

# Postgraduate Diploma

## Diagnosis, Treatment and Rehabilitation of Locomotor Pathologies in Sport Horses





## Postgraduate Diploma Diagnosis, Treatment and Rehabilitation of Locomotor Pathologies in Sport Horses

Course Modality: **Online**

Duration: **6 months**

Certificate: **TECH Technological University**

Official N° of hours: **450 h.**

Website: [www.techtute.com/us/veterinary-medicine/postgraduate-diploma/postgraduate-diploma-diagnosis-treatment-rehabilitation-locomotor-pathologies-sport-horses](http://www.techtute.com/us/veterinary-medicine/postgraduate-diploma/postgraduate-diploma-diagnosis-treatment-rehabilitation-locomotor-pathologies-sport-horses)

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Certificate

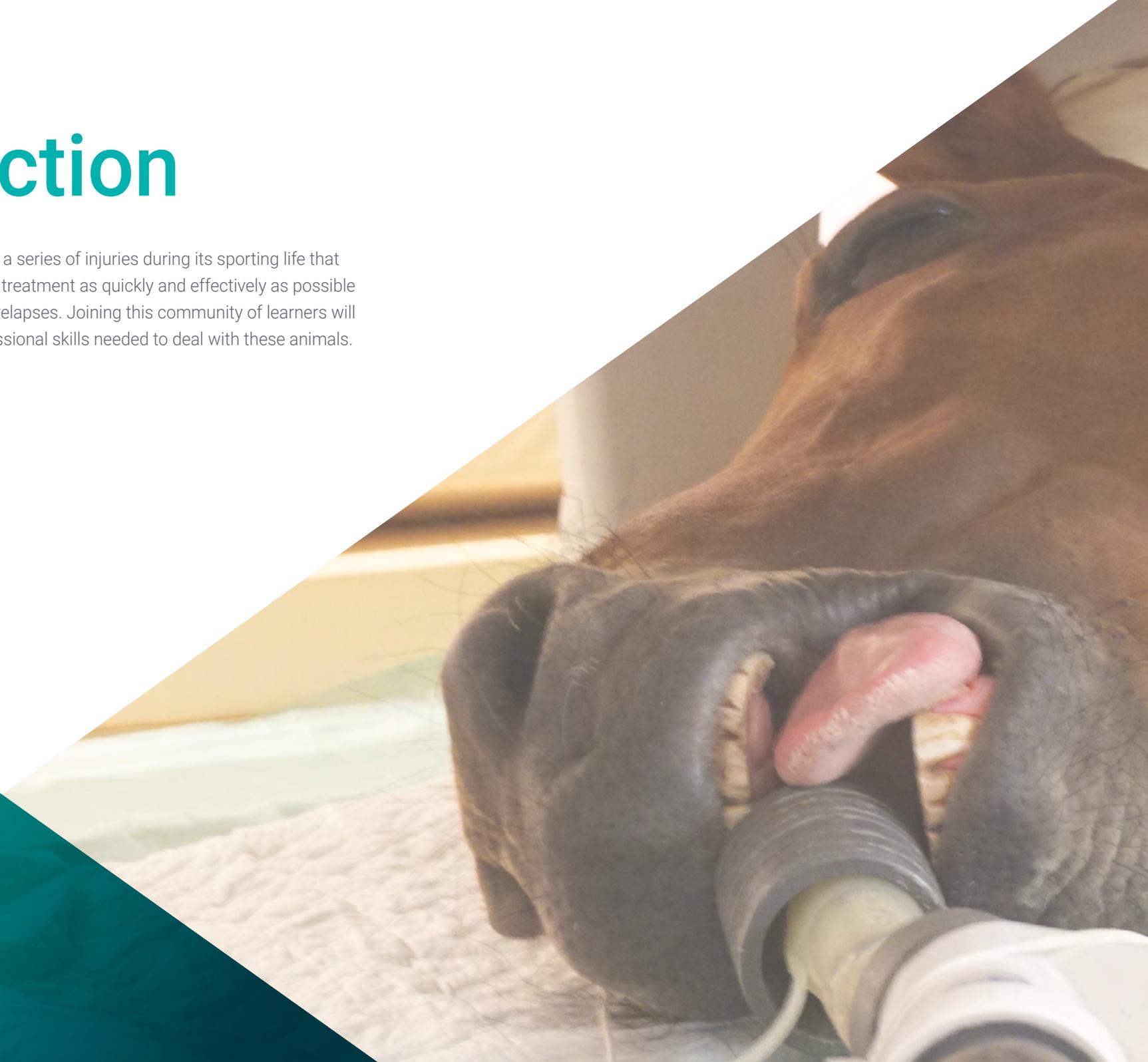
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# 01

# Introduction

The horse, like any athlete, presents a series of injuries during its sporting life that require identification, diagnosis and treatment as quickly and effectively as possible to reduce loss of performance and relapses. Joining this community of learners will allow students to develop the professional skills needed to deal with these animals.



