

# Postgraduate Diploma

## Physiotherapy and Rehabilitation of Small Animals





## Postgraduate Diploma Physiotherapy and Rehabilitation of Small Animals

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/veterinary-medicine/postgraduate-diploma/postgraduate-diploma-physiotherapy-rehabilitation-small-animals](http://www.techtute.com/us/veterinary-medicine/postgraduate-diploma/postgraduate-diploma-physiotherapy-rehabilitation-small-animals)

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# 01

# Introduction

This program designed by TECH professionals delves into the most relevant aspects of the musculoskeletal system of small animals in depth. It is extremely important for veterinarians who want to specialize in this field to know the right way to rehabilitate and bring greater longevity to people's pets. These topics, which will be dealt with comprehensively during the course of this program, will provide veterinarians with a solid base of knowledge to enable them to successfully start their professional activity in the clinical sector, developing and implementing rehabilitation plans from the very beginning.





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*The physiotherapeutic rehabilitation of small animals is a growing discipline. Get into this exciting field with this Postgraduate Diploma”*

This very complete Postgraduate Diploma comprehensively delves into the most relevant aspects of the musculoskeletal system which are necessary for the veterinarian in rehabilitation, to specialize in the field.

In the same way, the functional assessment of animals in physiotherapy will also be addressed, a factor which is essential to the veterinarian's daily work, the assessments must be personalized and adjusted to the individual situation of each pet that comes in search of rehabilitative treatment.

By knowing the basics of biomechanics it will allow us to evaluate the relationship between the movement executed and the energy expenditure involved, so that we can optimize it and obtain the maximum possible performance.

Finally, this program will examine the physiological mechanisms of pain in order to understand the techniques used in rehabilitation, analyze the signs of pain and identify the different types and their relationships with one another. Therefore, we will address the theoretical aspects of the functioning of the nervous system and investigate, in an applied manner, the five stages of the neurological examination.

All this, condensed into a 100% online specialization, full of quality multimedia and didactic material, and specially designed to lead veterinarians to success in their daily practice.

This **Postgraduate Diploma in Physiotherapy and Rehabilitation of Small Animals** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The development of case studies presented by experts in the physiotherapy and rehabilitation of small animals
- ♦ 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
- ♦ New developments in physiotherapy and rehabilitation of small animals
- ♦ Practical exercises where the self-assessment process can be carried out to improve learning
- ♦ With special emphasis on innovative methodologies in physical therapy and rehabilitation for small animals
- ♦ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection work
- ♦ Content that is accessible from any fixed or portable device with an internet connection



*TECH presents a top quality specialization, full of theoretical and practical material specially designed to guide you to professional success"*



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*A first class program, especially oriented towards veterinarians who want to learn everything they need to administer physiotherapeutic rehabilitation in an optimal way”*

The program includes, in its teaching staff, professionals belonging to the field of veterinary medicine, who bring to this training their vast work experience, in addition to recognized specialists from reference societies and prestigious universities.

The Multimedia Content, elaborated with the latest educational technology, will allow the professional a situated and contextual learning, that is to say, a simulated environment that will provide an immersive specialization programmed to train 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 during the academic year. To do so, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts in Physiotherapy and Rehabilitation of Small Animals.

*As this is an online Postgraduate Diploma, you can study wherever and whenever you want.*

*A quality Postgraduate Diploma, full of practical case studies specially designed to lead veterinarians to success in their profession.*



# 02 Objectives

This comprehensive Postgraduate Diploma that TECH is offering was created with the fundamental objective of providing veterinary professionals with the necessary skills to develop, design and implement rehabilitation plans specially designed to provide quality of life to small animals. In this way, the knowledge that will be addressed throughout the specialization will be the professionals' main asset when it comes to entering the job market which is increasingly demanding veterinarians with expertise in this area.





