

# Postgraduate Certificate

Physical Therapies and Introduction  
to Holistic Therapies in Small Animals





## Postgraduate Certificate Physical Therapies and Introduction to Holistic Therapies in Small Animals

- » Modality: online
- » Duration: 12 weeks
- » Certificate: TECH Global University
- » Credits: 12 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/veterinary-medicine/postgraduate-certificate/physical-therapies-introduction-holistic-therapies-small-animals](http://www.techtute.com/us/veterinary-medicine/postgraduate-certificate/physical-therapies-introduction-holistic-therapies-small-animals)

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# 01

# Introduction

When physical rehabilitation is carried out, it is done with the objective of reestablishing the use of the tissues using different techniques such as manual therapy, thermotherapy, laser therapy or electrotherapy. In order to administer the appropriate treatment, it is necessary for veterinarians to possess in-depth knowledge of how to carry out these techniques and their effects on the tissues. Therefore, during this program, the characteristics of the different types of therapy will be analyzed, and the different types of bandages most commonly used in daily clinical practice will be examined. These contents will help professionals to position themselves in a sector that is increasingly demanding more and more experts in the field.





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*Learn in depth everything you need to administer therapy to small animals successfully with this TECH Postgraduate Certificate"*

In this Postgraduate Certificate we will analyze the characteristics of ultrasound therapy, laser therapy and electrostimulation and examine the different types of bandages most commonly used in a daily clinical practice.

Therapeutic ultrasound is considered to be a hugely effective form of thermotherapy in the treatment of musculoskeletal conditions that limit the range of joint mobility as a result of pain, muscle spasm or joint contracture, and is also a productive way of stimulating tissue healing.

Electrical stimulation is widely used, not only for its great versatility but also for being a form of therapy that does not require a large economic investment. There are a multitude of types of electrical stimulation, which has created confusion in nomenclature. This Postgraduate Certificate will review neuromuscular electrical stimulation (NMES) used to prevent atrophy and muscle reeducation and transcutaneous electrical stimulation (TENS), used in the treatment of pain.

Laser therapy, a treatment based on photobiomodulation, will also be discussed. It is based on the healing properties attributed to light. The major difference between laser light and the light generated by normal sources is that laser light is monochromatic, coherent and collimated, which leads to the attribution of an abundance of therapeutic effects, some of which are still being studied.

Finally, the characteristics of diathermy, Indiba®, magnetotherapy and shock wave therapy will be studied. On this course, the most important aspects of each of them and the possibilities they offer within Physiotherapy and Rehabilitation will be addressed.

This **Postgraduate Certificate in Physical Therapies and Introduction to Holistic Therapies in 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 Physical Therapies and Introduction to Holistic Therapies in 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
- ♦ What's new in Physical Therapies and Introduction to Holistic Therapies in Small Animals
- ♦ Practical exercises where the self-assessment process can be carried out to improve learning
- ♦ Special emphasis on innovative methodologies in Physical Therapies and Introduction to Holistic Therapies in 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 prioritizes quality content and teaching staff when designing our programs. This ensures that we are able to lead veterinarians to professional success"*

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*You can study at home, the office, you consulting room or even outdoors. Anywhere that suits you is a good place to study when you choose to study online”*

The program includes, in its teaching staff, professionals belonging to the veterinary field, who contribute their work experience to this learning process, as well as renowned specialists from reference 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 an immersive training program designed 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 academic program. For this purpose, the professional will be assisted by an innovative interactive video system developed by recognized experts in

*Don't miss this great educational opportunity and position yourself as a prestigious veterinarian with this comprehensive TECH program.*