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*Veterinarians with expertise in horse locomotor pathologies can help extend the sporting life of these competition animals”*

This Postgraduate Diploma in Diagnosis, Treatment and Rehabilitation of Locomotor Pathologies in Sport Horses approaches this discipline through the experience of several internationally accredited rehabilitation specialists, including information that cannot be found in any other online or classroom program, delivered by a faculty of the highest level.

Effective treatment and rehabilitation of sports horse pathologies requires accurate diagnosis. For this, a detailed anamnesis, clinical examination, use of the correct diagnostic tools and, finally, the application of a treatment to aid the horse's sporting recovery must be carried out.

This Postgraduate Diploma addresses the most relevant pathologies in detail and the most appropriate diagnostic methods for the musculoskeletal system for equine physiotherapists.

In recent years, thanks in part to the introduction of advanced imaging techniques in equine medicine, many advances have been made in diagnosis as well as in conventional treatment and physiotherapy. Injury monitoring and rehabilitation have gained importance in the field of equine medicine.

The study of musculoskeletal problems in the horse is a complex process, but very common in equine medicine. It is one of the most frequent causes of decreased performance in this species and, therefore, can represent a significant economic loss for the owner in the case of competition or racehorses.

This Postgraduate Diploma provides students with specialist tools and skills to enhance their professional practice and work on key competencies such as knowledge of the day-to-day realities of veterinary professionals and responsibility in the monitoring and supervision of their work, as well as communication skills for effective teamwork.

In addition, as it is an online Postgraduate Diploma, 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 Diploma in Diagnosis, Treatment and Rehabilitation of Locomotor Pathologies in Sport Horses** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The development of practical cases presented by experts in equine physiotherapy and rehabilitation
- ♦ Graphic, schematic, and practical contents which provide scientific and practical information on the disciplines that are essential for professional practice
- ♦ Practical exercises where self-assessment can be used to improve learning
- ♦ Special emphasis on innovative methodologies in Diagnosis, Treatment and Rehabilitation of Locomotor Pathologies in Sport Horses
- ♦ 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



*Don't miss the opportunity to take this Postgraduate Diploma in Diagnosis, Treatment and Rehabilitation of Locomotor Pathologies in Sport Horses with us. It's the perfect opportunity to advance your career"*

“

*This Postgraduate Diploma is the best investment you can make in selecting a refresher program to update your knowledge in Locomotor Pathologies of the Sport Horse"*

Its teaching staff includes veterinary professionals, who bring their professional experience to this program, as well as recognised 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 specialist 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 developed by renowned and experienced experts in diagnosis, treatment and rehabilitation of locomotor pathologies of the sport horse.

*This program comes with the best educational material, providing you with a contextual approach that will facilitate your learning.*

*This 100% online Postgraduate Diploma will allow you to combine your studies with your professional work while expanding your knowledge in this field.*



# 02

# Objectives

This program in Diagnosis, Treatment and Rehabilitation of Locomotor Pathologies in Sport Horses is aimed at facilitating the performance of the veterinary professional with the latest advances and most innovative treatments in the sector.



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*Our goal is to provide quality professional development so that our students become the best in their profession"*



## General objectives

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- ♦ Gain essential knowledge for obtaining and reading diagnostic images
- ♦ Acquire knowledge of diagnostic technique and its clinical application
- ♦ Assess the different pathologies and their clinical significance
- ♦ Provide the foundation on which to establish adequate physiotherapeutic treatment
- ♦ Explore the most common locomotor system pathologies in equine athletes, their diagnosis and options for conventional treatments and physiotherapy
- ♦ Present new techniques to diagnose and monitor pathology lesions
- ♦ Propose new treatments based on publications and analyze previous treatments
- ♦ Establish general recommendations to design treatment and rehabilitation for injuries





