Postgraduate Certificate

Diagnostic Imaging in Musculoskeletal Pathologies

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Postgraduate Certificate

Diagnostic Imaging in Musculoskeletal Pathologies

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

Website: www.techtitute.com/us/veterinary-medicine/postgraduate-certificate/diagnosis-imaging-musculoskeletal-pathologies

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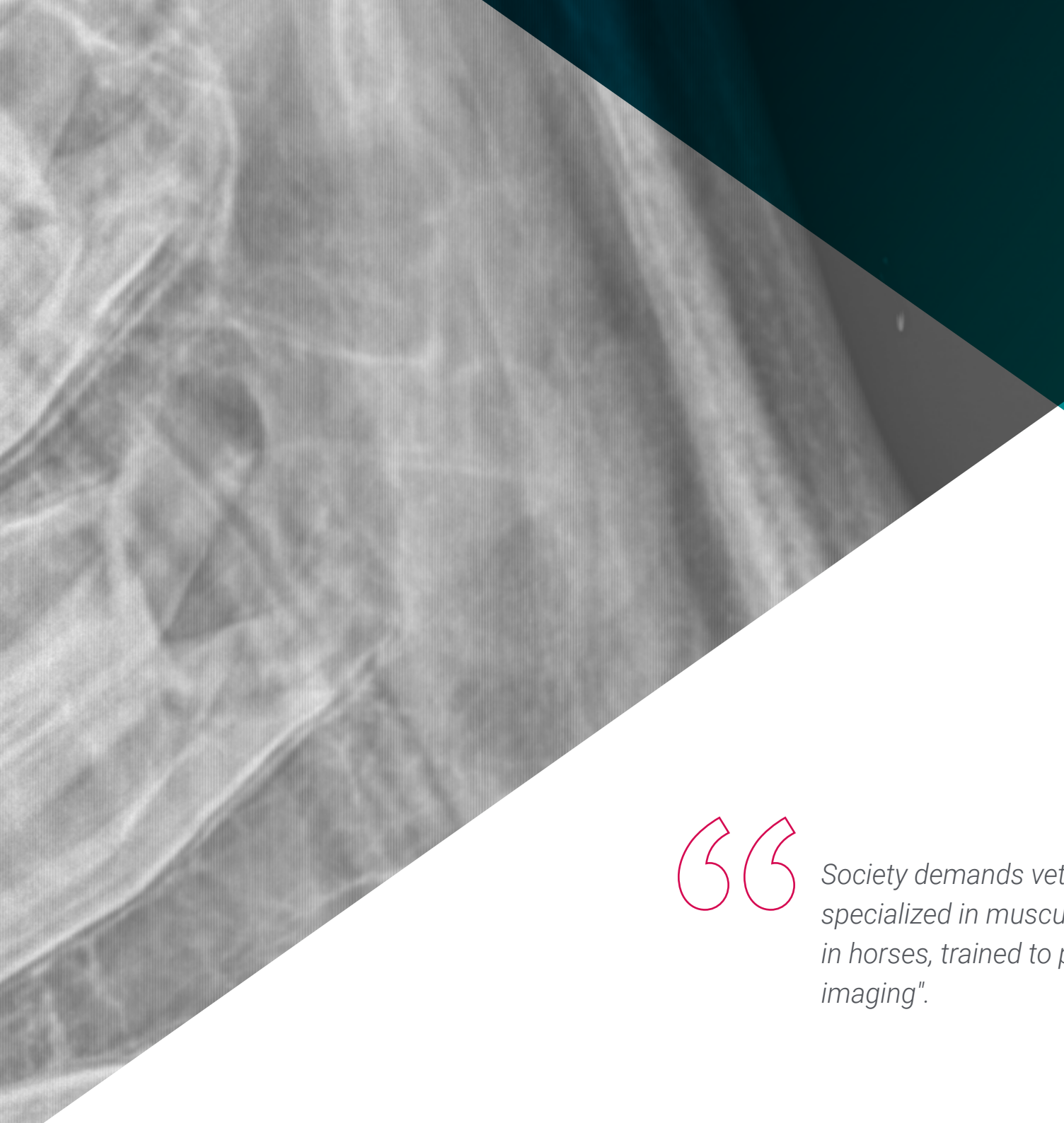
01

Introduction

A correct treatment and rehabilitation of pathologies requires an accurate diagnosis. For this, a correct anamnesis, clinical examination, use of the correct diagnostic tools and, finally, the application of a treatment aimed at the horse's sporting recovery must be carried out. Join our community of learners and develop your skills to treat these animals.