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*TECH has created this specialization with the single objective of training veterinarians with total success and enabling them to position themselves as prestigious specialists within this sector”*



## General objectives

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- ♦ Generate specialized knowledge of veterinary physiotherapy and rehabilitation
- ♦ Examine the main anatomical bone references
- ♦ Determine the main muscles and nerves involved in movement
- ♦ Evaluate the patient globally
- ♦ Determine the basis for a good functional assessment
- ♦ Examine static body position and gait assessment
- ♦ Identify pain points or behavior, as well as compensatory body positions
- ♦ Identify signs related to pain
- ♦ Determine the most useful tools to assist in the assessment of pain
- ♦ Develop specialized knowledge of pain
- ♦ Compile the latest therapies used in rehabilitation for the treatment of pain and for the management of neurological patients in rehabilitation
- ♦ Review the functioning of the nervous system to understand the rationale for neurological evaluation
- ♦ Examine the different parts of the neurological examination





## Specific objectives

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### **Module 1. Veterinary Physiotherapy and Rehabilitation. Functional Anatomy in Small Animals**

- ♦ Determine the use of Physiotherapy in Small Animals
- ♦ Examine the main anatomical bone references and the different muscle groups
- ♦ Analyze the movement of each muscle group
- ♦ Develop the most important concepts related to Rehabilitation
- ♦ Address muscle components
- ♦ Analyze the different phases of inflammation

### **Module 2. Biomechanics. Functional Assessment**

- ♦ Develop the appropriate guidelines and discipline to perform a complete assessment of our patients
- ♦ Examine the patient as a whole, taking into account the locomotor system and associated structures
- ♦ Define gait characteristics and identify gait abnormalities
- ♦ Assess and identify injuries that may be affecting the forelimb and hind limb
- ♦ Examine the spine and identify tender points and/or lesions present, as well as neurological deficits associated with these alterations
- ♦ Establish the bases of biomechanics and the elements used for its study
- ♦ Analyze the Biomechanics of a patient, theoretically, by means of a system of levers

### **Module 3. Physiology of Pain. Neurological Evaluation**

- ♦ Identify signs related to pain
- ♦ Determine the most useful tools to assist in the assessment of pain
- ♦ Develop specialized knowledge about pain
- ♦ Compile the latest therapies used in rehabilitation for the treatment of pain and for the management of neurological patients in rehabilitation
- ♦ Review the functioning of the nervous system to understand the rationale for neurological evaluation
- ♦ Examine the different parts of the neurological examination



*This program will help you acquire the skills you need to excel in your daily work”*



03

# Course Management

One of the main differentiating elements inTECH's training courses is its teaching staff. This university makes a huge effort and a capital investment in order to have the best professionals in the sector, backed by the number of clinical case studies they have reviewed, their publications and years of experience. This guarantees veterinarians will understand and know how Physiotherapy and Rehabilitation of Small Animals works from a multidisciplinary approach, providing them with a better understanding of the conditions for which these techniques have a higher rate of success.



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*The best professionals in the sector are at the best university. Don't miss this great opportunity to get specialized”*



## Management



### Ms. Ceres Vega-Leal, Carmen

- Veterinarian in the Physiotherapy and Rehabilitation Service at Clínica Veterinaria A Raposeira, Vigo (Pontevedra)
- Veterinarian in Tierklinik Scherzingen, Freiburg (Germany)
- Degree in Veterinary Medicine from the Faculty of Veterinary Medicine of León in 2008
- Master's Degree in Physiotherapy and Rehabilitation of Small Animals, Complutense University of Madrid
- Master's Degree in Veterinary Physiotherapy and Rehabilitation for Dogs and Cats, Complutense University of Madrid
- Postgraduate Diploma in Bases of Physiotherapy and Animal Rehabilitation, Complutense University of Madrid 2014

## Professors

### Ms. Picón Costa, Marta

- ◆ Outpatient Rehabilitation and Physiotherapy Service in Seville and Cadiz areas
- ◆ Veterinarian by the Faculty of Veterinary Medicine of Alfonso X the Wise
- ◆ Postgraduate Diploma in Physiotherapy and Animal Rehabilitation, Complutense University of Madrid

