



Applied Therapy in Physiotherapy and Rehabilitation of Small Animals

» Modality: online

» Duration: 6 monthst

» Certificate: TECH Global University

» Credits: 18 ECTS

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/veterinary-medicine/postgraduate-diploma/postgraduate-diploma-applied-therapy-physiotherapy-rehabilitation-small-animals

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## tech 06 | Introduction

For effective physiotherapeutic therapy in animals, rapid action is essential, especially in conditions with symptoms such as incoordination, weakness and stiffness. The use of exercise as therapy dates back to several centuries ago and, at present, it is undoubtedly physiotherapy that takes up most time for those professionals who use rehabilitation techniques.

Therefore, during the Postgraduate Diploma they will practice ways of restoring animals back to health and how to help decrease their pain or disability, turning veterinarians into more than just therapists.

In addition to, looking into the different types of bandages such as Robert Jones and Ehmer Velpeau, as knowledge of these is essential in order to be aware of any possible complications that can arise from their use. The characteristics of ultrasound therapy, laser therapy and electrostimulation will also be analyzed.

Finally, electrical stimulation will be investigated, it is a widely used method, both because of the great variety of uses it offers and for the fact that it does not require a large economic investment. There are a myriad of types of electrical stimulation, which has created confusion in nomenclature. This Postgraduate Diploma will take a deep dive into Neuromuscular Electrical Stimulation (NMES) which is used to prevent atrophy and muscle reeducation and Transcutaneous Electrical Stimulation (TENS), used for pain treatment.

This Postgraduate Diploma in Applied Therapy in Physiotherapy and Rehabilitation in Small Animals contains the most complete and up to date scientific program on the market. The most important features of the specialization are:

- The development of case studies presented by experts in Applied Therapy in 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
- News on Applied Therapy in Physiotherapy and Small Animal Rehabilitation
- Practical exercises where the self assessment process can be carried out to improve learning
- Special emphasis on innovative methodologies in Physical Therapy and Rehabilitation of 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



The labor market is increasingly demanding professionals who are experts in this field. Don't miss this opportunity"

## Introduction | 07 tech



This Postgraduate Diploma is the opportunity to update your knowledge of the sector that you have been waiting for"

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

The Multimedia Content, elaborated using 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 which is programmed to train them 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.

Don't miss this great opportunity to get specialized. It will undoubtedly be a gateway to a promising future.

Since this is an online specialization, you will not have to neglect the rest of your daily tasks





