in health and fitness today, at any performance level
- Gain an in-depth understanding of the logic of movement-based training design
- Differentiate between means and methods for strength
- Detect priority movement patterns for applying force in the sport at hand
- Understand the functioning and application of technological means in the service of strength training
- Identify and analyze the mechanisms of force production in different endurance disciplines

- Gain in-depth knowledge of the different means and methods of strength training and their practical application
- Delve into the effects of concurrent training and its responses on endurance
- Program and organize strength training

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

03

Skills

After passing the assessments on the TECH Professional Master's Degree in Strength Training for Sports Performance, professionals will have acquired the skills they need to provide quality and up-to-date services, based on the most innovative teaching methodology.

This program will allow you to acquire the necessary skills to achieve professional success in this field"

General Skill

- Successfully integrate strength training to improve sports skills

Increase your skills with our high-quality program and give your career a boost"

Specific Skills

- Delve into the functioning of the cardiovascular and respiratory systems and oxygen utilization during exercise
- Organize and systematize the skill development process
- Analyze the different components that are interrelated in strength training and their application in situational sports
- Gain in-depth knowledge of the key aspects of planning, periodization and monitoring, and learn theoretical terms for Strength Training
- Compare and differentiate the speed of situational sport with respect to the track and field model
- Correctly and safely administer the protocols of the different tests and the interpretation of the data collected
- Detect priority movement patterns for applying force in the sport at hand
- Identify and analyze the mechanisms of force production in different endurance disciplines

04

Course Management

Our teaching team, experts in Personal Training, are all renowned professionals with years of teaching experience who have come together to help you give a boost to your profession. For this, they have developed the Professional Master's Degree using the latest developments in the field, which will allow you to train and enhance your skills in this area.

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

Management

Dr. 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
- Specialist in Applied Biomechanics and Functional Evaluation
- Certification in Weight Management and Physical Performance Technologies
- Postgraduate course in Physical Activity in Populations with Pathologies
- Postgraduate diploma in Injury Prevention and Rehabilitation
- Functional Assessment and Corrective Exercise Certificate
- Certificate in Functional Neurology
- Diploma in Advanced Studies, University of Castilla la Mancha
- PhD Candidate in ARD

Professors

D. Añon, Pablo

- Degree in Physical Activity and Sport
- Postgraduate diploma in Sports Medicine and Sciences Applied to Sport
- Physical trainer of the National Volleyball team that will attend the next Olympic Games
- Certified Strength and Conditioning Specialist, NSCA certification
- NSCA National Conference

D. Bruno Gizzarelli, Matías

- Degree in Physical Education
- Training in Applied Neurosciences
- EXOS Performance Specialist
- Author of the Book "Basketball Training: Physical Preparation"

D. Carbone, Leandro

- Degree in Physical Education
- Specialist in exercise physiology
- Msc Strength and Conditioning
- CSCS–NASCA, CISSN–ISSN
- Currently at Club The Strongest
- Collaborator with olympic athletes

D. Garzon Duarte, Mateo

- Degree in Physical Activity and Sport
- MGD -Customized Training. S&C Coach
- Researcher and author of Papers

D. Masse, Juan

- Degree in Physical Education
- Director of Athlos study group
- Physical trainer for several professional soccer teams in South America, experienced teacher

D. Palarino, Matías

- Degree in Physical Activity and Sport
- Physical trainer in Professional Soccer
- Physical Trainer in Field Hockey
- Physical Trainer in Rugby
- Extensive teaching experience in physical preparation and load control courses

D. Trobadelo, Pablo Omar

- Strength and Physical Performance Coach, general and specific physical preparation of amateur athletes of different disciplines for national and international competitions. Handball, Tennis, Soccer, Taekwondo, Motocross Enduro, Jiu Jitsu, Wrestling, Street Racing and Ultra Endurance, etc
- Personal Fitness Trainer for all types of people looking to reach their sports performance goals, general fitness, health, aesthetics and functional rehabilitation of injuries and movement re-education
- Degree in High Performance in Sports. National University of Lomas de Zamora
- Physical Education Teacher at the Physical Education Higher Institute Nº1 "Dr. Enrique Romero Brest" (CeNARD -National Center for High Performance Sports)

D. Tinti, Hugo

- Degree in Physical Activity and Sport
- Master's Degree in Big Data
- Specialist in Technologies and Injury Prevention in Soccer
- Specialist in load management

D. Rossanigo, Horacio

- BUILD Academy-Academic Services in Physical Training
- CEO, Jaguares– Argentina Rugby Union
- Degree in Physical Education and Physical Work Physiology, FMS 1&2
- Lecturer in courses on sports performance

D. Vaccarini, Adrián

- Degree in Sports Medicine
- Head of the Applied Sciences Department of the Peruvian Soccer Federation
- Physical trainer of the Peruvian National Soccer Team (present in the last World Cup)

D. Varela, Mauricio Carlos

- Physical Education Teacher. Faculty of Humanities and Educational Sciences. National University of La Plata
- Teacher of personalized physical activity classes for older adults
- Physical Trainer; Personal Trainer of Elite Cyclist category at the Astronomía Cycling Circuit
- Physical education teacher in various schools in Argentina
- Specialization in Exercise Programming and Evaluation (Postgraduate course, Faculty of Humanities and Education Sciences, La Plata National University) Cohort
- ISAK Anthropometrist level 1