Society demands veterinary professionals specialized in musculoskeletal pathologies in horses, trained to perform diagnostic imaging".

Currently, diagnostic imaging consists of multiple modalities, not all of which are easy to understand. The physical basis of MRI, for example, is a complex chapter that cannot be dealt with briefly, but in order to reach a diagnosis it is necessary to understand the different modalities of image acquisition in the various diagnostic techniques.

This University Course addresses in detail the most relevant pathologies and the most appropriate diagnostic modalities of the musculoskeletal system from the point of view of an equine physiotherapist. At the end of the training, the student will be able to recognize by means of diagnostic imaging techniques the most frequent pathologies in the musculoskeletal system alterations in horses.

Each topic describes the radiographic technique of the anatomical region to be treated, reviewing the standard projections and the special projections of each area to be evaluated. Subsequently, the individual anatomical variations that can be observed are described, as well as incidental findings and their interpretation. The pathologies of each anatomical region are also developed. With respect to ultrasound, the ultrasound technique, normal images and the most significant alterations in musculoskeletal system lesions are described. Finally, other very current techniques such as MRI, CT, Gammagraphy or PET are analyzed.

This Postgraduate Certificate provides students with specialized tools and skills to successfully develop their professional activity, working on key competencies such as knowledge of the reality and daily practice of the veterinary professional, and developing responsibility in the monitoring and supervision of their work, as well as communication skills within the essential teamwork.

In addition, as it is an university 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 Diagnostic Imaging in Musculoskeletal Pathologies** contains the most complete and up-to-date educational program on the market. The most important features of the program include:

- The development of practical cases presented by experts in equine physiotherapy and rehabilitation
- The graphic, schematic, and eminently practical contents with which they are created, 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 imaging methodologies in musculoskeletal pathologies of the horse.
- 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

Do not miss the opportunity to take this Postgraduate Certificate in Diagnostic Imaging in Musculoskeletal Pathologies. It's the perfect opportunity to advance your career"

This Postgraduate Certificate is the best investment you can make in selecting a refresher program to update your knowledge in Diagnostic Imaging in Musculoskeletal Pathologies"

This training comes with the best didactic material, providing you with a contextual approach that will facilitate your learning.

This 100% online course will allow you to combine your studies with your professional work while increasing your knowledge in this field.

Its teaching staff includes professionals from the veterinary field, who bring the experience of their work to this training, as well as recognised specialists from leading societies and prestigious universities.