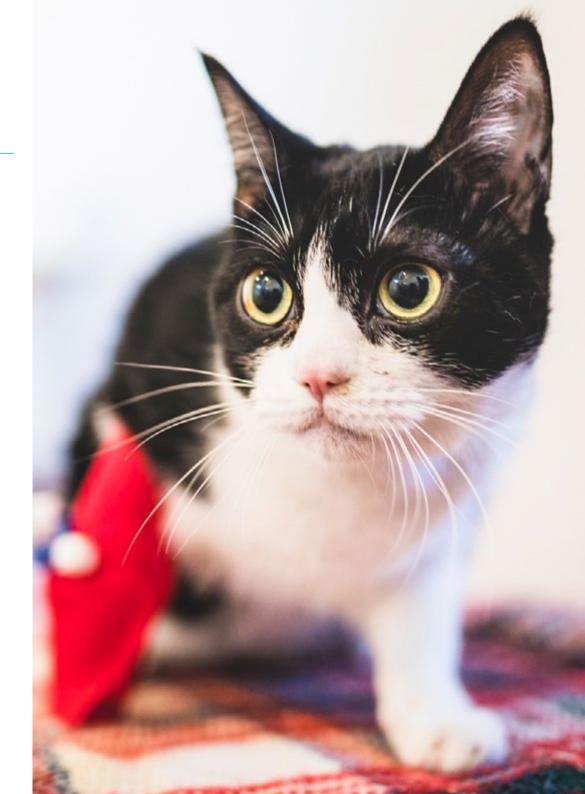


## tech 10 | Objectives



## **General Objectives**

- Analyze movement methods as a treatment
- Examine the mechanical analysis of the movement
- Construct exercises from anatomical elements
- Generate local and general effects on the patient
- Determine thermotherapy application techniques
- Introduce ultrasound, laser therapy and electrostimulation modalities
- Evaluate the parameters most commonly used in these techniques
- Establish appropriate protocols for the above therapies in certain pathologies
- Define each of the therapies and specify their use in each clinical case study
- Introduce the modalities of diathermy, magnetotherapy and shockwave therapy
- Examine complementary therapies to Physical Therapy and Rehabilitation
- Generate specialized knowledge on the nutritional management of a patient with osteoarthrosis or obesity





### Module 1. Manual Therapies and Kinesitherapy. Bandages

- Develop specialized knowledge through touch and manipulation
- Use movement for therapeutic purposes
- Treatment planning through the use of the therapist's hands
- Restore range of motion to the patient
- Achieve physiological effects in the patient
- Identify a series of limitations in the patient
- Maintain or increasing trophism and muscle power

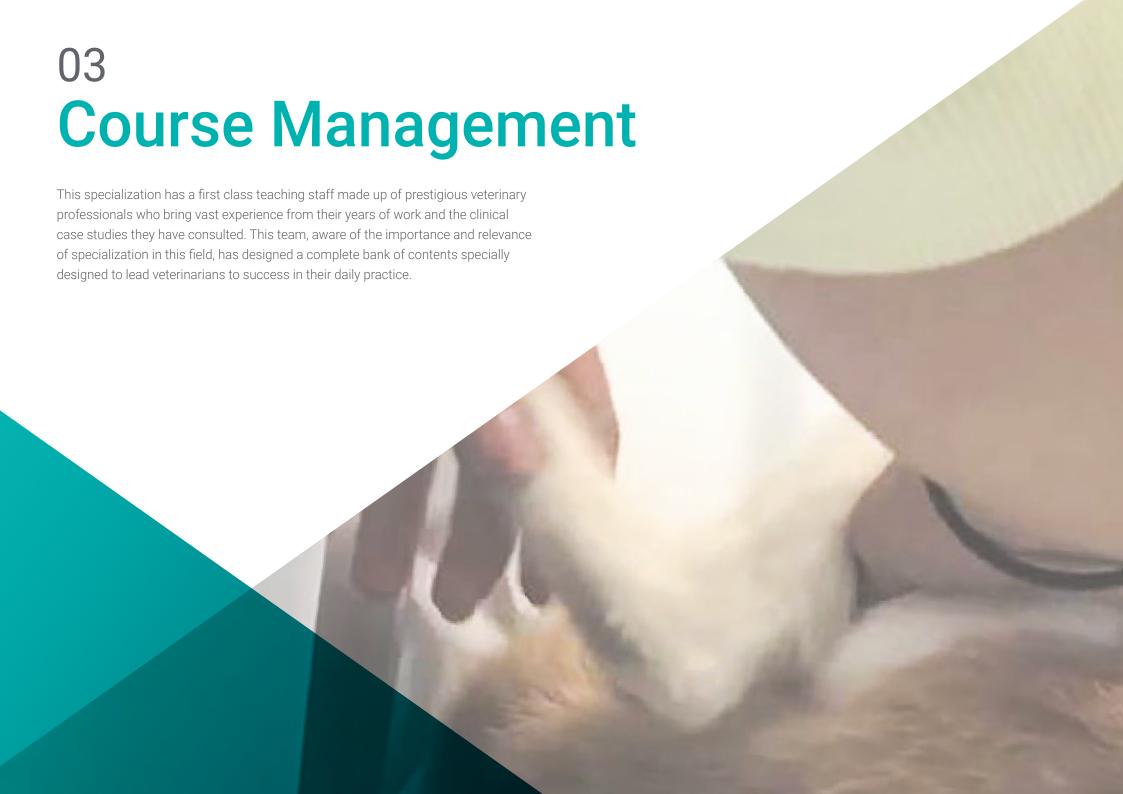
# Module 2. Physical Therapy I: Electrotherapy, Laser Therapy, Therapeutic Ultrasound. Thermotherapy