D. Vilariño, Leandro

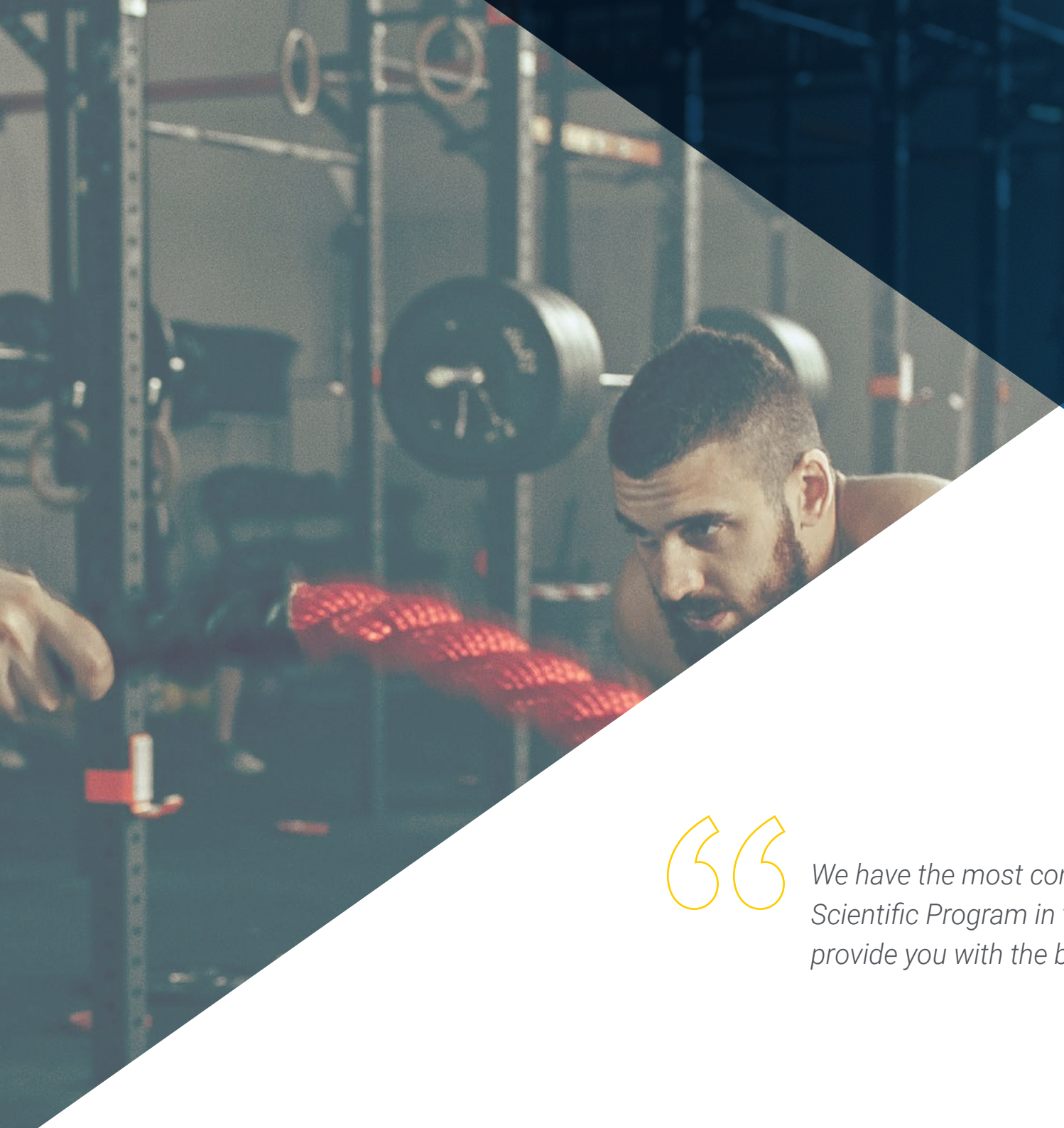
- Degree in Physical Activity and Sport
- Teacher, Peruvian Soccer Federation
- Teacher of the Postgraduate Diploma in Sports Medicine
- Physical trainer in professional soccer in the Argentine and Bolivian leagues

Our teaching team will provide you with all their knowledge so that you are up to date with the most current information in the field"

05

Structure and Content

The syllabus has been designed by a team of professionals who recognize the importance of applying specialized training to daily practice, and who are aware of the current need to provide up-to-date, quality education in the field of personal training, while they are also committed to excellence in teaching using new educational technologies.



We have the most complete and up-to-date Scientific Program in the Market. We want to provide you with the best program"

Module 1. Exercise Physiology and Physical Activity

1.1. Thermodynamics and Bioenergetics
- 1.1.1. Definition
- 1.1.2. General Concepts
  - 1.1.2.1. Organic Chemistry
  - 1.1.2.2. Functional Groups
  - 1.1.2.3. Enzymes
  - 1.1.2.4. Coenzymes
  - 1.1.2.5. Acids and Bases
  - 1.1.2.6. PH

1.2. Energy Systems
- 1.2.1. General Concepts
  - 1.2.1.1. Capacity and Power
  - 1.2.1.2. Cytoplasmic Vs Mitochondrial Processes
- 1.2.2. Phosphagen Metabolism
  - 1.2.2.1. ATP - PC
  - 1.2.2.2. Pentose Pathway
  - 1.2.2.3. Nucleotide Metabolism
- 1.2.3. Carbohydrate Metabolism
  - 1.2.3.1. Glycolysis
  - 1.2.3.2. Glycogenogenesis
  - 1.2.3.3. Glycogenolysis
  - 1.2.3.4. Gluconeogenesis
- 1.2.4. Lipid Metabolism
  - 1.2.4.1. Bioactive Lipids
  - 1.2.4.2. Lipolysis
  - 1.2.4.3. Beta-oxidation
  - 1.2.4.4. De Novo Lipogenesis

1.2.5. Oxidative Phosphorylation
1.2.5.1. Oxidative Decarboxylation of Pyruvate
1.2.5.2. Krebs Cycle
1.2.5.3. Electron Transport Chain
1.2.5.4. ROS
1.2.5.5. Mitochondrial *Crosstalk*

1.3. Signaling Pathways
1.3.1. Second Messengers
1.3.2. Steroid Hormones
1.3.3. AMPK
1.3.4. NAD+
1.3.5. PGC1

1.4. Skeletal Muscle
1.4.1. Structure and Function
1.4.2. Fibers
1.4.3. Innervation
1.4.4. Muscle Cytoarchitecture
1.4.5. Protein Synthesis and Breakdown
1.4.6. mTOR

1.5. Neuromuscular Adaptations
1.5.1. Motor Unit Recruitment
1.5.2. Synchronization
1.5.3. Neural Drive
1.5.4. Golgi Tendon Organ and Neuromuscular Spindle

1.6. Structural Adaptations
1.6.1. Hypertrophy
1.6.2. Mecano Signal Transduction
1.6.3. Metabolic Stress
1.6.4. Muscle Damage and Inflammation
1.6.5. Changes in Muscular Architecture

1.7. Fatigue
1.7.1. Central Fatigue
1.7.2. Peripheral Fatigue
1.7.3. HRV
1.7.4. Bioenergetic Model
1.7.5. Cardiovascular Model
1.7.6. Thermoregulator Model
1.7.7. Psychological Model
1.7.8. Central Governor Model

1.8. Maximum Oxygen Consumption
1.8.1. Definition
1.8.2. Assessment
1.8.3. VO2 Kinetics
1.8.4. VAM
1.8.5. Running Economics

1.9. Thresholds
1.9.1. Lactate and Ventilatory Threshold
1.9.2. MLSS
1.9.3. Critical Power
1.9.4. HIIT and LIT
1.9.5. Anaerobic Speed Reserve

1.10. Extreme Physiological Conditions
1.10.1. Height
1.10.2. Temperature
1.10.3. Diving

Module 2. Strength Training to Enhance Movement Skills

2.1. Strength in Skill Development
- 2.1.1. Importance of Strength in Skill Development
- 2.1.2. Benefits of Strength Training in Skill Development
- 2.1.3. Types of Strength in Different Skills
- 2.1.4. Training Methods for Strength Development in Skills

2.2. Team Sports Skills
- 2.2.1. General Concepts
- 2.2.2. Performance Development Skills
- 2.2.3. Skills: Classification
  - 2.2.3.1. *Locomotive skills*
  - 2.2.3.2. *Manipulative skills*

2.3. Agility and Movements
- 2.3.1. Basic Concepts
- 2.3.2. The Importance of Sports
- 2.3.3. Agility Components
  - 2.3.3.1. Movement Skills: Classification
  - 2.3.3.2. Physical Factors: Strength
  - 2.3.3.3. Anthropometric Factors
  - 2.3.3.4. Perceptual-Cognitive Components

2.4. Posture
- 2.4.1. Importance of Posture in the Different Skills
- 2.4.2. Posture and Mobility
- 2.4.3. Posture and CORE
- 2.4.4. Posture and Center of Pressure
- 2.4.5. Biomechanical Analysis of Efficient Posture
- 2.4.6. Methodological Resources