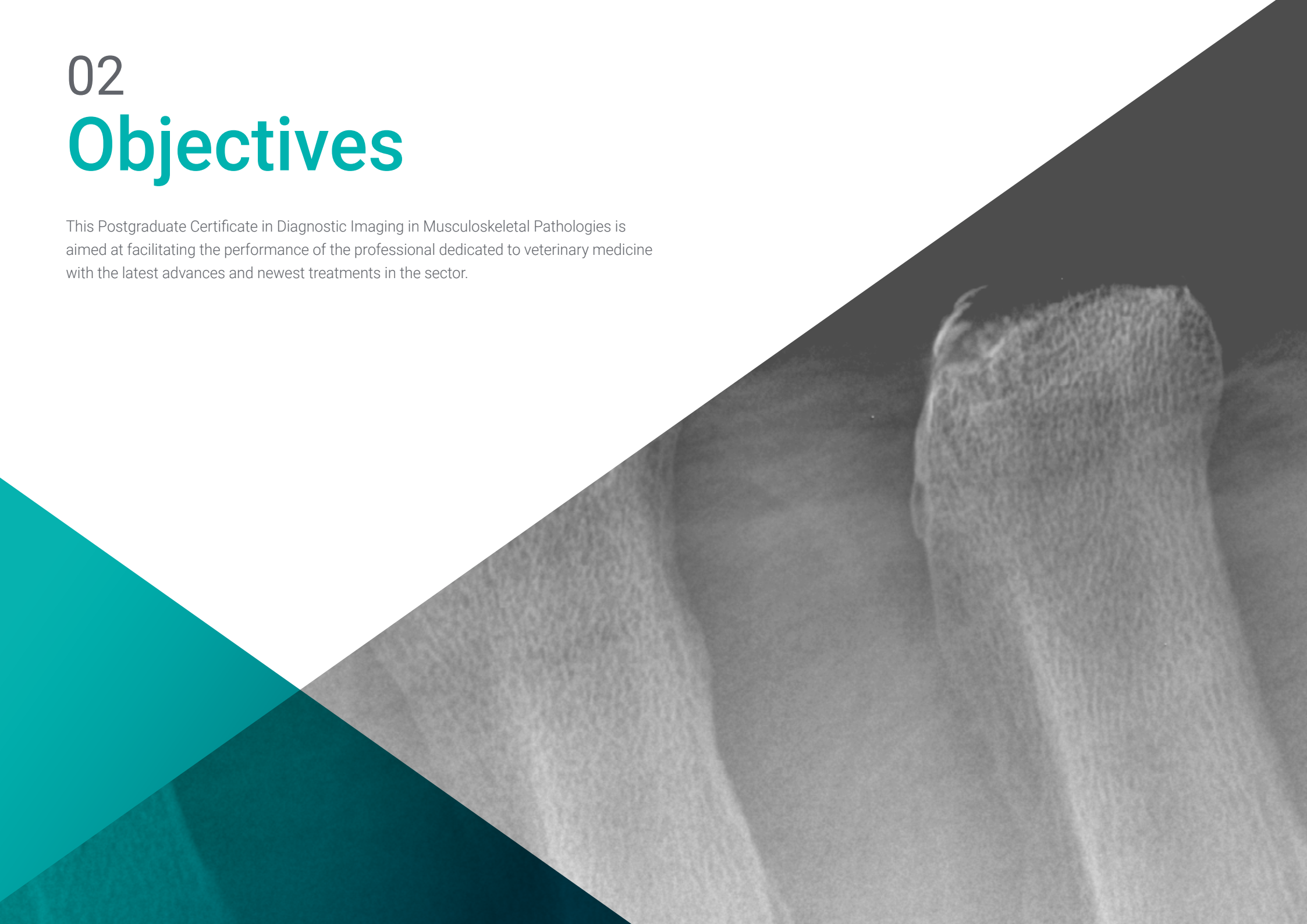
Its multimedia content, developed with the latest educational technology, will allow the professional a situated and contextual learning, that is, a simulated environment that will provide an immersive training programmed to train in real situations.

This program is designed around Problem Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the program. For this purpose, the professional will be assisted by an innovative interactive video system developed by renowned and experienced experts in Diagnostic Imaging in Musculoskeletal Pathologies.

02

Objectives

This Postgraduate Certificate in Diagnostic Imaging in Musculoskeletal Pathologies is aimed at facilitating the performance of the professional dedicated to veterinary medicine with the latest advances and newest treatments in the sector.



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

General Objectives

- Establish the basis for obtaining and reading diagnostic images
- Acquire knowledge of the diagnostic technique and its clinical application
- Assess the different pathologies and their clinical significance
- Provide the basis on which to establish an adequate physiotherapeutic treatment

A path to achieve training and professional growth that will propel you towards a greater level of competitiveness in the employment market".