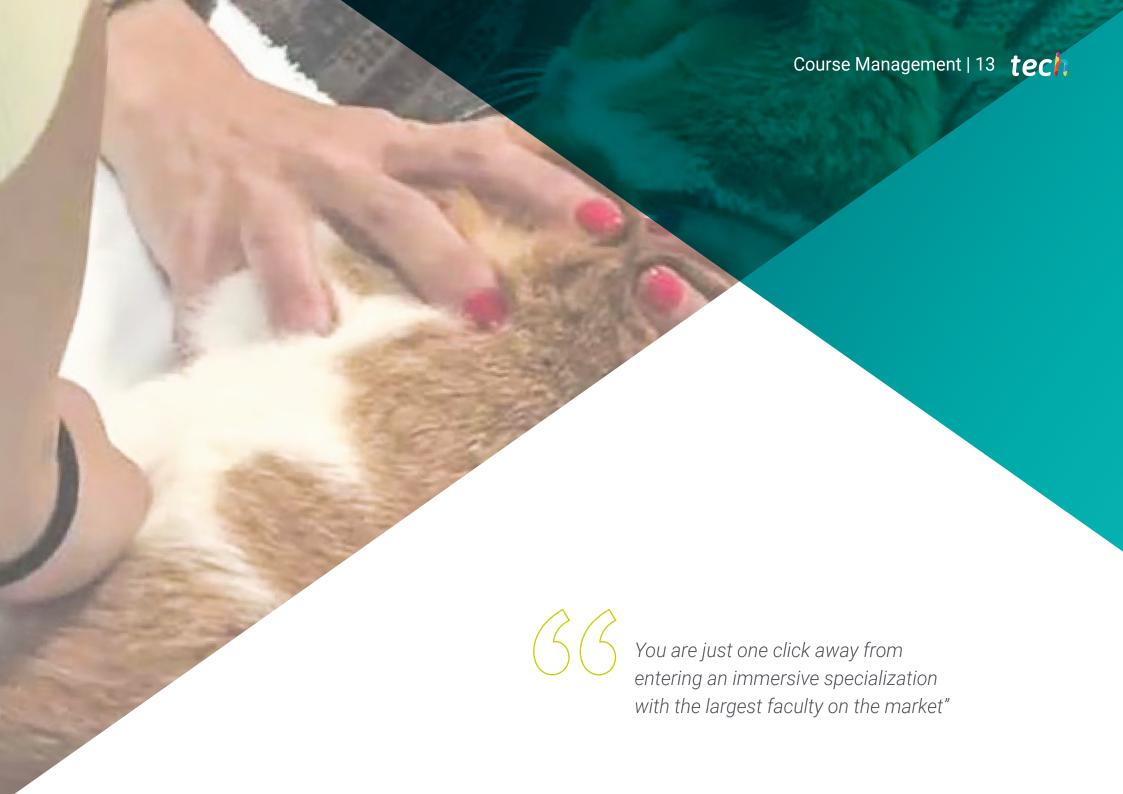
- Determine the benefits and uses of Thermotherapy
- Establish the ultrasound parameters that can be modified in the different therapies, depending on the desired effect
- Examine the parameters of laser therapy and electrotherapy that can be modified in the different therapies, depending on the desired effect
- Analyze the differences between physiological and evoked muscle recruitment
- Develop the mechanisms of pain relief worked with electrotherapy

## Module 3. Physical Therapies II-Diathermy, Magnetotherapy, Indiba, Shockwaves, Other Therapies Used in Rehabilitation Nutrition