## Specific objectives

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### Module 1. Diagnostic Imaging for the Diagnosis of Problems Treatable with Physiotherapy

- ◆ Establish a protocol for diagnostic imaging screening
- ◆ Identify which technique is necessary in each case
- ◆ Build expertise in each anatomical area
- ◆ Establish a diagnosis that aids effective treatment of the patient
- ◆ Determine the various diagnostic techniques and the contributions each makes to the examination
- ◆ Examine the normal anatomy of the different areas to be explored with the different forms of imaging
- ◆ Recognize individual anatomical variations
- ◆ Assess incidental findings and their possible clinical impact
- ◆ Establish significant disorders with different diagnostic methods and their interpretation
- ◆ Provide an accurate diagnosis to assist in the establishment of an appropriate treatment

### Module 2. Common Injuries in Sport Horses: Diagnosis, Conventional Treatment, Rehabilitation Programs and Physiotherapy Thoracic Limb Part I

- ◆ Present the most frequent thoracic pathologies, as well as their etiopathology, diagnosis, treatment and rehabilitation
- ◆ Recognize clinical signs associated to each thoracic pathology
- ◆ Evaluate conventional treatment options for the most frequent thoracic limb pathologies and subsequent monitoring
- ◆ Know the available physiotherapeutic treatments, rehabilitation protocols and physiotherapy treatments of the most frequent thoracic limb pathologies

### Module 3. Common Injuries in Sport Horses: Diagnosis, Conventional Treatment, Rehabilitation Programs and Physiotherapy Pelvic Limb Part II

- ◆ Compile images for each pathology to present examples of clinical cases
- ◆ Establish differential diagnoses that cause similar clinical signs
- ◆ Develop different therapies for each pathology
- ◆ Gain methodical knowledge for the diagnosis of forelimb lameness
- ◆ Determine guidelines to design individualized rehabilitation programs



*A professional development and growth path that will propel you towards a greater level of competitiveness in the employment market"*

03

# Course Management

The faculty includes leading experts in Equine Physiotherapy and Rehabilitation who pour their professional experience into this program. They are world-renowned professionals from different countries with proven theoretical and practical professional experience.



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*We have the most complete and successful  
faculty in the world of academia”*

## Management



### Dr. Hernández Fernández, Tatiana

- ♦ Diploma in Physiotherapy at the URJC
- ♦ Degree in Veterinary Medicine from the UCM
- ♦ Resident in the area of Equidae at the Clinical Veterinary Hospital of the UCM
- ♦ Practical experience of more than 500 hours in hospitals, sports centers, primary care centers and human physical therapy clinics
- ♦ More than 10 years working as a specialist in rehabilitation and physiotherapy

## Professors

### Dr. Argüelles Capilla, David

- ♦ PhD in Veterinary Medicine from the Autonomous University of Barcelona (UAB)
- ♦ Degree in Veterinary Medicine, Autonomous University of Barcelona
- ♦ Resident in Sports Medicine and Rehabilitation for the ACVSMR
- ♦ Diploma in Equine Surgery from the European College of Equine Veterinary Surgeons (ECVS)

### Dr. Luna Correa, Paulo Andrés

- ♦ Postgraduate in Physiotherapy and Rehabilitation of Sport Equine, in IACES, with Equidynamics by MV Marta García Piqueres, Madrid, Spain.
- ♦ Master in Equine Sports Medicine, University of Cordoba UCO, Spain
- ♦ Equine Physiotherapy and Rehabilitation Exercise for a personal venture: eKine



**Dr. Boado Lama, Ana**

- ◆ Internship at the Animal Health Trust, Newmarket
- ◆ Residency in Orthopedics at the University of Edinburgh, UK.
- ◆ Certificate in Equine Surgery (Orthopedics) from the Royal College of Veterinary Surgeons, UK
- ◆ Advanced Practitioner of Equine Surgery (Orth) (RCVS)
- ◆ Diploma in Sports Medicine and Rehabilitation (American and European)
- ◆ Member of the British Veterinary Association (BEVA) and the Spanish Association of Equine
- ◆ Speaker at international and national congresses and courses
- ◆ Specialized Equine Sports Medicine and Rehabilitation Service