Specific Objectives

- Establish a protocol for diagnostic imaging screening
- Identify which technique is necessary in each case
- Generate specialized knowledge in each anatomical area
- Establish a diagnosis that helps to better treat 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 in the different imaging modalities
- Recognize individual anatomical variations
- Assess incidental findings and their possible clinical impact
- Establish the significant alterations in the different diagnostic modalities and their interpretation.
- Determine an accurate diagnosis to assist in the establishment of an appropriate treatment

03

Course Management

The program includes in its teaching staff reference experts in Equine Physiotherapy and Rehabilitation who pour into this training the experience of their work. They are World-renowned Professionals from different Countries with proven Theoretical and Practical Professional Experience.

Our teaching team is the most complete and successful in the educational panorama".

Management

Dr. Hernández Fernández, Tatiana

- PhD in Veterinary Medicine from the UCM
- Diploma in Physiotherapy at the URJC
- Degree in Veterinary Medicine from the UCM
- Professor at the Complutense University of Madrid of: Expert in Equine Physiotherapy and Rehabilitation, Expert in Bases of Animal Rehabilitation and Physiotherapy, Expert in Physiotherapy and Rehabilitation of Small Animals, Training Diploma in Podiatry and Shoeing
- 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

Dña. Goyoaga Elizalde, Jaime

- Graduated in Veterinary Medicine in 1986
- Associate Professor in the Department of Animal Medicine and Surgery. Faculty of Veterinary Sciences. U.C.M. Since 1989
- Stays abroad at the University of Bern, Germany (veterinary clinic Dr. Cronau) and the United States (University of Georgia)
- Spanish Certificate in Equine Clinic
- Assistance work at the HCV Faculty of Veterinary Medicine of Madrid UCM since 1989
- Chief of the Large Animal Surgery Service of said institution
- Professor attached to the Diagnostic Imaging Service of the HCV Faculty of Veterinary Medicine of Madrid UCM

An impressive teaching staff, made up of professionals from different areas of expertise, will be your teachers during your training: a unique opportunity not to be missed"

04

Structure and Content

The structure of the content has been designed by the best professionals in the Equine Physiotherapy and Rehabilitation sector, with extensive experience and recognized prestige in the profession, backed by the volume of cases reviewed, studied, and diagnosed, and with extensive knowledge of new technologies applied to Veterinary.

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 Oriented to the Diagnosis of Problems Susceptible to Physiotherapy Treatment

1.1. Radiology. Radiology of the Phalanges 1
- 1.1.1. Introduction
- 1.1.2. Radiographic Technique
- 1.1.3. Radiology of the Phalanges 1
  - 1.1.4.1. Radiographic Technique and Normal Anatomy
  - 1.1.4.2. Incidental Findings
  - 1.1.4.3. Significant Findings

1.2. Radiology of the Phalanges 2. 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
- 1.2.1. 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 Alterations
  - 1.2.2.3. Assessment of Corrective Hardware

1.3. Radiology of the Fetlock and Metacarpus/Metatarsus
- 1.3.1. Radiology 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
  - 1.8.1.3 Neck, Dorsum and Pelvis

1.10. Others Diagnostic Imaging Techniques: Magnetic Resonance Imaging, Computed Axial Tomography, Gammagraphy, PET
- 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
- 1.10.5. Gammagraphy.
  - 1.10.5.1. Uses Gammagraphy in the Diagnosis of Musculoskeletal System Injuries