*This program will be the veterinarian's gateway to a promising future.*

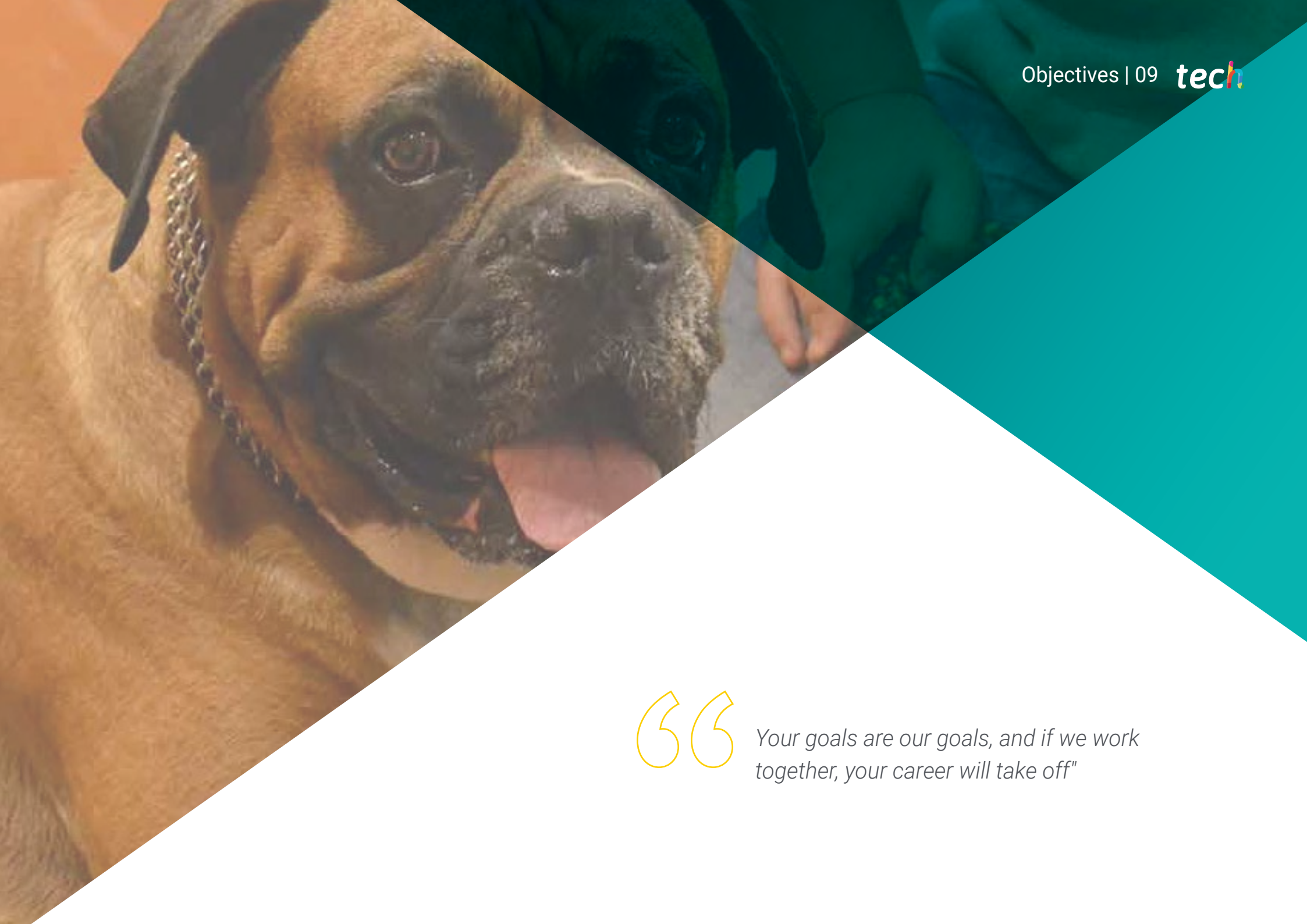


# 02 Objectives

TECH designs all its program based on the latest scientific evidence with the utmost rigour. All this, with the aim of providing veterinarians with the most up-to-date knowledge to efficiently run a professional practice of quality and prestige. In this sense, this Postgraduate Certificate will provide students with in-depth knowledge of the different types of therapy for the treatment of small animals, learning how to cure physical, sensory and/or motor problems in these small animals. After completing the program, professionals will be fully capable of designing and implementing this type of therapy, offering optimal conditions for the animal and ensuring its welfare.







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*Your goals are our goals, and if we work together, your career will take off"*



## General objectives

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- 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 osteoarthritis or obesity



*A pathway to achieving professional growth that will propel you towards a greater level of competitiveness in the employment market"*





## Specific Objectives

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- ◆ 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
- ◆ 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

03

# Course Management

It is clear that the teaching staff plays a fundamental role in any learning process. For this reason, TECH pays special attention to providing students with the best teaching staff on the market in order to provide them with a top-quality learning experience that takes into account not only the content, but also who teaches it. In this way, veterinarians will ensure that, after completing the Postgraduate Certificate, they will have learned and acquired a theoretical and practical basis from the most reputable professionals both nationally and internationally.