**Dr. Goyoaga Elizalde, Jaime**

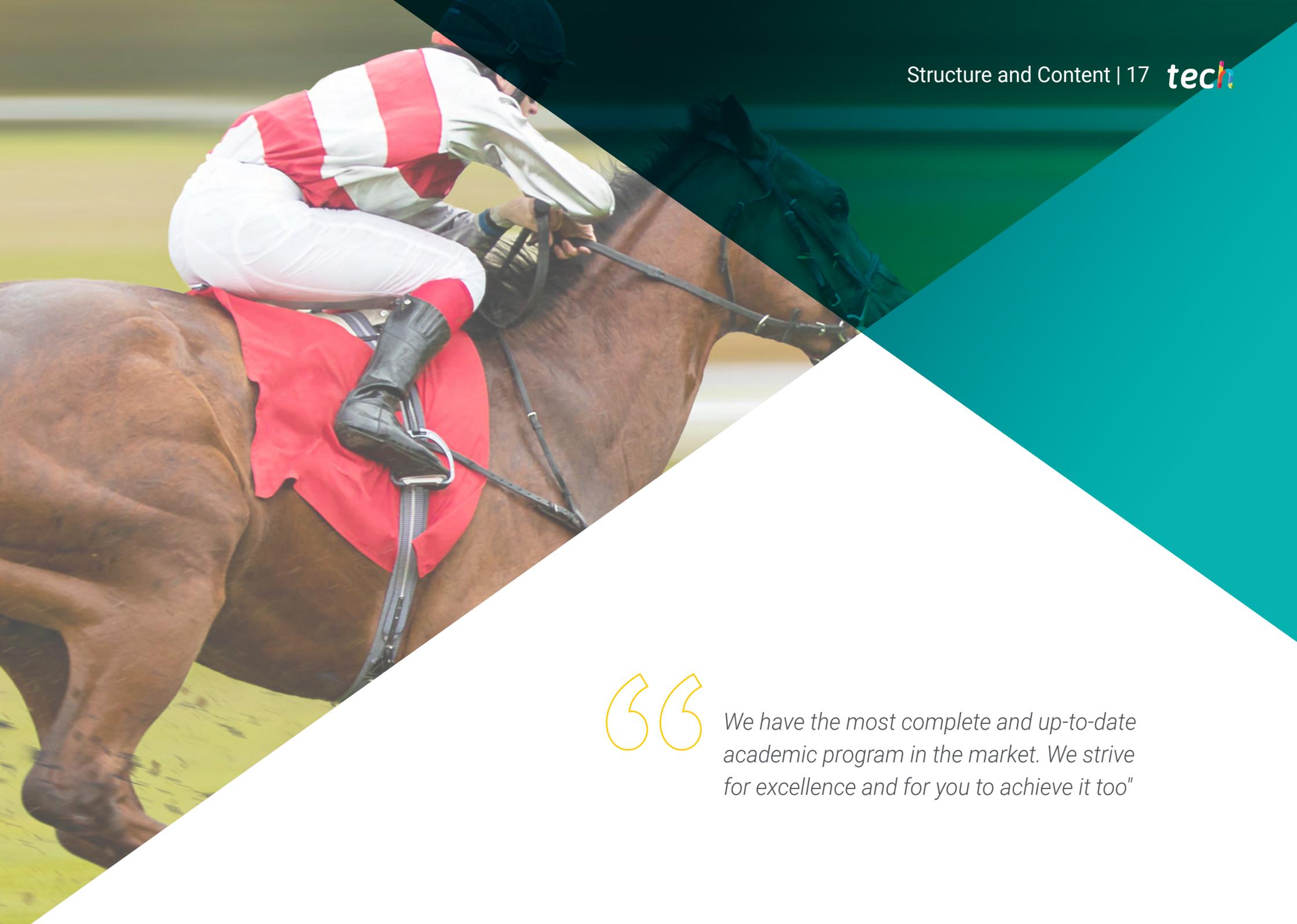
- ◆ Degree in Veterinary Medicine from the University of Bern, Germany (veterinary clinic "Dr. Cronau") and the United States (University of Georgia).
- ◆ Co-director and Professor of the Master's Degree "Equine Medicine and Surgery" Improve International
- ◆ Professor in Expert in Bases of Physiotherapy and Animal Rehabilitation. UCM.

# 04

# Structure and Content

The syllabus has been designed by the best professionals in Equine Physiotherapy and Rehabilitation, with extensive experience and excellent standing within the profession, backed by a large volume of cases reviewed, studied, and diagnosed, and extensive knowledge of new technologies applied to veterinary care.