2.5. Linear Skills
- 2.5.1. Characteristics of Linear Skills
  - 2.5.1.1. Main Planes and Vectors
- 2.5.2. Classification
  - 2.5.2.1. Starting, Braking and Deceleration
    - 2.5.2.1.1. Definitions and Context of Use
    - 2.5.2.1.2. Biomechanical Analysis
    - 2.5.2.1.3. Methodological Resources
  - 2.5.2.2. Acceleration
    - 2.5.2.2.1. Definitions and Context of Use
    - 2.5.2.2.2. Biomechanical Analysis
    - 2.5.2.2.3. Methodological Resources
  - 2.5.2.3. Backpedal
    - 2.5.2.3.1. Definitions and Context of Use
    - 2.5.2.3.2. Biomechanical Analysis
    - 2.5.2.3.3. Methodological Resources

2.6. Multi-Directional Skills: Shuffle
- 2.6.1. Classification of Skills
- 2.6.2. Shuffle: Definitions and Context of Use
- 2.6.3. Biomechanical Analysis
- 2.6.4. Methodological Resources

2.7. Multi-Directional Skills: Crossover
- 2.7.1. Crossover as a Change of Direction
- 2.7.2. Crossover as a Transitional Movement
- 2.7.3. Definitions and Context of Use
- 2.7.4. Biomechanical Analysis
- 2.7.5. Methodological Resources

2.8. Jump Skills 1
- 2.8.1. Importance of Jumps in Different Skills
- 2.8.2. Basic Concepts
  - 2.8.2.1. Biomechanics of Jumps
  - 2.8.2.2. CEA
  - 2.8.2.3. Stiffness
- 2.8.3. Jump Classification
- 2.8.4. Methodological Resources

2.9. Jump Skills 2
- 2.9.1. Methods
- 2.9.2. Acceleration and Jumps
- 2.9.3. Shuffle and Jumps
- 2.9.4. Crossover and Jumps
- 2.9.5. Methodological Resources

2.10. Programming Variables

Module 3. Strength Training under the Complex Dynamic Systems Paradigm

3.1. Introduction to Complex Dynamic Systems
- 3.1.1. Models Applied to Physical Preparation
- 3.1.2. Determining Positive and Negative Interaction
- 3.1.3. Uncertainty in Complex Dynamical Systems

3.2. Motor Control and its Role in Performance
- 3.2.1. Introduction to Motor Control Theories
- 3.2.2. Movement and Function
- 3.2.3. Motor Learning
- 3.2.4. Motor Control Applied to Systems Theory

3.3. Communication Processes in Systems Theory
- 3.3.1. From Message to Movement
  - 3.3.1.1. Efficient Communication Process
  - 3.3.1.2. Stages of Learning
  - 3.3.1.3. Role of Communication and Sports Development in Early Ages
- 3.3.2. VAKT Principles
- 3.3.3. Performance Knowledge vs. Outcome Knowledge
- 3.3.4. Verbal feedback in System Interactions

3.4. Strength as an Essential Condition
- 3.4.1. Strength Training in Team Sports
- 3.4.2. Manifestations of Strength Within the System
- 3.4.3. The Strength-Speed Continuum. Systemic Review

3.5. Complex Dynamical Systems and Training Methods
- 3.5.1. Periodization. Historical Review
  - 3.5.1.1. Traditional Periodization
  - 3.5.1.2. Contemporary Periodization
- 3.5.2. Analysis of Periodization Models in Training Systems
- 3.5.3. Evolution of Strength Training Methods

3.6. Strength and Motor Divergence
- 3.6.1. Developing Strength at Early Ages
- 3.6.2. The Manifestations of Strength in Infantile-Juvenile Ages
- 3.6.3. Efficient Programming at Youth Ages

3.7. The Role of Decision-Making in Complex Dynamical Systems
- 3.7.1. The Decision-Making Process
- 3.7.2. Decisional *Timing*
- 3.7.3. The Development of Decision Making
- 3.7.4. Programming Training Based on Decision Making

3.8. Perceptual Abilities in Sports
- 3.8.1. Visual Abilities
  - 3.8.1.1. Visual Recognition
  - 3.8.1.2. Central and Peripheral Vision
- 3.8.2. Motor Experience
- 3.8.3. Attentional Focus
- 3.8.4. The Tactical Component

3.9. Systemic Vision of Programming
  3.9.1. Influence of Identity on Programming
  3.9.2. System as a Path to Long-Term Development
  3.9.3. Long-Term Development Programs
3.10. Global Programming: From System to Necessity
  3.10.1. Program Design
  3.10.2. Practical System Assessment Workshop

Module 4. Prescription and Programming of Strength Training

4.1. Introduction and Definition of Concepts
  4.1.1. General Concepts
    4.1.1.1. Planning, Periodization, Prescription
    4.1.1.2. Qualities, Methods, Objectives
    4.1.1.3. Complexity, Risk and Uncertainty
    4.1.1.4. Complementary Pairs
4.2. Exercises
  4.2.1. General vs. Specific
  4.2.2. Simple vs. Complex
  4.2.3. Thrust vs. Ballistic
  4.2.4. Kinetics and Kinematics
  4.2.5. Basic Patterns
  4.2.6. Order, Emphasis, Importance
4.3. Variables in the Programming
  4.3.1. Intensity
  4.3.2. Effort
  4.3.3. Intension
  4.3.4. Volume
  4.3.5. Density
  4.3.6. Weight
  4.3.7. Dosage
4.4. Periodization Structures
  4.4.1. Microcycle
  4.4.2. Mesocycle
  4.4.3. Macrocycle
  4.4.4. Olympic Cycles
4.5. Session Structures
  4.5.1. Hemispheres
  4.5.2. Entries
  4.5.3. Weider
  4.5.4. Patterns
  4.5.5. Muscle
4.6. Prescription
  4.6.1. Load-Effort Tables
  4.6.2. Based on %
  4.6.3. Based on Subjective Variables
  4.6.4. Based on Speed (VBT)
  4.6.5. Others
4.7. Prediction and Monitoring
  4.7.1. Speed-Based Training
  4.7.2. Areas of Repetition
  4.7.3. Load Areas
  4.7.4. Time and Reps
4.8. Plan
  4.8.1. Series – Repetition Schemes
    4.8.1.1. Plateau
    4.8.1.2. Step
    4.8.1.3. Waves
    4.8.1.4. Steps
    4.8.1.5. Pyramids
    4.8.1.6. Light-Heavy
    4.8.1.7. Cluster
    4.8.1.8. Rest-Pause

4.8.2. Vertical Planning
4.8.3. Horizontal Planning
4.8.4. Classifications and Models
4.8.4.1. Constant
4.8.4.2. Lineal
4.8.4.3. Reverse Linear
4.8.4.4. Blocks
4.8.4.5. Accumulation
4.8.4.6. Undulating
4.8.4.7. Reverse Undulating
4.8.4.8. Volume-Intensity
4.9. Adaptation
4.9.1. Dosage-Response Model
4.9.2. Robust-Optimal
4.9.3. Fitness – Fatigue
4.9.4. Micro Doses
4.10. Assessments and Adjustments
4.10.1. Self-Regulated Load
4.10.2. Adjustments Based on VBT
4.10.3. Based on RIR and RPE
4.10.4. Based on Percentages
4.10.5. Negative Pathway