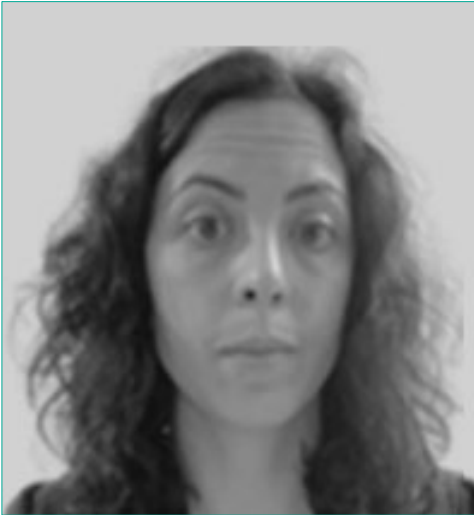




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*This university makes a major effort and investment to offer its students the best teaching staff in the professional landscape"*

## 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, Universidad Complutense de Madrid
- ♦ Master's Degree in Veterinary Physiotherapy and Rehabilitation for Dogs and Cats, Universidad Complutense de Madrid
- ♦ Postgraduate Diploma in Bases of Physiotherapy and Animal Rehabilitation, Universidad Complutense de 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 by Chi Institute. Certified acupuncturist. Certified Food Therapist
- ♦ Postgraduate Degree in Physiotherapy and Rehabilitation of Small Animals by Euroinnova Business School

# 04

## Structure and Content

The contents at the student's disposal during the course of the program have been designed by the best professionals in the field of animal rehabilitation therapy who have extensive experience and recognized prestige in the profession, backed by the volume of cases reviewed, studied and diagnosed, and with extensive mastery of the latest technology applied to veterinary medicine. This will ensure that upon completion of the program you will be fully trained in this area from a multidisciplinary approach to promote longevity and quality of life







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*Do not hesitate, by studying with TECH  
you will have the most complete and  
up-to-date contents on the market"*

## Module 1. Physical Therapy I: Electrotherapy, Laser Therapy, Therapeutic Ultrasound. Thermotherapy

- 1.1. Ultrasound I
  - 1.1.1. Definition
  - 1.1.2. Parameters.
  - 1.1.3. Indications
  - 1.1.4. Contraindications/Precautions
- 1.2. Ultrasound II
  - 1.2.1. Thermal Effects
  - 1.2.2. Mechanical Effects
  - 1.2.3. Uses of Therapeutic Ultrasound
- 1.3. Laser Therapy I
  - 1.3.1. Introduction to Laser Therapy
  - 1.3.2. Laser Properties
  - 1.3.3. Laser Classification
  - 1.3.4. Types of Lasers Used in Rehabilitation
- 1.4. Laser Therapy II
  - 1.4.1. Effects of Lasers on Tissues
    - 1.4.1.1. Wound Healing
    - 1.4.1.2. Bone and Cartilage
    - 1.4.1.3. Tendon and Ligament
    - 1.4.1.4. Peripheral Nerves and Spinal Cord
  - 1.4.2. Analgesia and Pain Control
- 1.5. Laser Therapy III
  - 1.5.1. Application of Laser Therapy in Dogs
  - 1.5.2. Precautions
  - 1.5.3. Dosage Guide for Different Pathologies
- 1.6. Electrostimulation I
  - 1.6.1. Terminology
  - 1.6.2. History of Electrostimulation
  - 1.6.3. Indications
  - 1.6.4. Contraindications and Precautions
  - 1.6.5. Types of Current

- 1.7. Electrostimulation II
  - 1.7.1. Parameters.
  - 1.7.2. Electrodes
  - 1.7.3. What to Look for When Buying an Electrostimulator
- 1.8. Electrostimulation III-NMES
  - 1.8.1. Types of Muscle Fibers
  - 1.8.2. Recruitment of Muscle Fibers
  - 1.8.3. Biological Effects
  - 1.8.4. Parameters.
  - 1.8.5. Placement of Electrodes
  - 1.8.6. Precautions
- 1.9. Electrostimulation IV– TENS
  - 1.9.1. Pain Control Mechanisms
  - 1.9.2. TENS for Acute Pain
  - 1.9.3. TENS for Chronic Pain
  - 1.9.4. Parameters
  - 1.9.5. Placement of Electrodes