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*We have the most complete and up-to-date academic program in the market. We strive for excellence and for you to achieve it too"*

**Module 1. Diagnostic Imaging for the Diagnosis of Problems Treatable with Physiotherapy**

- 1.1. Radiology. Radiology of the Phalanges I
  - 1.1.1. Introduction
  - 1.1.2. Radiographic Technique
  - 1.1.3. Radiology of the Phalanges I
    - 1.1.3.1. Radiographic Technique and Normal Anatomy
    - 1.1.3.2. Incidental Findings
    - 1.1.3.3. Significant Findings
- 1.2. Radiology of the Phalanges II: Navicular Disease and Laminitis
  - 1.2.1. Radiology of the Third Phalanx in Cases of Navicular
    - 1.2.1.1. Radiologic Changes in Navicular Disease
  - 1.2.2. Radiology of the Third Phalanx in Cases of Laminitis
    - 1.2.2.1. How to Measure Changes in the Third Phalanx with Good Radiographs
    - 1.2.2.2. Evaluation of Radiographic Disorders
    - 1.2.2.3. Assessment of Corrective Hardware
- 1.3. Radiology of the Fetlock and Metacarpus/Metatarsus
  - 1.3.1. Radiology of the Fetlock
    - 1.3.1.1. Radiographic Technique and Normal Anatomy
    - 1.3.1.2. Incidental Findings
    - 1.3.1.3. Significant Findings
  - 1.3.2. Radiology of the Metacarpus/Metatarsus
    - 1.3.2.1. Radiographic Technique and Normal Anatomy
    - 1.3.2.2. Incidental Findings
    - 1.3.2.3. Significant Findings
- 1.4. Radiology of the Carpus and Proximal Area (Elbow and Shoulder)
  - 1.4.1. Radiology the Carpus
    - 1.4.1.1. Radiographic Technique and Normal Anatomy
    - 1.4.1.2. Incidental Findings
    - 1.4.1.3. Significant Findings
  - 1.4.2. Radiology of the Proximal Area (Elbow and Shoulder)
    - 1.4.2.1. Radiographic Technique and Normal Anatomy
    - 1.4.2.2. Incidental Findings
    - 1.4.2.3. Significant Findings
- 1.5. Radiology the Hock and Stifle
  - 1.5.1. Radiology of the Hock
    - 1.5.1.1. Radiographic Technique and Normal Anatomy
    - 1.5.1.2. Incidental Findings
    - 1.5.1.3. Significant Findings
  - 1.5.2. Radiology of the Stifle
    - 1.5.2.1. Radiographic Technique and Normal Anatomy
    - 1.5.2.2. Incidental Findings
    - 1.5.2.3. Significant Findings
- 1.6. Radiology of the Spine
  - 1.6.1. Radiology the Neck
    - 1.6.1.1. Radiographic Technique and Normal Anatomy
    - 1.6.1.2. Incidental Findings
    - 1.6.1.3. Significant Findings
  - 1.6.2. Radiology the Dorsum
    - 1.6.2.1. Radiographic Technique and Normal Anatomy
    - 1.6.2.2. Incidental Findings
    - 1.6.2.3. Significant Findings
- 1.7. Musculoskeletal Ultrasound General Aspects
  - 1.7.1. Obtaining and Interpretation of Ultrasound Images
  - 1.7.2. Ultrasound of Tendons and Ligaments
  - 1.7.3. Ultrasound of Joints, Muscles and Bone Surfaces



- 1.8. Thoracic Limb Ultrasound
  - 1.8.1. Normal and Pathologic Images in the Thoracic Limb
    - 1.8.1.1. Hoof, Pastern and Fetlock
    - 1.8.1.2. Metacarpus
    - 1.8.1.3. Carpus, Elbow and Shoulder
- 1.9. Ultrasound of the Pelvic Limb, Neck and Dorsum
  - 1.9.1. Normal and Pathological Images in the Pelvic Limb and Axial Skeleton
    - 1.9.1.1. Metatarsus and Tarsus
    - 1.9.1.2. Stifle, Thigh and Hip
    - 1.9.1.3. Neck, Dorsum and Pelvis
- 1.10. Other Diagnostic Imaging Techniques: Magnetic Resonance Imaging, Computed Axial Tomography, Scintimammography, PET, etc.
  - 1.10.1. Description and Uses of Different Techniques
  - 1.10.2. Magnetic Resonance
    - 1.10.2.1. Acquisition Technique Cuts and Sequences
    - 1.10.2.2. Image Interpretation
    - 1.10.2.3. Artifacts in Interpretation
    - 1.10.2.4. Significant Findings
  - 1.10.3. CAT
    - 1.10.3.1. Uses of CT in the Diagnosis of Musculoskeletal System Injuries
  - 1.10.4. Gammagraphy
    - 1.10.4.1. Uses Gammagraphy in the Diagnosis of Musculoskeletal System Injuries