Module 5. Methodology of Strength Training

5.1. Training Methods Derived from Powerlifting
5.1.1. Functional Isometrics
5.1.2. Forced Repetitions
5.1.3. Eccentrics in Competition Exercises
5.1.4. Main Characteristics of the Most-Used Methods in Powerlifting
5.2. Training Methods from Weightlifting
5.2.1. Bulgarian Method
5.2.2. Russian Method
5.2.3. Origin of Popular Methodologies in Olympic Weightlifting School
5.2.4. Differences Between the Bulgarian and Russian Concepts
5.3. Zatsiorsky Methods
5.3.1. Maximum Effort Method (ME)
5.3.2. Repeated Effort Method (RE)
5.3.3. Dynamic Effort Method (DE)
5.3.4. Load Components and Main Characteristics of Zatsiorsky's Methods
5.3.5. Interpretation and Differences for: Mechanical Variables (Force, Power and Speed) Revealed among ME, RE and DE, and their Internal Response (PSE)
5.4. Pyramidal Methods
5.4.1. Classic Ascending
5.4.2. Classic Descending
5.4.3. Double
5.4.4. Skewed Pyramid
5.4.5. Truncated Pyramid
5.4.6. Flat or Stable Pyramid
5.4.7. Load Components (Volume and Intensity) for Different Pyramidal Method Proposals

5.5. Training Methods Derived from Body and Muscle Building
- 5.5.1. Superseries
- 5.5.2. Triseries
- 5.5.3. Compound Series
- 5.5.4. Giant Series
- 5.5.5. Congestive Series
- 5.5.6. Wave-Like Loading
- 5.5.7. ACT (Anti-Catabolic Training)
- 5.5.8. Bulk
- 5.5.9. Cluster
- 5.5.10. Zatziorsky 10x10
- 5.5.11. Heavy Duty
- 5.5.12. Ladder
- 5. 5.13. Characteristics and Load Components of the Different Methodological Proposals of Training Systems Coming From Bodybuilding

5.6. Methods from Sports Training
- 5.6.1. Plyometry
- 5.6.2. Circuit Training
- 5.6.3. Cluster Training
- 5.6.4. Contrast
- 5.6.5. Main Characteristics of Strength Training Methods Derived from Sports Training

5.7. Methods From Non-Conventional and CROSSFIT Training
- 5.7.1. EMOM (Every Minute on the Minute)
- 5.7.2. Tabata
- 5.7.3. AMRAP (As Many Reps as Possible)
- 5.7.4. For Time
- 5.7.5. Main Characteristics of Strength Training Methods Derived from CrossFit Training

5.8. Speed-Based Training (VBT)
- 5.8.1. Theoretical Foundation
- 5.8.2. Practical Considerations
- 5.8.3. Own Data

5.9. The Isometric Method
- 5.9.1. Concepts and Physiological Fundamentals of Isometric Stresses
- 5.9.2. Proposal of Yuri Verkhoshansky

5.10. Methodology of Repeat Power Ability (RPA) From Alex Natera
- 5.10.1. Theoretical Foundation
- 5.10.2. Practical Applications
- 5.10.3. Published Data vs. Own Data

5.11. Training Methodology Proposed by Fran Bosch
- 5.11.1. Theoretical Foundation
- 5.11.2. Practical Applications
- 5.11.3. Published Data vs Own Data

5.12. Cal Dietz and Matt Van Dyke's Three-Phase Methodology
- 5.12.1. Theoretical Foundation
- 5.12.2. Practical Applications

5.13. New Trends in Quasi-Isometric Eccentric Training
- 5.13.1. Neurophysiological Rationale and Analysis of Mechanical Responses Using Position Transducers and Force Platforms for Each Strength Training Approach

Module 6. Theory of Strength Training and Basis for Structural training

6.1. Strength, its Conceptualization and Terminology
- 6.1.1. Strength from Mechanics
- 6.1.2. Strength from Physiology
- 6.1.3. Concept Strength Deficit
- 6.1.4. Concept of Applied Strength
- 6.1.5. Concept of Useful Strength

6.1.6. Terminology of Strength Training
6.1.6.1. Maximum Strength
6.1.6.2. Explosive Strength
6.1.6.3. Elastic Explosive Strength
6.1.6.4. Reflective Elastic Explosive Strength
6.1.6.5. Ballistic Strength
6.1.6.6. Rapid Force
6.1.6.7. Explosive Power
6.1.6.8. Speed Strength
6.1.6.9. Resistance Training
6.2. Concepts Connected to Power 1
6.2.1. Definition of Power
6.2.1.1. Conceptual Aspects of Power
6.2.1.2. Importance of Power in Sports Performance Context
6.2.1.3. Clarification of Power Terminology
6.2.2. Factors Contributing to Peak Power Development
6.2.3. Structural Aspects Conditioning Power Production
6.2.3.1. Muscle Hypertrophy
6.2.3.2. Muscle Structure
6.2.3.3. Ratio of Fast and Slow Fibers in a Cross Section
6.2.3.4. Muscle Length and its Effect on Muscle Contraction
6.2.3.5. Quantity and Characteristics of Elastic Components
6.2.4. Neural Aspects Conditioning Power Production
6.2.4.1. Action Potential
6.2.4.2. Speed of Motor Unit Recruitment
6.2.4.3. Muscle Coordination
6.2.4.4. Intermuscular Coordination
6.2.4.5. Prior Muscle Status (PAP)
6.2.4.6. Neuromuscular Reflex Mechanisms and their Incidence
6.3. Concepts Connected to Power 2
6.3.1. Theoretical Aspects for Understanding Strength– Time Curve
6.3.1.1. Strength Impulse
6.3.1.2. Phases of the Strength–Time Curve
6.3.1.3. Phases of Acceleration in Strength– Time Curve
6.3.1.4. Maximum Acceleration Area in Strength– Time Curve
6.3.1.5. Deceleration Phase in Strength– Time Curve
6.3.2. Theoretical Aspects for Understanding Power Curves
6.3.2.1. Power– Time Curve
6.3.2.2. Energy– Displacement Curve
6.3.2.3. Optimal Workload for Maximum Power Development
6.4. Relating Concepts of Strength and their Connection to Sports Performance
6.4.1. Strength Training Objectives
6.4.2. Power Training Cycle/Phase Relationship
6.4.3. Maximum Force-Power Relationship
6.4.4. Relationship between Power and Improvement in Athletic Performance
6.4.5. Strength-Sports Performance Relationship
6.4.6. Strength-Speed Relationship
6.4.7. Strength-Jump Relationship
6.4.8. Relationship between Strength and Changes in Direction
6.4.9. Connection Between Strength and Other Aspects of Athletic Performance
6.4.9.1. Maximum Strength and Its Effects on Training
6.5. Neuromuscular System (Hypertrophic Training)
6.5.1. Structure and Function
6.5.2. Motor Unit
6.5.3. Sliding Theory
6.5.4. Types of Fiber
6.5.5. Types of Contraction

6.6. Responses and their Adaptation to the Neuromuscular System (Hypertrophic Training)
- 6.6.1. Nerve Impulse Adaptations
- 6.6.2. Muscle Activation Adaptations
- 6.6.3. Motor unit Synchronization Adaptations
- 6.6.4. Adaptations in Antagonist Coactivation
- 6.6.5. Adaptations in Doublets
- 6.6.6. Muscle Preactivation
- 6.6.7. Muscular Stiffness
- 6.6.8. Reflexes
- 6.6.9. Internal Models of Motor Engrams
- 6.6.10. Muscle Tone
- 6.6.11. Action Potential Speed