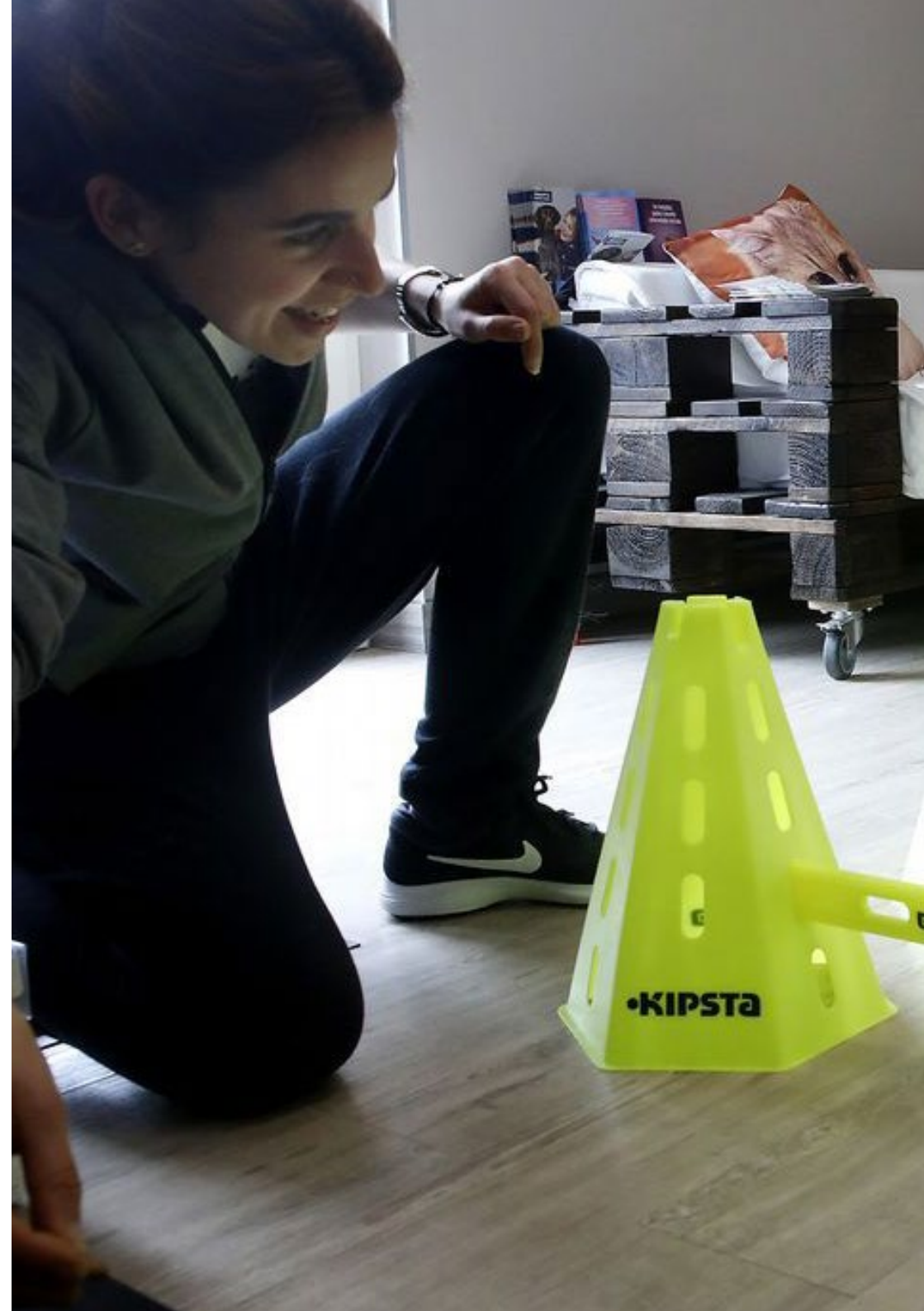
## Module 2. Physical Therapies II: Diathermy, Magnetotherapy, Indiba, Shockwaves, Other Therapies Used in Rehabilitation. Nutrition

- 2.1. Diathermy
  - 2.1.1. Introduction and Definition of Diathermy
  - 2.1.2. Types of Diathermy
    - 2.1.2.1. Short Wave
    - 2.1.2.2. Microwave
  - 2.1.3. Physiological Effects and Clinical Use
  - 2.1.4. Indications
  - 2.1.5. Contraindications and Precautions