- Examine the different types of diathermy, parameters and functions of each of them
- Define Indiba® therapy and develop in depth in which cases it is used
- Examine the parameters and functions of magnetotherapy and shock waves that can be modified according to the desired effect
- Justify the use of alternative therapies as a complement to Physiotherapy and Rehabilitation of Small Animals
- Define the concept of modalities such as chiropractic, cranio sacral therapy and ozone therapy and propose their use as complementary therapies
- Develop the most important concepts of canine nutrition in terms of obesity and osteoarthritis







## tech 14 | Course Management

### 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
- Head veterinarian and Coordinator of the Rehabilitation and Physiotherapy service at home, Animal Nutrition in Vetterapia Animal
- Head of the veterinary clinic at Centro Veterinario Don Pelanas. 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

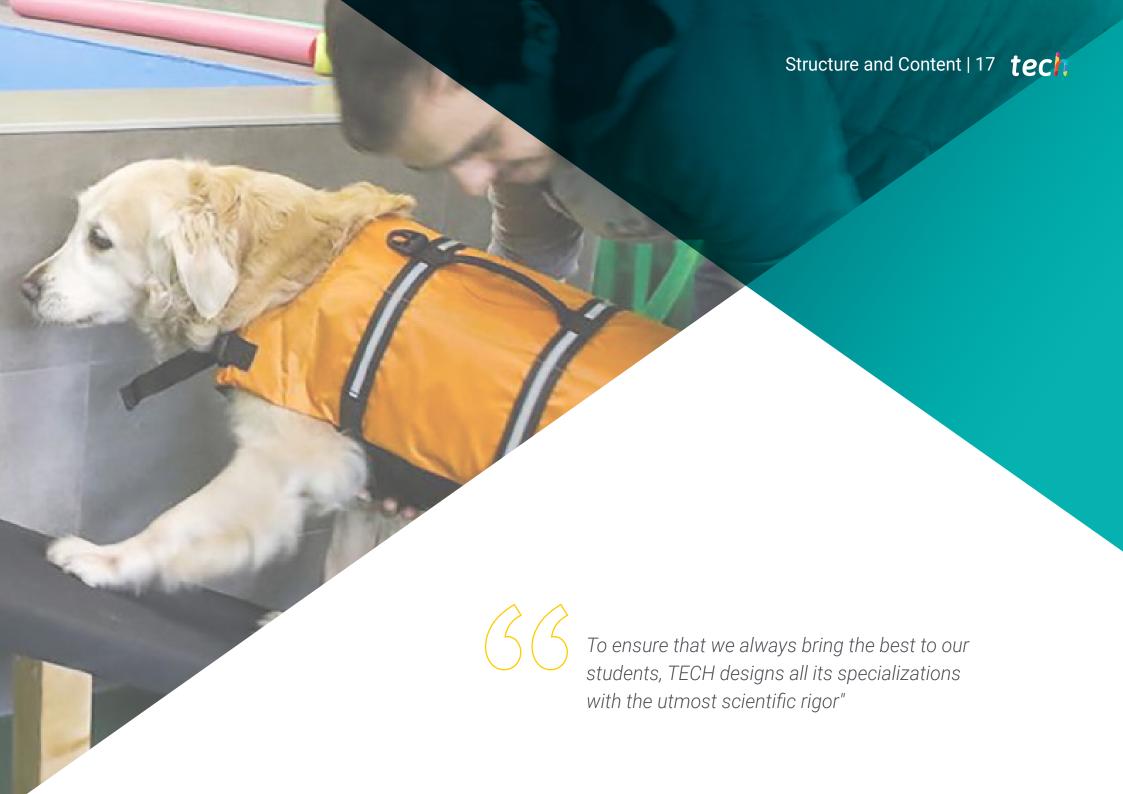
### Ms. Rodríguez-Moya Rodríguez, Paula

- Veterinarian at the Rehabcan Animal Rehabilitation and Physiotherapy Center. Traditional Chinese veterinary medicine service
- Veterinario del Centro de Rehabilitación y Fisioterapia Animal Rehabcan. Traditional Chinese veterinary medicine service
- Graduate in Veterinary Medicine, Catholic University of Valencia
- Specialty in Traditional Chinese Medicine by Chi Institute. Certified acupuncturist.
   Certified Food Therapist
- Postgraduate Degree in Physiotherapy and Rehabilitation of Small Animals by Euroinnova Business School