6.7. Hypertrophy
- 6.7.1. Introduction
  - 6.7.1.1. Parallel and Serial Hypertrophy
  - 6.7.1.2. Sarcoplasmic Hypertrophy
- 6.7.2. Satellite Cells
- 6.7.3. Hyperplasia

6.8. Mechanisms that Induce Hypertrophy*
- 6.8.1. Mechanism that Induces Hypertrophy: Mechanical Stress
- 6.8.2. Mechanism that Induces Hypertrophy: Metabolic Stress
- 6.8.3. Mechanism that Induces Hypertrophy: Muscle Damage

6.9. Variables for Hypertrophy Training Programming*
- 6.9.1. Volume
- 6.9.2. Intensity
- 6.9.3. Frequency (F)
- 6.9.4. Weight
- 6.9.5. Density
- 6.9.6. Selecting Exercises
- 6.9.7. Order in the Execution of Exercises
- 6.9.8. Type of Muscle Action
- 6.9.9. Duration of Rest Intervals
- 6.9.10. Duration of Repetitions
- 6.9.11. Range of Movement

6.10. Main Factors Affecting High-Level Hypertrophic Development
- 6.10.1. Genetics
- 6.10.2. Age
- 6.10.3. Sex
- 6.10.4. Training Status

Module 7. Strength Training to Improve Speed

7.1. Strength
- 7.1.1. Definition
- 7.1.2. General Concepts
  - 7.1.2.1. Manifestations of Strength
  - 7.1.2.2. Factors that Determine Performance
  - 7.1.2.3. Strength Requirements for Sprint Improvement Strength-Sprint Relationship
  - 7.1.2.4. Strength-Speed Curve
  - 7.1.2.5. Relationship of the S-S and Power Curve and its Application to Sprint Phases
  - 7.1.2.6. Development of Muscular Strength and Power

7.2. Dynamics and Mechanics of Linear Sprint (100m Model)
- 7.2.1. Kinematic Analysis of the Take-off
- 7.2.2. Dynamics and Strength Application During Take-off
- 7.2.3. Kinematic Analysis of the Acceleration Phase
- 7.2.4. Dynamics and Strength Application During Acceleration
- 7.2.5. Kinematic Analysis of Running at Maximum Speed
- 7.2.6. Dynamics and Strength Application During Maximum Speed

7.3. Acceleration Technique and Maximum Speed Analysis in Team Sports
- 7.3.1. Description of Technique in Team Sports
- 7.3.2. Comparison of Sprinting Technique in Team Sports vs. Athletic Events
- 7.3.3. Timing and Motion Analysis of Speed Events in Team Sports

7.4. Exercises as Basic and Special Means of Strength Development for Sprint Improvement
  7.4.1. Basic Movement Patterns
    7.4.1.1. Description of Patterns with Emphasis on Lower Limb Exercises
    7.4.1.2. Mechanical Demand of the Exercises
    7.4.1.3. Exercises Derived from Olympic Weightlifting
    7.4.1.4. Ballistic Exercises
    7.4.1.5. S-S Curve of the Exercises
    7.4.1.6. Strength Production Vector
7.5. Special Methods of Strength Training Applied to Sprinting
  7.5.1. Maximum Effort Method
  7.5.2. Dynamic Effort Method
  7.5.3. Repeated Effort Method
  7.5.4. French Complex and Contrast Method
  7.5.5. Speed-Based Training
  7.5.6. Strength Training as a Means of Injury Risk Reduction
7.6. Means and Methods of Strength Training for Speed Development
  7.6.1. Means and Methods of Strength Training for the Development of the Acceleration Phase
    7.6.1.1. Connection of Force to Acceleration
    7.6.1.2. Sledding and Racing Against Resistance
    7.6.1.3. Slopes
    7.6.1.4. Jumpability
      7.6.1.4.1. Building the Vertical Jump
      7.6.1.4.2. Building the Horizontal Jump
  7.6.2. Means and Methods for Top Speed Training
    7.6.2.1. Plyometry
      7.6.2.1.1. Concept of the Shock Method
      7.6.2.1.2. Historical Perspective
      7.6.2.1.3. Shock Method Methodology for Speed Improvement
      7.6.2.1.4. Scientific Evidence
7.7. Means and Methods of Strength Training Applied to Agility and Change of Direction
  7.7.1. Determinants of Agility and COD
  7.7.2. Multidirectional Jumps
  7.7.3. Eccentric Strength
7.8. Assessment and Control of Strength Training
  7.8.1. Strength-Speed Profile
  7.8.2. Load-Speed Profile
  7.8.3. Progressive Loads
7.9. Integration
  7.9.1. Case Study

Module 8. Assessing Sports Performance in Strength Training

8.1. Assessment
  8.1.1. General Concepts on Assessment, Test and Measuring
  8.1.2. Test Characteristics
  8.1.3. Types of Tests
  8.1.4. Assessment Objectives
8.2. Neuromuscular Technology and Assessments
  8.2.1. Contact Mat
  8.2.2. Strength Platforms
  8.2.3. Load Cell
  8.2.4. Accelerometers
  8.2.5. Position Transducers
  8.2.6. Cellular Applications for Neuromuscular Evaluation
8.3. Submaximal Repetition Test
  8.3.1. Assessment Protocol
  8.3.2. Validated Estimation Formulae for the Different Training Exercises
  8.3.3. Mechanical and Internal Load Responses During a Submaximal Repetition Test
8.4. Progressive Maximum Incremental Exercise Test (IETmax)
  8.4.1. Naclerio and Figueroa Protocol 2004
  8.4.2. Mechanical (Linear Encoder) and Internal Load (PSE) Responses During a Max TPI
  8.4.3. Determining the Optimal Zone for Power Training
8.5. Horizontal Jump Test
  8.5.1. Assessment Without Use of Technology
  8.5.2. Technologically Assisted Assessment (Horizontal Encoder and Force Platform)

8.6. Simple Vertical Jump Test
- 8.6.1. Squat Jump Assessment
- 8.6.2. Counter Movement Jump Assessment
- 8.6.3. Assessment of an Abalakov Salto ABK
- 8.6.4. Drop Jump Assessment

8.7. Repeated Vertical Jump Test (Rebound Jump)
- 8.7.1. 5-second Repeated Jump Test
- 8.7.2. 15-second Repeated Jump Test
- 8.7.3. 30-second Repeated Jump Test
- 8.7.4. Fast Strength Endurance Index (Bosco)
- 8.7.5. Effort Exercise Index in Rebound Jump Test

8.8. Mechanical Responses (Strength, Power and Speed/Time) during Single and Repeated Jump Tests
- 8.8.1. Strength/Time in Simple and Repeated Jumps
- 8.8.2. Speed/Time in Single and Repeated Jumps
- 8.8.3. Power/Time in Simple and Repeated Jumps

8.9. Strength/Speed Profiles in Horizontal Vectors
- 8.9.1. Theoretical Basis of an S/S Profile
- 8.9.2. Morin and Samozino Assessment Protocols
- 8.9.3. Practical Applications
- 8.9.4. Contact Carpet, Linear Encoder and Force Platform Force Evaluation