### Ms. Pascual Veganzones, María

- ◆ Head veterinarian at the Narub Rehabilitation and Hydrotherapy Center
- ◆ Manager and Coordinator of the Rehabilitation and Physiotherapy service at home, Animal Nutrition in Vetterapia Animal
- ◆ In charge of the veterinary clinic at Don Pelanas Veterinary Center. Animal Rehabilitation and Physiotherapy Service
- ◆ Graduate in Veterinary Medicine from the University of Leon
- ◆ Postgraduate course in Rehabilitation and Veterinary Physiotherapy in Small Animals, FORVET school

### Ms. Laliena Aznar, Julia

- ◆ Head of the Rehabilitation Service, Veterinary Hospital Anicura Valencia Sur. Valencia
- ◆ I-VET academy teacher in Rehabilitation classes of the Veterinary Technical Assistant postgraduate course
- ◆ Degree in Veterinary from the University of Zaragoza
- ◆ Master's Degree in Small Animal Clinic I and II
- ◆ Postgraduate Certificate in Small Animal Veterinary Rehabilitation
- ◆ Postgraduate Certificate in Clinical Diagnosis in the Canine and Feline Patient

### Ms. Hernández Jurado, Lidia

- ◆ Co-owner and head of the Animal Physical Rehabilitation Service of the Amodiño Veterinary Clinic in Lugo
- ◆ Graduate in Veterinary Medicine from the University of Santiago de Compostela
- ◆ Degree in Biology from the University of Santiago de Compostela
- ◆ Specialization Postgraduate Certificate in Small Animal Rehabilitation

### Ms. Rodríguez-Moya Rodríguez, Paula

- ◆ Veterinarian at the Rehabcan Animal Rehabilitation and Physiotherapy Center. Traditional Chinese veterinary medicine service
- ◆ Graduate in Veterinary Medicine, Catholic University of Valencia
- ◆ Specialty in Traditional Chinese Medicine from Chi Institute. Certified acupuncturist. certified Food Therapist
- ◆ Postgraduate Degree in Physiotherapy and Rehabilitation of Small Animals from Euroinnova Business School