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





## tech 18 | Structure and Content

### Module 1. Manual Therapies and Kinesitherapy. Bandages

- 1.1. Manual Therapy I
  - 1.1.1. Manual Therapy
  - 1.1.2. Physiological Modifications
  - 1.1.3. Therapeutic Effects
- 1.2. Massage
  - 1.2.1. Types of Massages
  - 1.2.2. Indications
  - 1.2.3. Contraindications
- 1.3. Lymphatic Drainage
  - 1.3.1. Lymphatic System
  - 1.3.2. Purpose of Lymphatic Drainage
  - 1.3.3. Indications
  - 1.3.4. Contraindications
- 1.4. Kinesitherapy I
  - 1.4.1. What Is Kinesitherapy?
  - 1.4.2. General Objectives
  - 1.4.3. Classification
- 1.5. Kinesitherapy II
  - 1.5.1. Therapeutic Exercises
    - 1.5.1.1. Passive Kinesitherapy
    - 1.5.1.2. Active Kinesitherapy
      - 1.5.1.2.1. Active Resisted Kinesitherapy
      - 1.5.1.2.2. Active Assisted Kinesitherapy
  - 1.5.2. Stretching
  - 1.5.3. How to Establish an Exercise Plan?
- 1.6. Myofascial Manual Therapy
  - 1.6.1. Concept of Fascia and Fascial System
  - 1.6.2. Techniques of Myofascial Therapy
  - 1.6.3. Trigger Points





### Structure and Content | 19 tech

- 1.7. Evaluation of the Articular Arch
  - 1.7.1. Definition of ROM and AROM
  - 1.7.2. Elastic Barrier, Paraphysiological Zone and Anatomical Barrier
  - 1.7.3. End Feel
- 1.8. Neuromuscular Bandaging
  - 1.8.1. Introduction
  - 1.8.2. Description and Characteristics
  - 1.8.3. Physiological Basis
  - 1.8.4. Applications
- 1.9. Gait Re Evaluation
  - 1.9.1. How Motor Control is Altered
  - 1.9.2. Consequences of Altered Motor Control
  - 1.9.3. Retraining Gait
- 1.10. Bandages
  - 1.10.1. Modified Robert Jones Bandage
  - 1.10.2. Ehmer Bandage
  - 1.10.3. Carpal Flexion Bandage
  - 1.10.4. Velpeau Bandage
  - 1.10.5. External Fixator Bandage
  - 1.10.6. Complications of Bandages

# **Module 2.** Physical Therapy I: Electrotherapy, Laser Therapy, Therapeutic Ultrasound. Thermotherapy

- 2.1. Thermotherapy
  - 2.1.1. Thermotherapy
  - 2.1.2. Application of Thermotherapy
  - 2.1.3. Effects
  - 2.1.4. Indications
  - 2.1.5. Contraindications
- 2.2. Ultrasound I
  - 2.2.1. Definition
  - 2.2.2. Parameters
  - 2.2.3. Indications
  - 2.2.4. Contraindications/Precautions