8.10. Strength/Speed Profiles in Vertical Vectors
- 8.10.1. Theoretical Basis of an S/S Profile
- 8.10.2. Morin and Samozino Assessment Protocols
- 8.10.3. Practical Applications
- 8.10.4. Contact Carpet, Linear Encoder and Force Platform Evaluation of Forces

8.11. Isometric Tests
- 8.11.1. McCall Test
  - 8.11.1.1. Evaluation Protocol and Values Recorded With a Force Platform
- 8.11.2. Mid-Thigh Pull Test
  - 8.11.2.1. Evaluation Protocol and Values Recorded With a Force Platform

Module 9. Strength Training in Situational Sports

9.1. Fundamentals
- 9.1.1. Functional and Structural Adaptations
  - 9.1.1.1. Functional Adaptations
  - 9.1.1.2. Load-Pause Ratio (Density) as a Criterion for Adaptation
  - 9.1.1.3. Strength as a Base Quality
  - 9.1.1.4. Structural Adjustment Mechanisms or Indicators
  - 9.1.1.5. Utilization, Conceptualization of the Muscular Adaptations Provoked, as an Adaptive Mechanism of the Imposed Load. (Mechanical Stress, Metabolic Stress, Muscle Damage)
- 9.1.2. Motor Unit Recruitment
  - 9.1.2.1. Recruitment Order, Central Nervous System Regulatory Mechanisms, Peripheral Adaptations, Central Adaptations Using Tension, Speed or Fatigue as a Tool for Neural Adaptation
  - 9.1.2.2. Order of Recruitment and Fatigue During Maximum Effort
  - 9.1.2.3. Recruitment Order and Fatigue During Sub-Maximum Efforts
  - 9.1.2.4. Fibrillar Recovery

9.2. Specific Fundamentals
- 9.2.1. Movement as a Starting Point
- 9.2.2. Quality of Movement as a General Objective for Motor Control, Motor Pattern and Motor Programming
- 9.2.3. Priority Horizontal Movements
  - 9.2.3.1. Accelerating, Braking, Change of Direction with Inside Leg and Outside Leg, Maximum Absolute Speed and/or Sub-Maximum Speed Technique, Correction and Application According to Specific Movements in Competition
- 9.2.4. Priority Vertical Movements
  - 9.2.4.1. Jumps, Hops, Bounds Technique, Correction and Application According to Specific Movements in Competition

9.3. Technological Means for Strength Training and External Load Control Assessment
- 9.3.1. Introduction to Technology and Sport

9.3.2. Strength and Power Training Assessment and Control Technology
9.3.2.1. Rotary Encoder (Operation, Interpretation Variables, Intervention Protocols, Application)
9.3.2.2. Load Cell (Operation, Interpretation Variables, Intervention Protocols, Application)
9.3.2.3. Strength Platforms (Operation, Interpretation Variables, Intervention Protocols, Application)
9.3.2.4. Electric Photocells (Operation, Interpretation Variables, Intervention Protocols, Application)
9.3.2.5. Contact Mat (Operation, Interpretation Variables, Intervention Protocols, Application)
9.3.2.6. Accelerometer (Operation, Interpretation Variables, Intervention Protocols, Application)
9.3.2.7. Mobile Device Applications (Operation, Interpretation Variables, Intervention Protocols, Application)
9.3.3. Intervention Protocols for the Assessment and Control of Training

9.4. Internal Load Control
9.4.1. Subjective Load Perception by Perceived Exertion Rating
9.4.1.1. Subjective Perception of Load to Estimate Relative Load (% 1MR)
9.4.2. Scope
9.4.2.1. As Exercise Control
9.4.2.1.1. Repetitions and PRE
9.4.2.1.2. Repetitions in Reserve
9.4.2.1.3. Scale of Speed
9.4.2.2. Controlling the Overall Effect of a Session
9.4.2.3. As Periodization Tool
9.4.2.3.1. Use of (APRE) Self-Regulated Progressive Resistance Exercise, Data Interpretation and Relation to Correct Dosage of Load during Session
9.4.3. Recovery Quality Scale, Interpretation and Practical Application in the Session (TQR 0-10)
9.4.4. As a Tool for Daily Practice
9.4.5. Application
9.4.6. Recommendations

9.5. Means for Strength Training
- 9.5.1. Role of Means in Designing Method
- 9.5.2. Means According to Method and Central Sporting Objective
- 9.5.3. Types of Means
- 9.5.4. Movement Patterns and Activations as a Central Axis for Media Selection and Method Implementation

9.6. Building a Method
- 9.6.1. Defining the Types of Exercises
  - 9.6.1.1. Cross-Connectors as Guides to Movement Objective
- 9.6.2. Exercise Evolution
  - 9.6.2.1. Rotational Component Modification and Number of Supports According to Plane of Motion
- 9.6.3. Exercise Organization
  - 9.6.3.1. Relationship with Priority Horizontal and Vertical Movements (2.3 and 2.4)

9.7. Practical Implementation of a Method (Programming)
- 9.7.1. Logical Implementation of the Plan
- 9.7.2. Implementation of a Group Session
- 9.7.3. Individual Programming in a Group Context
- 9.7.4. Strength in Context Applied to the Game
- 9.7.5. Periodization Proposal

9.8. ITU 1 (Integrating Thematic Unit)
- 9.8.1. Training Construction for Functional and Structural Adaptations and Recruitment Order
- 9.8.2. Constructing a Training Monitoring and/or Assessment System
- 9.8.3. Movement-Based Training Construction for the Implementation of Fundamentals, Means and External and Internal Load Control

9.9. ITU 2 (Integrating Thematic Unit)
- 9.9.1. Construction of a Group Training Session
- 9.9.2. Construction of a Group Training Session in Context Applied to the Game
- 9.9.3. Construction of a Periodization of Analytical and Specific Loads

Module 10. Training in Medium and Long Duration Sports

10.1. Strength
- 10.1.1. Definition and Concept
- 10.1.2. Continuum of Conditional Abilities
- 10.1.3. Strength Requirements for Endurance Sports. Scientific Evidence
- 10.1.4. Strength Manifestations and Their Relationship to Neuromuscular Adaptations in Endurance Sports

10.2. Scientific Evidence on the Adaptations of Strength Training and its Influence on Medium and Long Duration Endurance Tests
- 10.2.1. Neuromuscular Adaptations
- 10.2.2. Metabolic and Endocrine Adaptations
- 10.2.3. Adaptations When Performing Specific Tests

10.3. Principle of Dynamic Correspondence Applied to Endurance Sports
- 10.3.1. Biomechanical Analysis of Force Production in Different Gestures: Running, Cycling, Swimming, Rowing, Cross-Country Skiing
- 10.3.2. Parameters of Muscle Groups Involved and Muscle Activation
- 10.3.3. Angular Kinematics
- 10.3.4. Rate and Duration of Force Production
- 10.3.5. Stress Dynamics
- 10.3.6. Amplitude and Direction of Movement