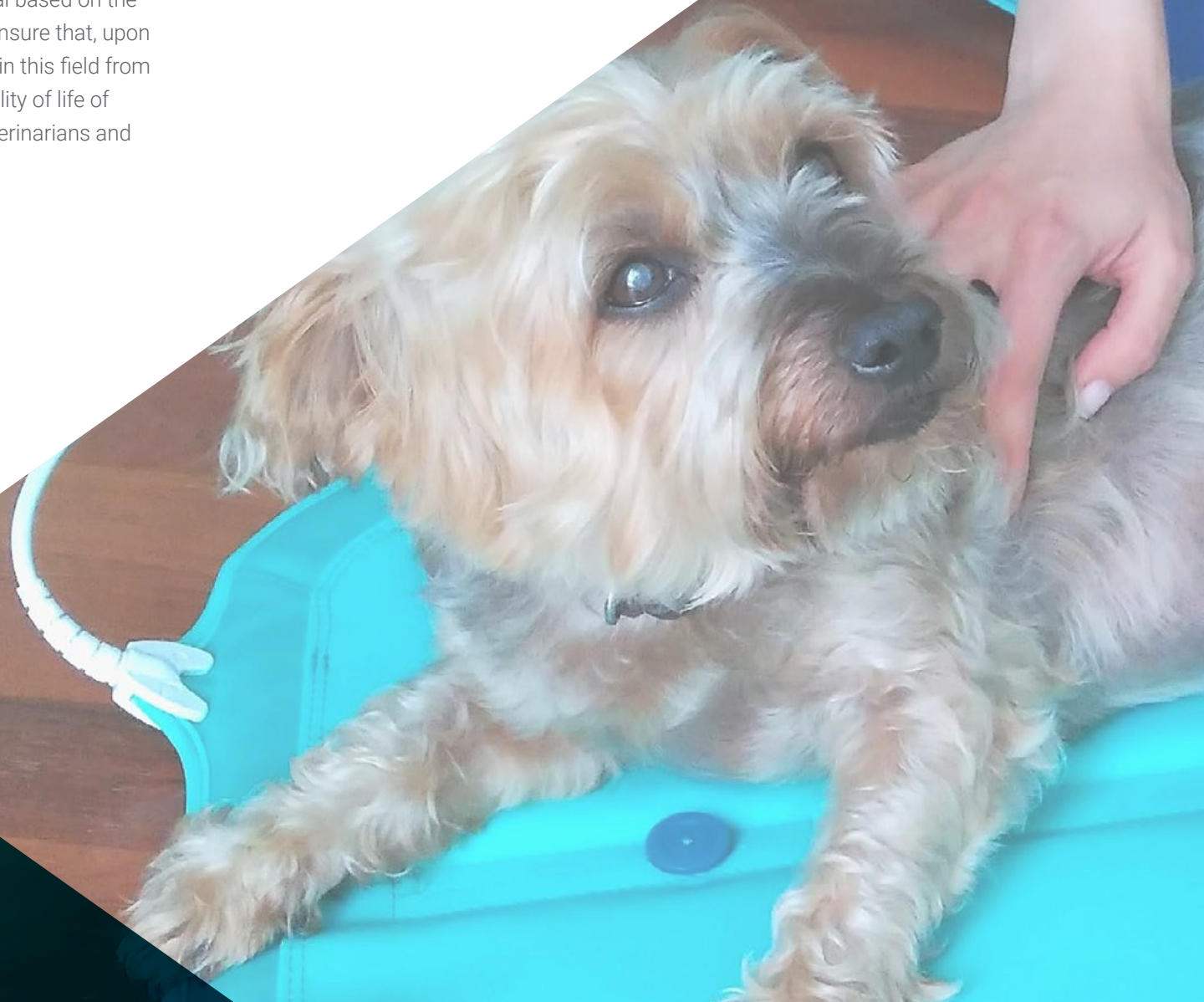


*With this highly academic program, you will train with the best. A unique opportunity to achieve professional excellence”*

# 04

## Structure and Content

TECH, and its professional team design all its didactic material based on the latest scientific evidence and with the utmost rigor. This will ensure that, upon completion of the specialization, students will be fully trained in this field from a multidisciplinary approach that favors the longevity and quality of life of animals. In addition, these contents will be a great tool for veterinarians and provide theoretical support to their clinical case studies.





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*The best contents on the international educational scene, condensed into this very extensive TECH program”*



**Module 1. Veterinary Physiotherapy and Rehabilitation. Functional Anatomy in Small Animals**

- 1.1. Physiotherapy and Rehabilitation of Small Animals
  - 1.1.1. Introduction
    - 1.1.1.1. Medical History
    - 1.1.1.2. Veterinary Rehabilitation and Physiotherapy
  - 1.1.2. Species Susceptible to be Treated with Physiotherapy
  - 1.1.3. Objectives of Physiotherapy
  - 1.1.4. Techniques in Veterinary Physiotherapy
  - 1.1.5. Indications of Physiotherapy
- 1.2. Morphology, Structure and Function
  - 1.2.1. Bone
  - 1.2.2. Joints
  - 1.2.3. Muscle
- 1.3. The Skeleton of the Dog. Important Anatomical Bone References
  - 1.3.1. Head and Vertebrae
  - 1.3.2. Thoracic Limb
  - 1.3.3. Pelvic Limb
- 1.4. Head and Neck Muscle
  - 1.4.1. Head Muscles
  - 1.4.2. Motor Muscles of the Head
  - 1.4.3. Neck Muscles
- 1.5. Trunk and Tail Muscles
  - 1.5.1. Muscles of the Spine
  - 1.5.2. Thoracic Muscles
  - 1.5.3. Abdominal Muscles
  - 1.5.4. Tail Muscles
- 1.6. Thoracic Limb Muscles
  - 1.6.1. Thoracic Girdle Muscles
  - 1.6.2. Shoulder Muscles
  - 1.6.3. Elbow Muscles
  - 1.6.4. Muscles of Carpus and Fingers