**Module 2.** Common Injuries in Sport Horses: Diagnosis, Conventional Treatment, Rehabilitation Programs and Physiotherapy Thoracic Limb Part I

- 2.1. Introduction
- 2.2. Hoof
  - 2.2.1. Capsule: Laminitis, Quarters, Cancker
  - 2.2.2. Arthrosis
  - 2.2.3. Collateral
  - 2.2.4. Deep Flexor
  - 2.2.5. Podotrochlear Apparatus
  - 2.2.6. Phalanges
- 2.3. Metacarpophalangeal Joint
- 2.4. Digital Sheath
- 2.5. Metacarpal Region
  - 2.5.1. Superficial Digital Flexor
  - 2.5.2. Deep Digital Flexor
  - 2.5.3. Ligament Check
  - 2.5.4. Suspensory Ligament
- 2.6. Pathology of the Carpus
- 2.7. Carpal Sheath
- 2.8. Radius, Elbow and Shoulder Pathology
- 2.9. Conventional Treatments for the Most Frequent Pathologies of the Thoracic Limb and Their Monitoring
- 2.10. Physiotherapeutic Treatments, Rehabilitation Protocols and Physiotherapy Treatment of the Most Frequent Pathologies of the Thoracic Limb
  - 2.10.1. Special Considerations for Each Sport Discipline: Dressage/Jumping/Raid/Complete/Speed Races





### **Module 3.** Common Injuries in Sport Horses: Diagnosis, Conventional Treatment, Rehabilitation Programs and Physiotherapy Pelvic Limb Part II

- 3.1. Introduction
- 3.2. Common Pathologies of the Distal to the Tarsus in the Pelvic Limb
  - 3.2.1. Hoof
  - 3.2.2. Metacarpophalangeal Joint
  - 3.2.3. Sheath and Tendons
- 3.3. Suspensory Ligament of the Fetlock
- 3.4. Tarsal Pathology
- 3.5. Tibia and Stifle Pathology
- 3.6. Hip and Pelvis Pathology
- 3.7. Spine Pathology
  - 3.7.1. Cervical Pathology
  - 3.7.2. Thoracic Pathology
    - 3.7.2.1. Spinal Processes
    - 3.7.2.2. Joint Facets
    - 3.7.2.3. Vertebral Bodies
  - 3.7.3. Lumbosacral-Iliac
- 3.8. Conventional Treatments of the Most Frequent Pathologies of the pelvic Limb and Spine
  - 3.8.1. Arthrosis
  - 3.8.2. Bone Tissue
  - 3.8.3. Soft Tissues
- 3.9. Physiotherapeutic Treatments, Rehabilitation Protocols of the Most Frequent Pathologies of the Pelvic Limb and Spine
  - 3.9.1. Special Considerations for Each Sports Discipline
- 3.10. Monitoring of Pelvic Limb and Spine Injuries