10.4. Concurrent Strength and Endurance Training
- 10.4.1. Historical Perspective
- 10.4.2. Interference Phenomenon
  - 10.4.2.1. Molecular Aspects
  - 10.4.2.2. Sports Performance
- 10.4.3. Effects of Strength Training on Endurance
- 10.4.4. Effects of Resistance Training on Strength Demonstrations
- 10.4.5. Types and Modes of Load Organization and Their Adaptive Responses
- 10.4.6. Concurrent Training. Evidence on Different Sports

10.5. Strength Training
- 10.5.1. Means and Methods for Maximum Strength Development
- 10.5.2. Means and Methods for Explosive Strength Development
- 10.5.3. Means and Methods for Reactive Strength Development
- 10.5.4. Compensatory and Injury Risk Reduction Training
- 10.5.5. Plyometric Training and Jumping Development as an Important Part of Improving Running Economy

10.6. Exercises and Special Means of Strength Training for Medium and Long Endurance Sports
- 10.6.1. Movement Patterns
- 10.6.2. Basic Exercises
- 10.6.3. Ballistic Exercises
- 10.6.4. Dynamic Exercises
- 10.6.5. Resisted and Assisted Strength Exercises
- 10.6.6. Core Exercises

10.7. Strength Training Programming Based on the Microcycle Structure
- 10.7.1. Selection and Order of Exercises
- 10.7.2. Weekly Frequency of Strength Training
- 10.7.3. Volume and Intensity According to the Objective
- 10.7.4. Recovery Times

10.8. Strength Training Aimed at Different Cyclic Disciplines
- 10.8.1. Strength Training for Middle-Distance and Long-Distance Runners
- 10.8.2. Strength Training for Cycling
- 10.8.3. Strength Training for Swimming
- 10.8.4. Strength Training for Rowing
- 10.8.5. Strength Training for Cross-Country Skiing

10.9. Controlling the Training Process
- 10.9.1. Load Speed Profile
- 10.9.2. Progressive Load Test

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

06

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

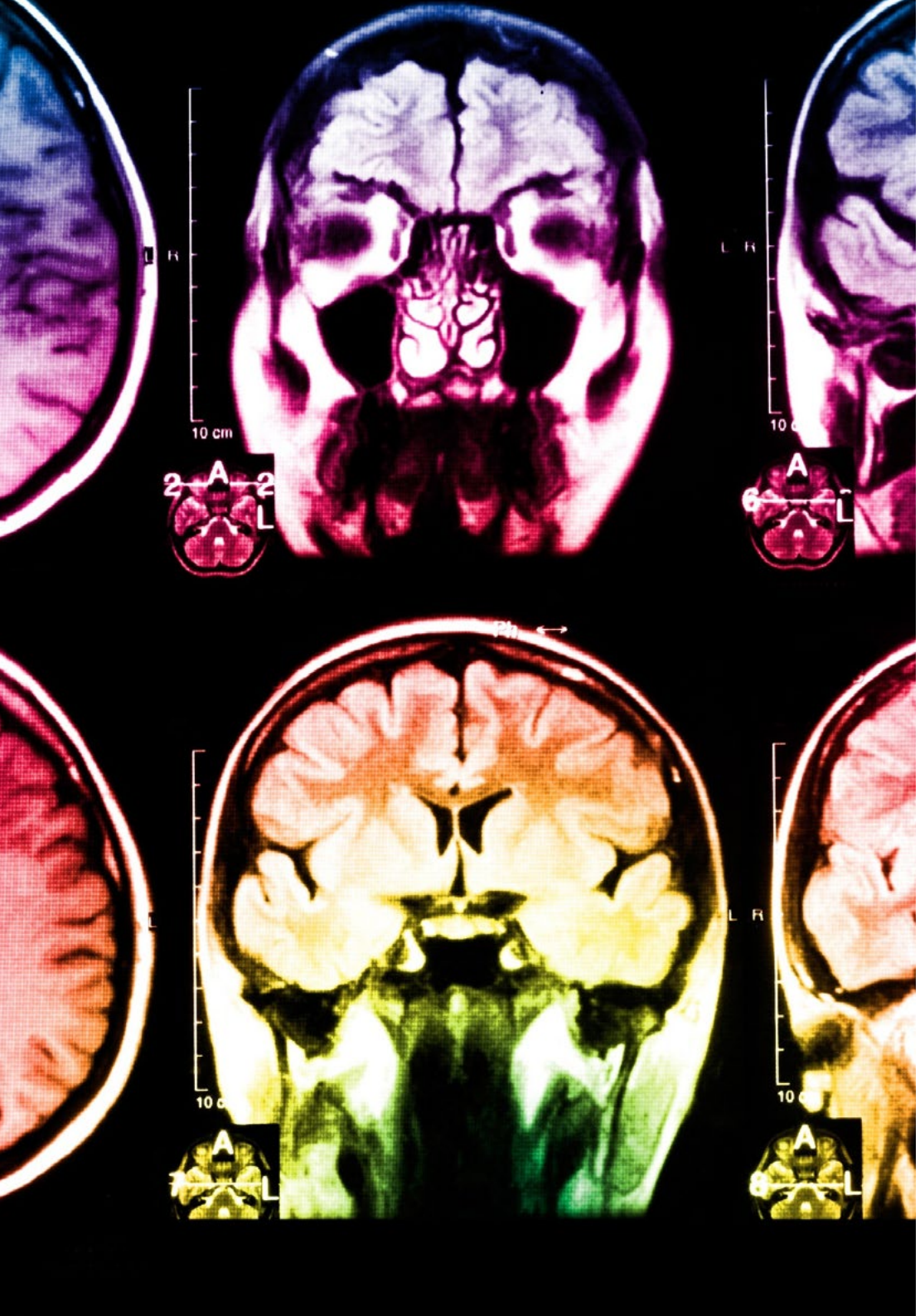
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

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.

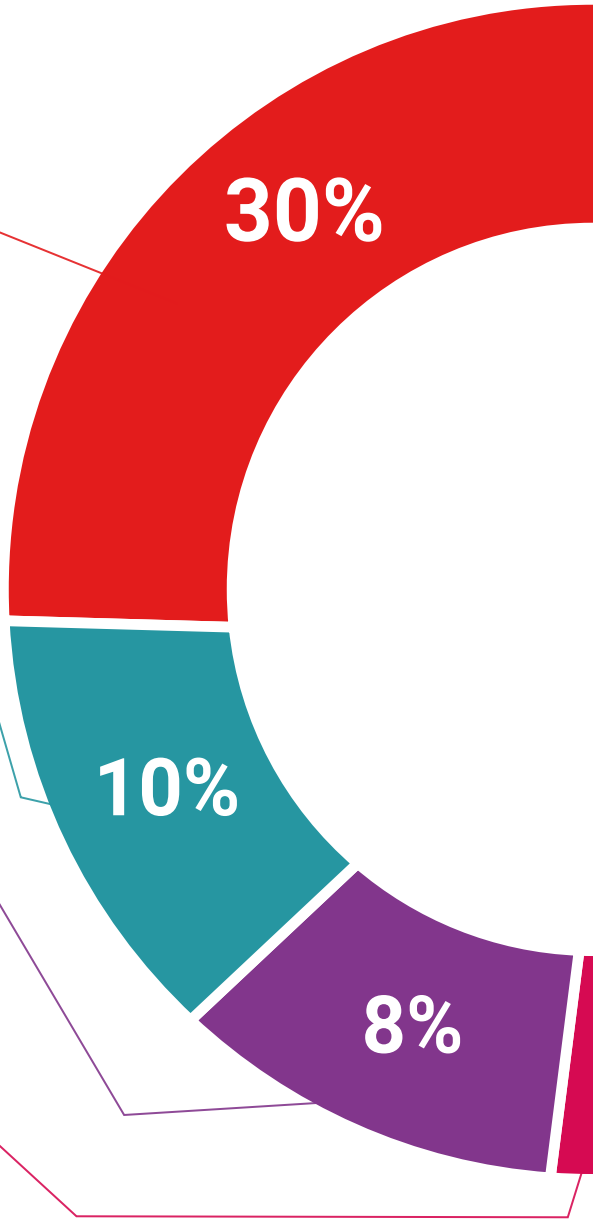
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