- 2.2. Indiba®
  - 2.2.1. Concept of Indiba® Radiofrequency
  - 2.2.2. Physiological Effects of Radiofrequency
  - 2.2.3. Indications
  - 2.2.4. Contraindications and Precautions
- 2.3. Magnetotherapy
  - 2.3.1. Introduction and Definition of Magnetotherapy
  - 2.3.2. Biomagnetism
    - 2.3.2.1. Effects of Magnetotherapy
    - 2.3.2.2. Natural Magnets
    - 2.3.2.3. Properties of Magnetic Poles
  - 2.3.3. Pulsed Magnetic Fields
    - 2.3.3.1. Physiological Effects and Clinical Use
    - 2.3.3.2. Indications
    - 2.3.3.3. Contraindications and Precautions
- 2.4. Shock Waves
  - 2.4.1. Introduction and Definition of Shock Waves
  - 2.4.2. Types of Shockwaves
  - 2.4.3. Physiological Effects and Clinical Use
  - 2.4.4. Indications
  - 2.4.5. Contraindications and Precautions
- 2.5. Holistic Therapies and Integrative Medicine
  - 2.5.1. Introduction and Definitions
  - 2.5.2. Types of Holistic Therapy
  - 2.5.3. Physiological Effects and Clinical Use
  - 2.5.4. Indications
  - 2.5.5. Contraindications and Precautions
- 2.6. Traditional Chinese Medicine
  - 2.6.1. Basis of the MTC
  - 2.6.2. Acupuncture
    - 2.6.2.1. Acupoints and Meridians
    - 2.6.2.2. Actions and Effects
    - 2.6.2.3. Indications
    - 2.6.2.4. Contraindications and Precautions

- 2.6.3. Chinese Herbal Medicine
- 2.6.4. Tui-Na
- 2.6.5. Diet Therapy
- 2.6.6. Qi-Gong
- 2.7. Clinical Nutrition in Obesity and Osteoarthritis
  - 2.7.1. Introduction
  - 2.7.2. Definition of Obesity
    - 2.7.2.1. Body Condition Evaluation
  - 2.7.3. Nutritional Management and Feed-Based Dietary Plan
  - 2.7.4. Nutritional Management Based on Natural Food
  - 2.7.5. Supplements and Supplements
- 2.8. Chiropractic
  - 2.8.1. Introduction and Concept of Chiropractics
  - 2.8.2. Vertebral Subluxation Complex
  - 2.8.3. Physiological Effects
  - 2.8.4. Indications
  - 2.8.5. Contraindications and Precautions
- 2.9. Cranio-Sacral Therapy
  - 2.9.1. Introduction
  - 2.9.2. Use in Veterinary Medicine
  - 2.9.3. Physiological Effects and Benefits
  - 2.9.4. Indications
  - 2.9.5. Contraindications and Precautions
- 2.10. Ozone Therapy
  - 2.10.1. Introduction
    - 2.10.1.1. Oxidative Stress
  - 2.10.2. Physiological Effects and Clinical Use
  - 2.10.3. Indications
  - 2.10.4. Contraindications and Precautions





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*Welcome to the training  
experience that will change  
your professional outlook”*