## tech 20 | Structure and Content

Ultraso	und II	
2.3.1.	Thermal Effects	
2.3.2.	Mechanical Effects	
2.3.3.	Uses of Therapeutic Ultrasound	
Laser Therapy I		
2.4.1.	Introduction to Laser Therapy	
2.4.2.	Laser Properties	
2.4.3.	Laser Classification	
2.4.4.	Types of Lasers Used in Rehabilitation	
Laser Therapy II		
2.5.1.	Effects of Lasers on Tissues	
	2.5.1.1. Wound Healing	
	2.5.1.2. Bone and Cartilage	
	2.5.1.3. Tendon and Ligament	
	2.5.1.4. Peripheral Nerves and Spinal Cord	
2.5.2.	Analgesia and Pain Control	
Laser Therapy III		
2.6.1.	Application of Laser Therapy in Dogs	
2.6.2.	Precautions	
2.6.3.	Dosage Guide for Different Pathologies	
Electrostimulation I		
2.7.1.	Terminology	
2.7.2.	History of Electrostimulation	
2.7.3.	Indications	
2.7.4.	Contraindications and Precautions	
2.7.5.	Types of Current	
Electrostimulation II		
2.8.1.	Parameters	
2.8.2.	Electrodes	
2.8.3.	What to Look for When Buying an Electrostimulator	
	2.3.1. 2.3.2. 2.3.3. Laser T 2.4.1. 2.4.2. 2.4.3. 2.4.4. Laser T 2.5.1.  2.5.2. Laser T 2.6.1. 2.6.2. 2.6.3. Electro 2.7.1. 2.7.2. 2.7.3. 2.7.4. 2.7.5. Electro 2.8.1. 2.8.2.	

2.9.	Electrostimulation III- NMES		
	2.9.1.	Types of Muscle Fibers	
	2.9.2.	Recruitment of Muscle Fibers	
	2.9.3.	Biological Effects	
	2.9.4.	Parameters	
	2.9.5.	Placement of Electrodes	
	2.9.6.	Precautions	
2.10.	Electrostimulation IV- TENS		
	2.10.1.	Pain Control Mechanisms	
	2.10.2.	TENS for Acute Pain	
	2.10.3.	TENS for Chronic Pain	
	2.10.4.	Parameters	
	2.10.5.	Placement of Electrodes	
Mod	<b>ule 3.</b> F	Physical Therapies II-Diathermy, Magnetotherapy, Indiba,	
Shoc	kwaves	s, Other Therapies Used in Rehabilitation. Nutrition	
3.1.	Diathermy		
	3.1.1.	Introduction and Definition of Diathermy	
	3.1.2.	Types of Diathermy	
		3.1.2.1. Short Wave	
		3.1.2.2. Microwave	
	3.1.3.	Physiological Effects and Clinical Use	

3.1.4. Indications

3.2.3. Indications

3.2. Indiba®

3.1.5. Contraindications and Precautions

3.2.1. Indiba® Radiofrequency Concept3.2.2. Physiological Effects of Radiofrequency

3.2.4. Contraindications and Precautions

3.3.	Magnetotherapy			
	3.3.1.	Introduction and Definition of Magnetotherapy		
	3.3.2.	Biomagnetism		
		3.3.2.1. Effects of Magnetotherapy		
		3.3.2.2. Natural Magnets		
		3.3.2.3. Properties of Magnetic Poles		
	3.3.3.	Pulsed Magnetic Fields		
		3.3.3.1. Physiological Effects and Clinical Use		
		3.3.3.2. Indications		
		3.3.3.3. Contraindications and Precautions		
3.4.	Shock Waves			
	3.4.1.	Introduction and Definition of Shock Waves		
	3.4.2.	Types of Shockwaves		
	3.4.3.	Physiological Effects and Clinical Use		
	3.4.4.	Indications		
	3.4.5.	Contraindications and Precautions		
3.5.	Holistic Therapies and Integrative Medicine			
	3.5.1.	Introduction and Definitions		
	3.5.2.	Types of Holistic Therapy		
	3.5.3.	Physiological Effects and Clinical Use		
	3.5.4.	Indications		
	3.5.5.	Contraindications and Precautions		
3.6.	Traditional Chinese Medicine			
	3.6.1.	Basis of the MTC		
	3.6.2.	Acupuncture		
		3.6.2.1. Acupoints and Meridians		
		3.6.2.2. Actions and Effects		
		3.6.2.3. Indications		
		3.6.2.4. Contraindications and Precautions		
	3.6.3.	Chinese Herbal Medicine		
	3.6.4.	Tui-Na		
	3.6.5.	Diet Therapy		
	3.6.6.	Qi-Gong		