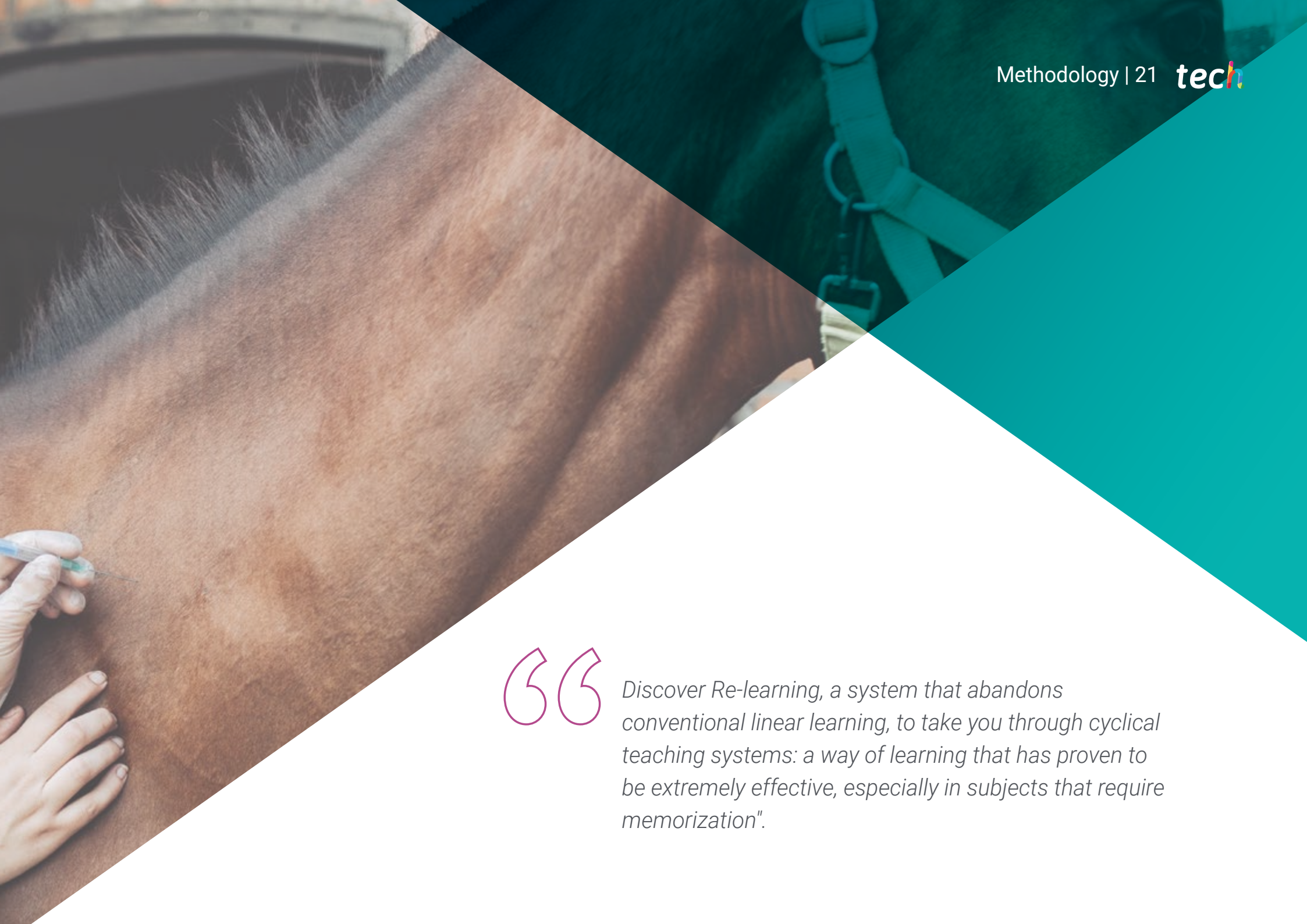
This training will allow you to advance in your career comfortably"

05

Methodology

This training program provides you with a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning.***