- 1.7. Pelvic Limb Muscles
  - 1.7.1. Pelvic Girdle Muscles
  - 1.7.2. Muscles of the Hip
  - 1.7.3. Muscles of the knee
  - 1.7.4. Muscles of Tarsus and Fingers
- 1.8. Innervation and Vascularization
  - 1.8.1. Brachial Plexus
  - 1.8.2. Lumbosacral Plexus
  - 1.8.3. Other Important Nerves
- 1.9. Skeletal Muscle Contraction
  - 1.9.1. Mechanism of Muscle Contraction
  - 1.9.2. Types of Muscle Contraction
  - 1.9.3. Definitions
- 1.10. Physiology of Inflammation
  - 1.10.1. What Is Inflammation?
  - 1.10.2. Phases of Inflammation
  - 1.10.3. Tissue Repair

## Module 2. Biomechanics. Functional Assessment

- 2.1. Overall Functional Assessment
  - 2.1.1. Patient Identification
  - 2.1.2. Qualitative and Quantitative Assessment of the Patient
  - 2.1.3. Assessment of Skin, Subcutaneous Tissue and Musculature
    - 2.1.3.1. Muscle Modifications
- 2.2. Assessment of Gait and Static Positioning
  - 2.2.1. Dynamic Physical Examination
    - 2.2.1.1. Characteristics of the Gait
  - 2.2.2. Static Physical Evaluation
- 2.3. Functional Examination of Locomotor System: Forelimb
  - 2.3.1. Shoulder
  - 2.3.2. Elbow
  - 2.3.3. Carpus and Metacarpus
  - 2.3.4. Phalanges

- 2.4. Functional Examination of Locomotor System: Hind Limb
  - 2.4.1. Hip
    - 2.4.1.1. Techniques Used in Hip Examination
  - 2.4.2. Knee
  - 2.4.3. Tarsus and Metatarsus
  - 2.4.4. Brief Mention of the Bioarth Scale
- 2.5. Functional Examination of the Spine
  - 2.5.1. Cervical Spine
  - 2.5.2. Thoracic Spine
  - 2.5.3. Lumbar and Sacral Spine
- 2.6. Biomechanics
  - 2.6.1. Basis of Biomechanics
  - 2.6.2. Dempster Diagram
  - 2.6.3. Free Body Diagram
- 2.7. Motor Gesture and Background Automatism
  - 2.7.1. Motor Gesture
  - 2.7.2. Bottom Automatism
- 2.8. Levers and Pulleys
  - 2.8.1. Newton's Laws
  - 2.8.2. Lever System
  - 2.8.3. Types of Levers
  - 2.8.4. Pulleys
- 2.9. Functional Assessment Most Frequent Forelimb and Spine Injuries
  - 2.9.1. Forelimb
    - 2.9.1.1. Elbow Dysplasia
  - 2.9.2. Rachis
    - 2.9.2.1. Hernia in Thoracolumbar Region
    - 2.9.2.2. Cauda Equina Syndrome
- 2.10. Functional Assessment of the Most Frequently Occurring Hindlimb Injuries
  - 2.10.1. Hindlimb
    - 2.10.1.1. Hip Dysplasia
    - 2.10.1.2. Patella Dislocation
    - 2.10.1.3. Ruptured Anterior Cruciate Ligament of the Knee

### Module 3. Physiology of Pain. Neurological Evaluation

- 3.1. Introduction
  - 3.1.1. What is Pain?
  - 3.1.2. How to Identify Pain
  - 3.1.3. How to Quantify Pain
  - 3.1.4. Perception of Pain in Different Organs and Tissues
- 3.2. Types of Pain
  - 3.2.1. Classification of the Types of Pain
  - 3.2.2. Terminology Related to Pain
  - 3.2.3. Components of Pain
- 3.3. Neurophysiology of Pain
  - 3.3.1. Transduction
  - 3.3.2. Transmission
  - 3.3.3. Modulation
  - 3.3.4. Perception
- 3.4. Chronic Pain and Related Types of Pain
  - 3.4.2. Neurophysiology of Chronic Pain
  - 3.4.2. Pain Due to Osteoarthritis (OA)
  - 3.4.2. Neuropathic Pain
  - 3.4.2. Myofascial Pain
- 3.5. The Role of Rehabilitation in Pain Management
  - 3.5.1. Review of Pain Inhibition Mechanisms
  - 3.5.2. Analgesic Therapies Used in Rehabilitation
  - 3.5.3. Management of the Patient with Acute Pain
  - 3.5.4. Management of the Chronic Pain Patient
- 3.6. Neurological Evaluation I
  - 3.6.1. Introduction
  - 3.6.2. Motor System: Review of the Concepts of Upper Motor Neuron and Lower Motor Neuron.
  - 3.6.3. Sensory System: Review of Cranial Nerves and Spinal Nerves