3.7.	Clinical Nutrition in Obesity and Osteoarthrosis		
	3.7.1.	Introduction	
	3.7.2.	Definition of Obesity	
		3.7.2.1. Body Condition Evaluation	
	3.7.3.	Nutritional Management and Feed Based Dietary Plan	
	3.7.4.	Nutritional Management Based on Natural Food	
	3.7.5.	Supplements and Supplements	
3.8.	Chiropractic		
	3.8.1.	Introduction and Concept of Chiropractics	
	3.8.2.	Vertebral Subluxation Complex	
	3.8.3.	Physiological Effects	
	3.8.4.	Indications	
	3.8.5.	Contraindications and Precautions	
3.9.	Cranio-Sacral Therapy		
	3.9.1.	Introduction	
	3.9.2.	Use in Veterinary Medicine	
	3.9.3.	Physiological Effects and Benefits	
	3.9.4.	Indications	
	3.9.5.	Contraindications and Precautions	
3.10.	Ozone Therapy		
	3.10.1.	Introduction	
		3.10.1.1. Oxidative sSress	
	3.10.2.	Physiological Effects and Clinical Use	
	3.10.3.	Indications	



3.10.4. Contraindications and Precautions

Top notch content, full of case studies designed to lead you to success in your daily practice"



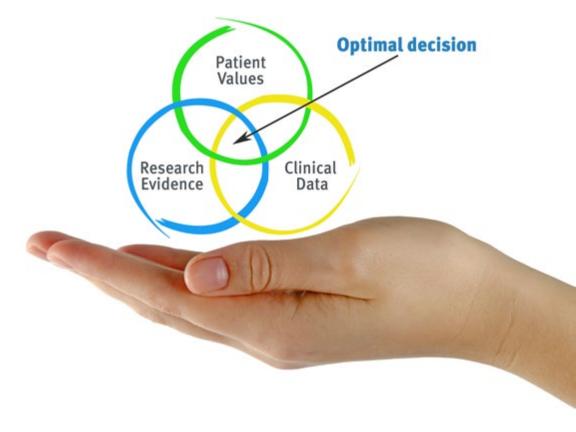


## tech 24 | Methodology

### 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.



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.





### Methodology | 27 tech

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**

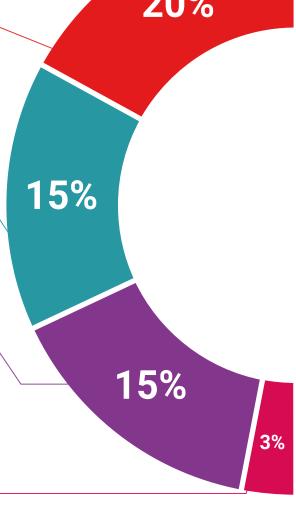
TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current and procedures of veterinary techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch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



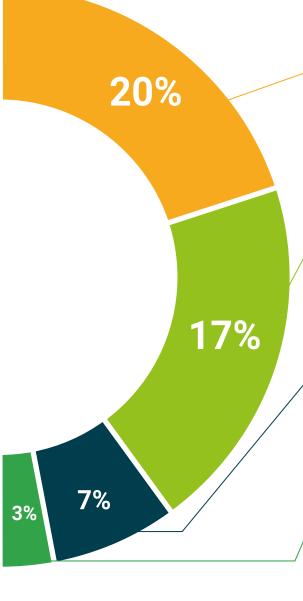
There is scientific evidence suggesting that observing third-party experts can be useful.

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.







## tech 32 | Certificate

This program will allow you to obtain your **Postgraduate Diploma in Applied Therapy in Physiotherapy and Rehabilitation of Small Animals** 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 Diploma in Applied Therapy in Physiotherapy and Rehabilitation of Small Animals

Modality: online

Duration: 6 months

Accreditation: 18 ECTS



has successfully passed and obtained the title of:

## Postgraduate Diploma in Applied Therapy in Physiotherapy and Rehabilitation of Small Animals

This is a program of 450 hours of duration equivalent to 18 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



<sup>\*</sup>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.

health
guarantee

tech
global
university

## Postgraduate Diploma

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