# 05 Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.





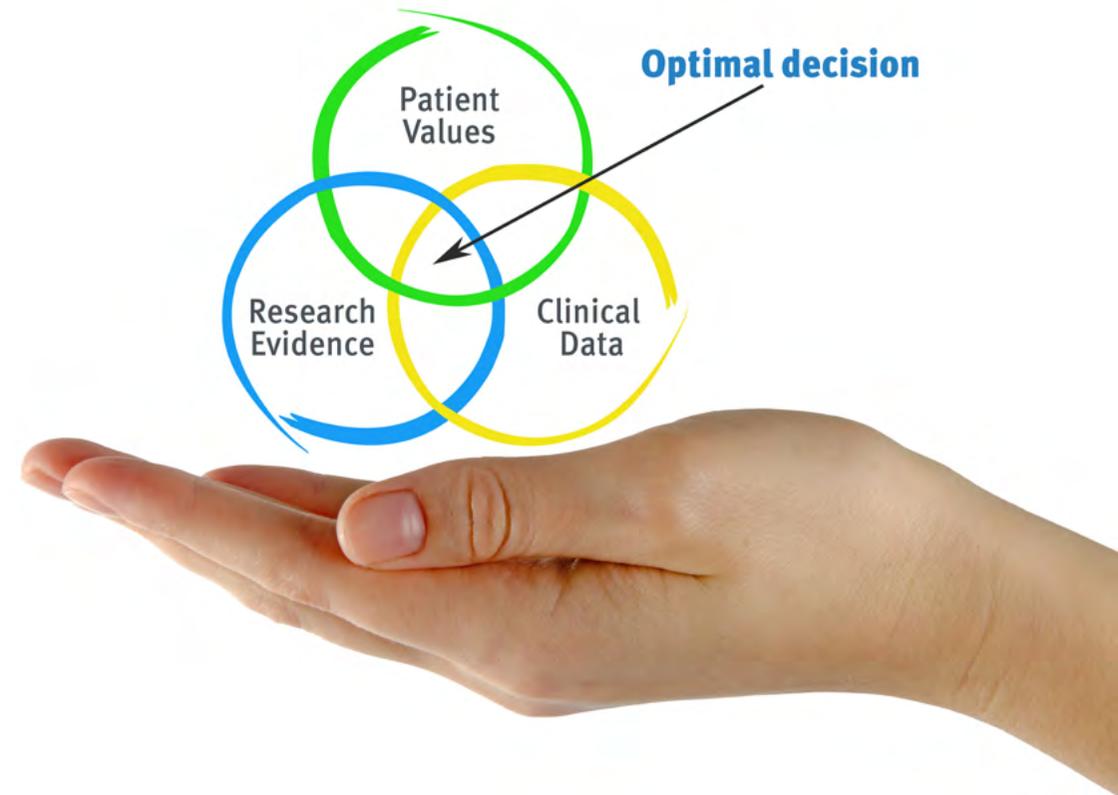
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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

*With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.*



According to Dr. Gervas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, in an attempt to recreate the actual conditions in a veterinarian's professional practice.

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*Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method”*

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

1. Veterinarians who follow this method not only manage to assimilate concepts, but also develop their mental capacity through exercises to evaluate real situations and knowledge application
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. The feeling that the effort invested is effective becomes a very important motivation for veterinarians, which translates into a greater interest in learning and an increase in the time dedicated to working on the course.



## Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.



*Veterinarians will learn through real cases and by resolving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.*

At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology more than 65,000 veterinarians have been trained with unprecedented success in all clinical specialties, regardless of the surgical load. Our teaching method is developed in a highly demanding environment, where the students have a high 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.*

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.

The overall score obtained by TECH's learning system is 8.01, according to the highest international standards.



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.



#### Latest Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current and procedures of veterinary techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



#### Interactive Summaries

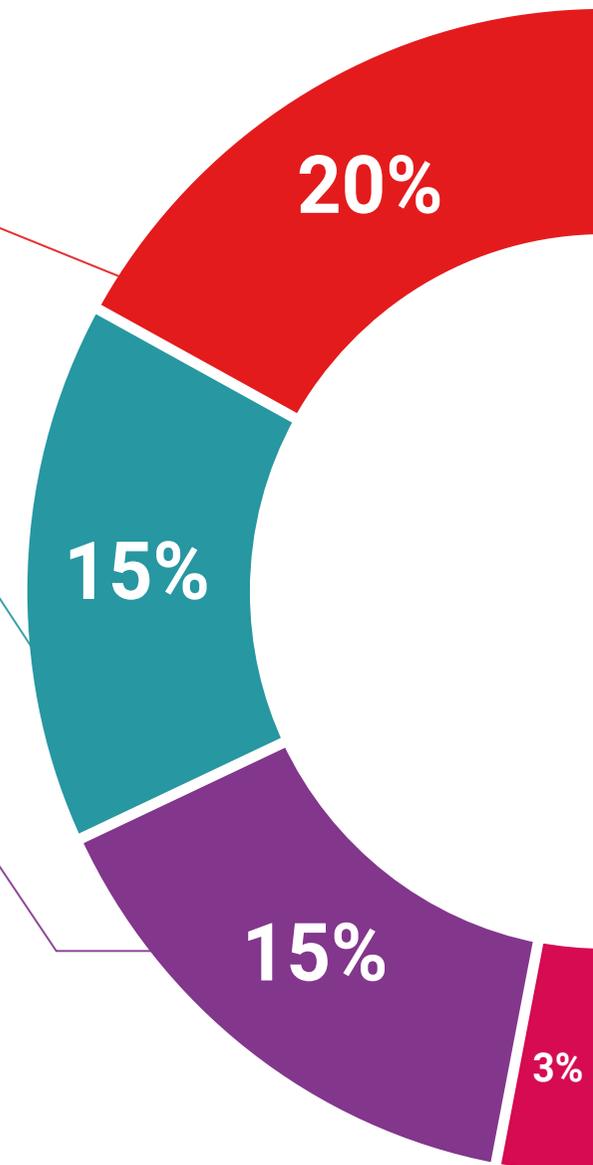
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