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.***

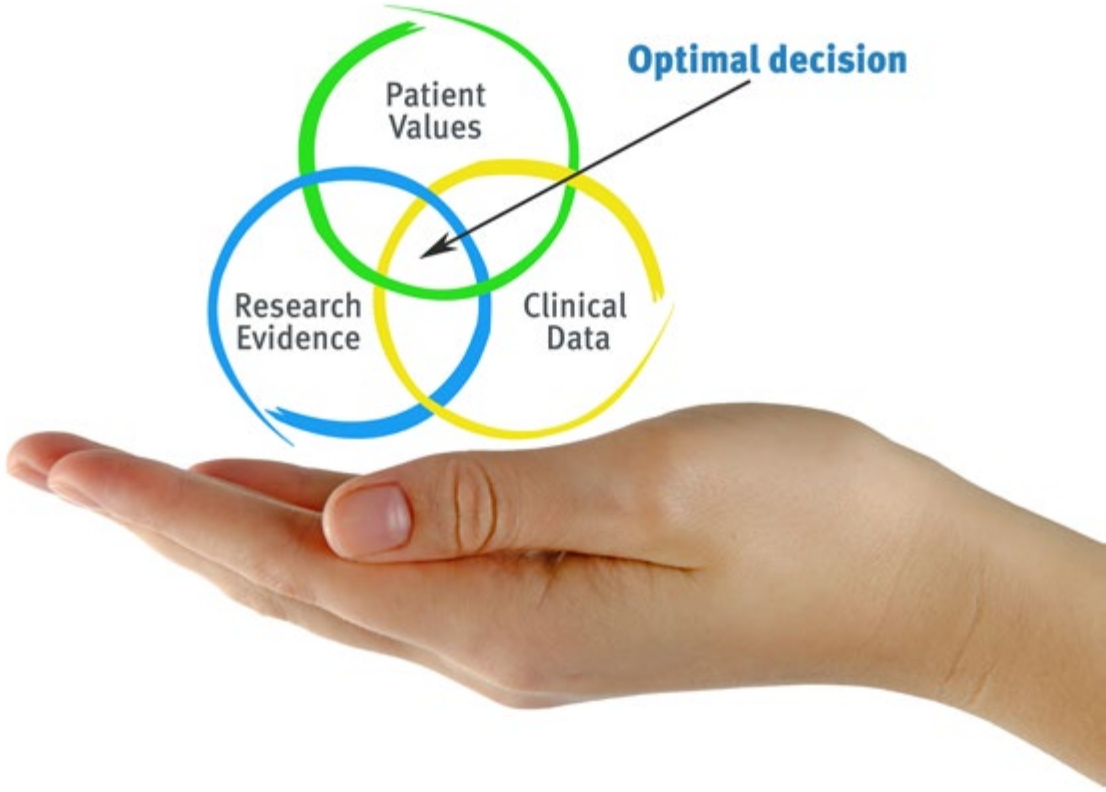


Discover Re-learning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization".

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 abundant 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. Gérvas, 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.

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:

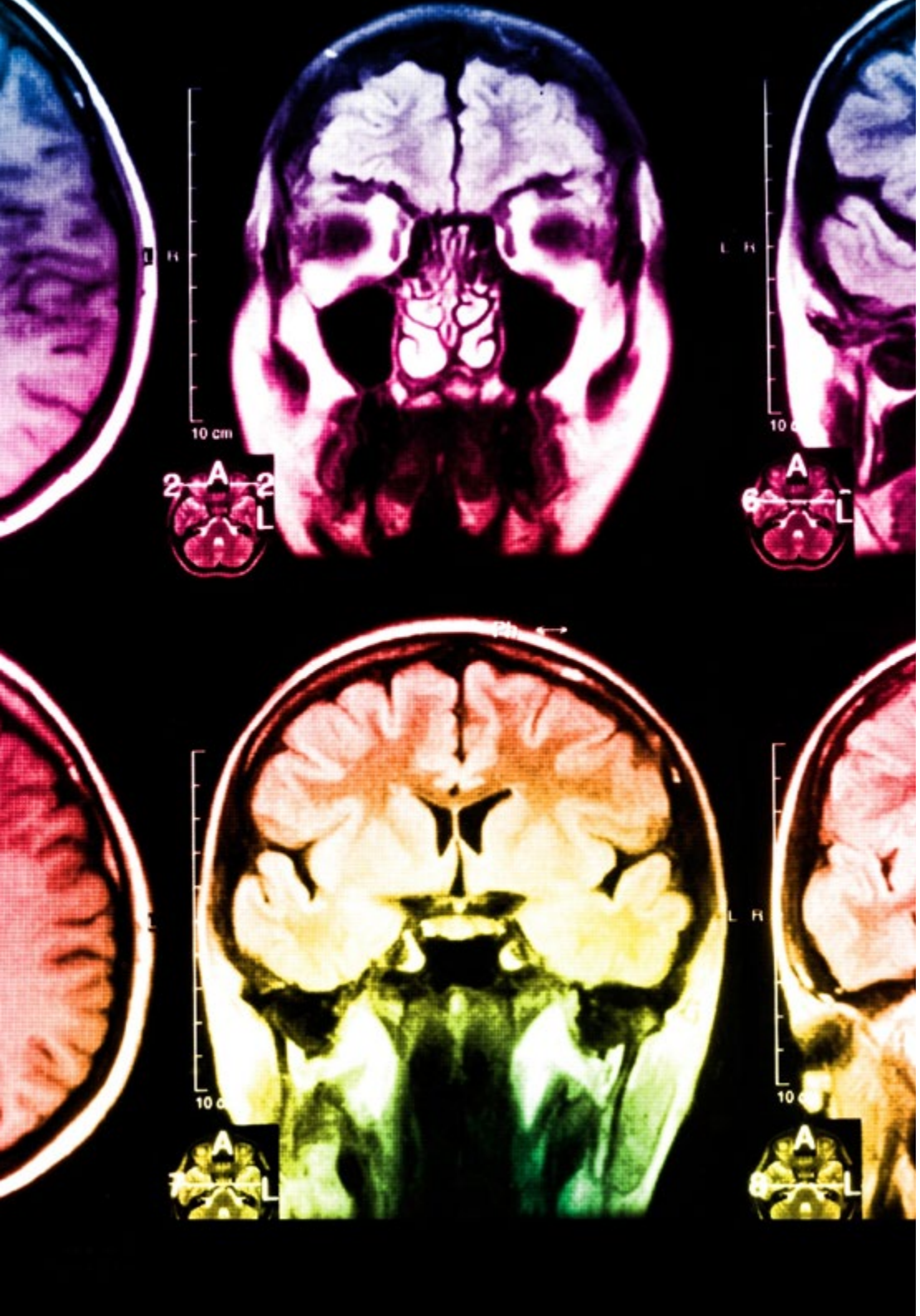
1. Veterinarians who follow this method not only manage to assimilate concepts, but also develop their mental capacity through exercises to evaluate real situations and knowledge application
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real 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.

Re-Learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

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 Re-learning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best Spanish-speaking 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.

Re-learning 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.