- 3.7. Neurological Evaluation II
  - 3.7.1. Review
  - 3.7.2. Observation of Mental State
  - 3.7.3. Behavioral Assessment
  - 3.7.4. Posture Observation
  - 3.7.5. Gait Evaluation
- 3.8. Neurological Evaluation III. Neurological Tests
  - 3.8.1. Evaluation of Cranial Nerves
  - 3.8.2. Evaluation of Spinal Reflexes
  - 3.8.3. Postural Reaction Tests
- 3.9. Neurological Evaluation III
  - 3.9.1. Evaluation of Cranial Nerves
  - 3.9.2. Postural Reactions
  - 3.9.3. Evaluation of Cranial Nerves
- 3.10. Neurological Patient
  - 3.10.1. General Care.
  - 3.10.2. Postural Rehabilitation Exercises
  - 3.10.3. Neurological Facilitation Exercises

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*A extensive in-depth educational program specially designed to guide you towards professional success”*



# 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. 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.

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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".

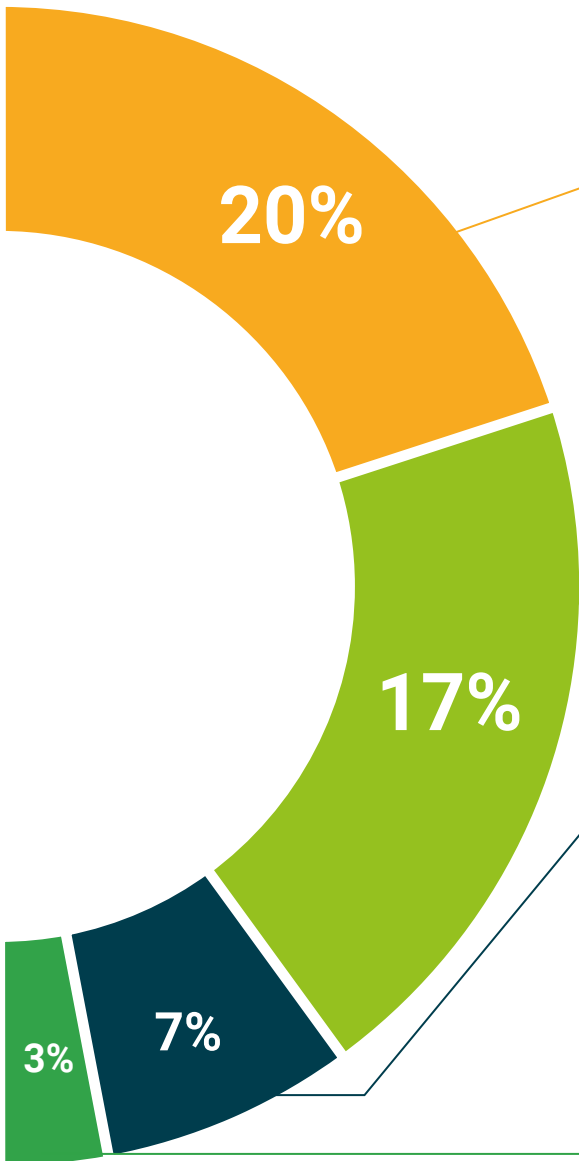


#### Additional Reading

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

The Postgraduate Diploma in Physiotherapy and Rehabilitation of Small Animals guarantees you, in addition to the most rigorous and up-to-date training, access to a Postgraduate Diploma issued by TECH Technological University.





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



This **Postgraduate Diploma in Physiotherapy and Rehabilitation of Small Animals** 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 Physiotherapy and Rehabilitation of Small Animals**

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  
virtual classroom



**Postgraduate Diploma**  
Physiotherapy and  
Rehabilitation of  
Small Animals

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

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