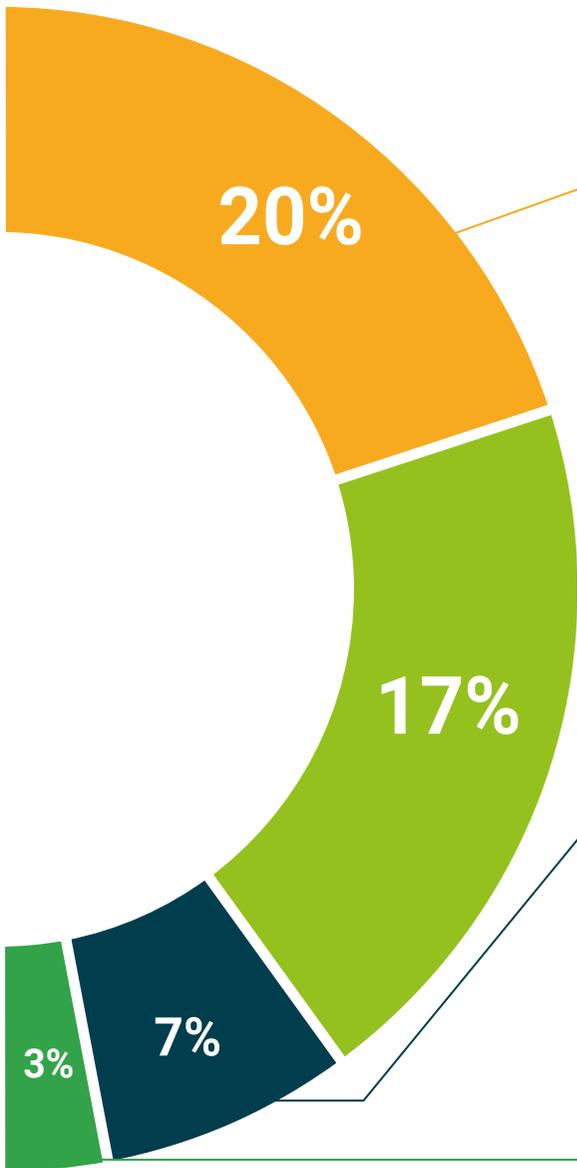
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### 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.





#### Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### 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.



#### 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.



#### Quick Action Guides

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.



# 06 Certificate

This Postgraduate Diploma in Diagnosis, Treatment and Rehabilitation of Locomotor Pathologies in Sport Horses guarantees you, in addition to the most rigorous and updated training, access to a Postgraduate Diploma issued by TECH Technological University.





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*Successfully complete this program  
and receive your university degree  
without travel or laborious paperwork”*

This **Postgraduate Diploma in Diagnosis, Treatment and Rehabilitation of Locomotor Pathologies in Sport Horses** 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 **Postgraduate Diploma** issued by **TECH Technological University** via tracked delivery\*.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Diploma, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Diploma in Diagnosis, Treatment and Rehabilitation of Locomotor Pathologies in Sport Horses**

Official N° of hours: **450 h.**



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

future  
health confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present  
development language  
classroom

**tech** technological  
university

**Postgraduate Diploma**  
Diagnosis, Treatment  
and Rehabilitation of  
Locomotor Pathologies  
in Sport Horses

Course Modality: Online

Duration: 6 months

Certificate: TECH Technological University

Official N° of hours: 450 h.

# Postgraduate Diploma

## Diagnosis, Treatment and Rehabilitation of Locomotor Pathologies in Sport Horses