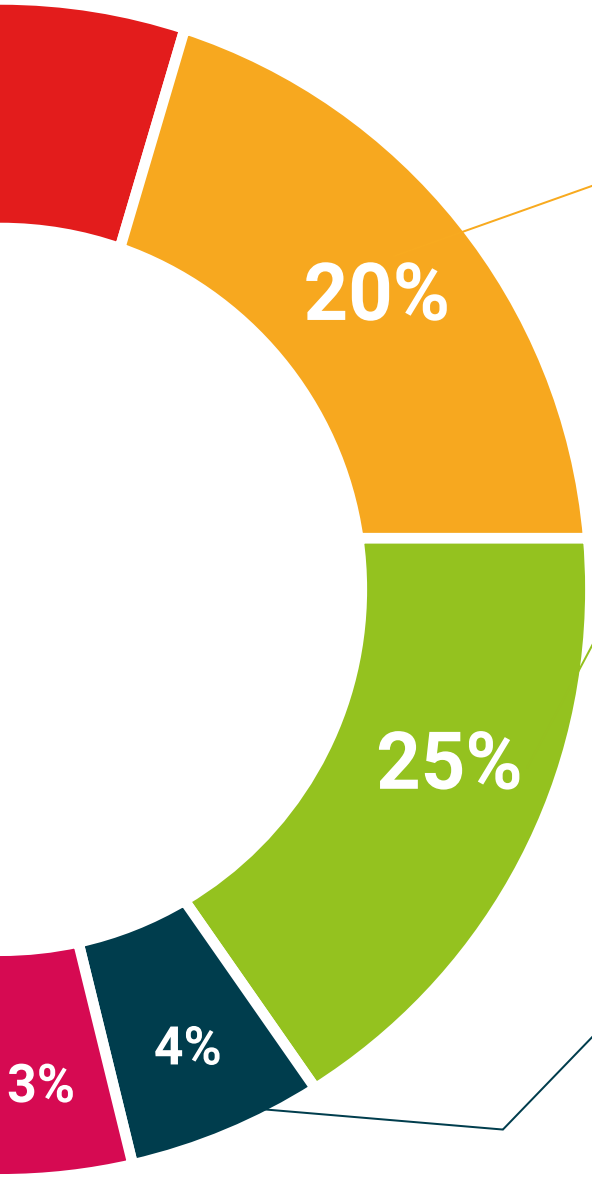
Practising Skills and Abilities

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.

07

Certificate

The Professional Master's Degree in Strength Training for Sports Performance guarantees students, in addition to the most rigorous and up-to-date education, access to a Professional Master's Degree issued by TECH Technological University.

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

This **Professional Master's Degree in Strength Training for Sports Performance** contains the most complete and up-to-date scientific program on the market.

After the student has passed the assessments, they will receive their corresponding **Professional Master's Degree** certificate issued by **TECH Technological University** via tracked delivery*.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Professional Master's Degree, and meets the requirements commonly demanded by job exchanges, competitive examinations, and professional career evaluation committees.

Title: **Professional Master's Degree in Strength Training for Sports Performance**

Official Number of Hours: **1,500 hours.**

Endorsed by the NBA


tech technological university

Awards the following

CERTIFICATE

to

Mr./Ms. _____, with identification number _____

For having successfully passed and accredited the following program

PROFESSIONAL MASTER'S DEGREE

in

Strength Training for Sports Performance

This is a qualification awarded by this University, equivalent to 1,500 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

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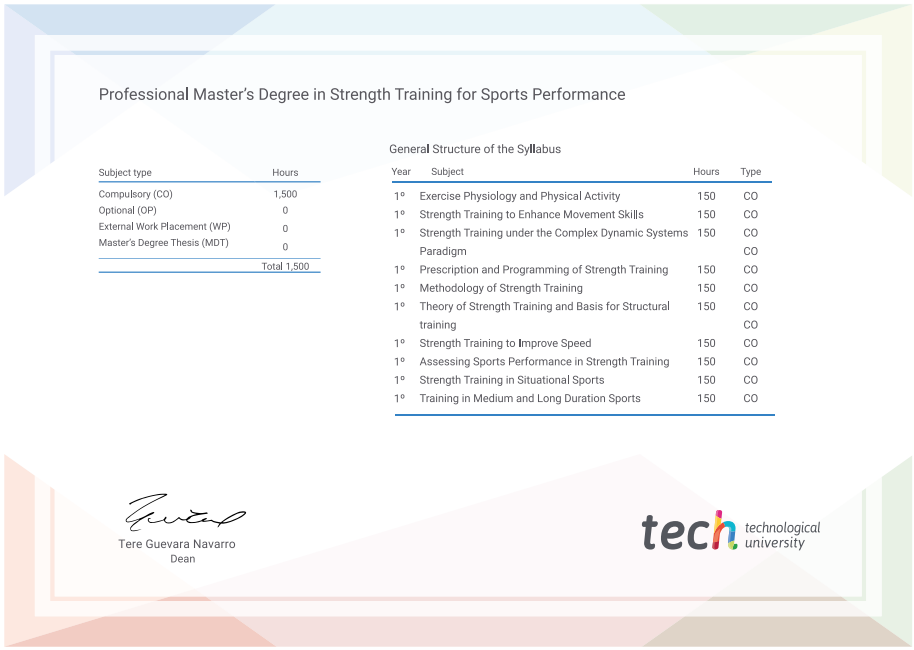
Dean

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


Professional Master's Degree in Strength Training for Sports Performance

Subject type	Hours
Compulsory (CO)	1,500
Optional (OP)	0
External Work Placement (WP)	0
Master's Degree Thesis (MDT)	0
	Total 1,500

General Structure of the Syllabus

Year	Subject	Hours	Type
1º	Exercise Physiology and Physical Activity	150	CO
1º	Strength Training to Enhance Movement Skills	150	CO
1º	Strength Training under the Complex Dynamic Systems Paradigm	150	CO
1º	Prescription and Programming of Strength Training	150	CO
1º	Methodology of Strength Training	150	CO
1º	Theory of Strength Training and Basis for Structural training	150	CO
1º	Strength Training to Improve Speed	150	CO
1º	Assessing Sports Performance in Strength Training	150	CO
1º	Strength Training in Situational Sports	150	CO
1º	Training in Medium and Long Duration Sports	150	CO

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*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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Professional Master's Degree

Strength Training for Sports Performance

- Modality: **online**
- Duration: **12 months**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Professional Master's Degree

Strength Training for Sports Performance

Endorsed by the NBA

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