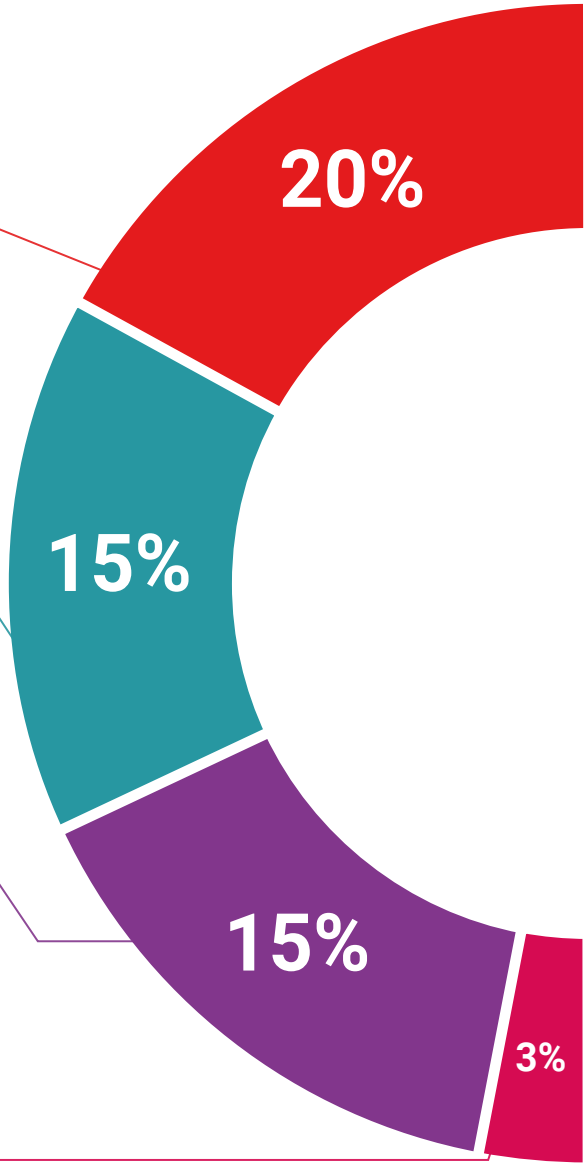
Interactive Summaries

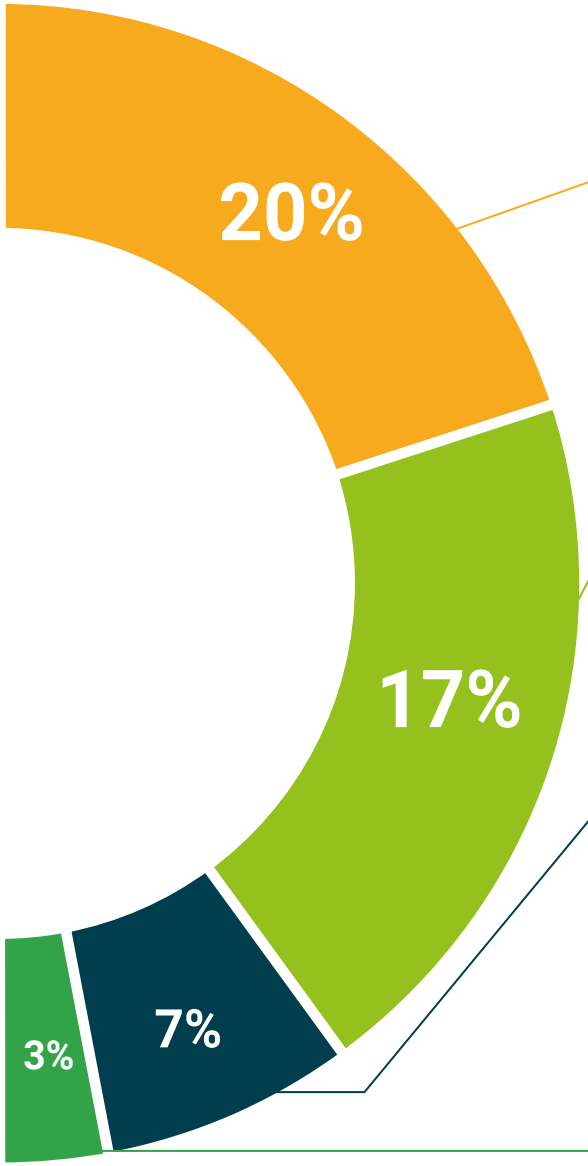
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive multimedia content presentation training Exclusive system 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 & Re-testing

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 your 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 Certificate in Diagnostic Imaging in Musculoskeletal Pathologies guarantees, in addition to the most rigorous and up-to-date training, access to a Postgraduate Certificate issued by TECH Global University.

Successfully complete this training program and receive your university certificate without travel or laborious paperwork"

This program will allow you to obtain your **Postgraduate Certificate in Diagnostic Imaging in Musculoskeletal Pathologies** 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** title 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 Diagnostic Imaging in Musculoskeletal Pathologies**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**


tech global university

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

Postgraduate Certificate in Diagnostic Imaging in Musculoskeletal Pathologies

This is a program 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

Dr. Pedro Navarro Illana
Rector

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

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

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Postgraduate Certificate
Diagnostic Imaging in Musculoskeletal Pathologies

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

Postgraduate Certificate

Diagnostic Imaging in Musculoskeletal Pathologies

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