# 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.





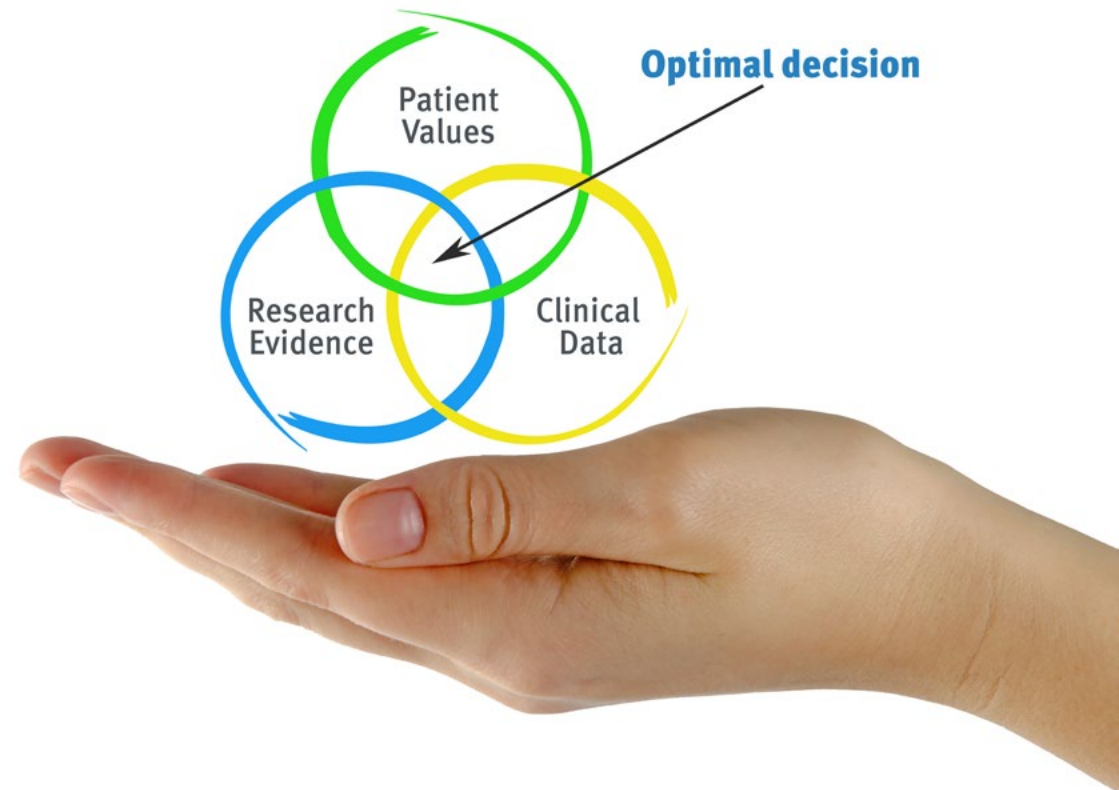
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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## 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.

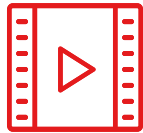
*Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.*

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

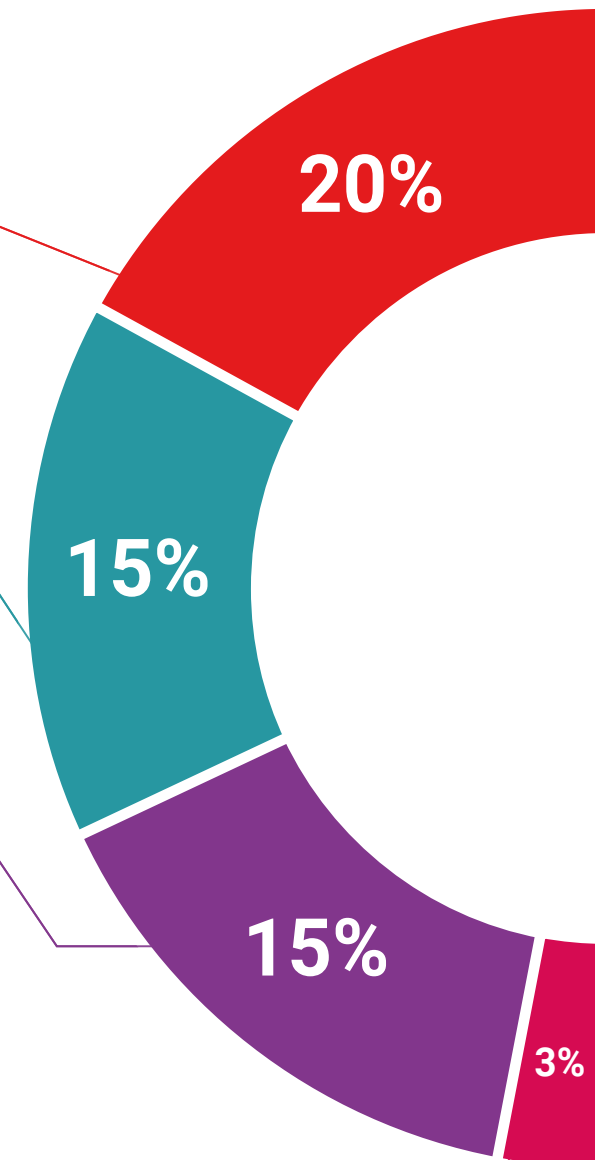
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

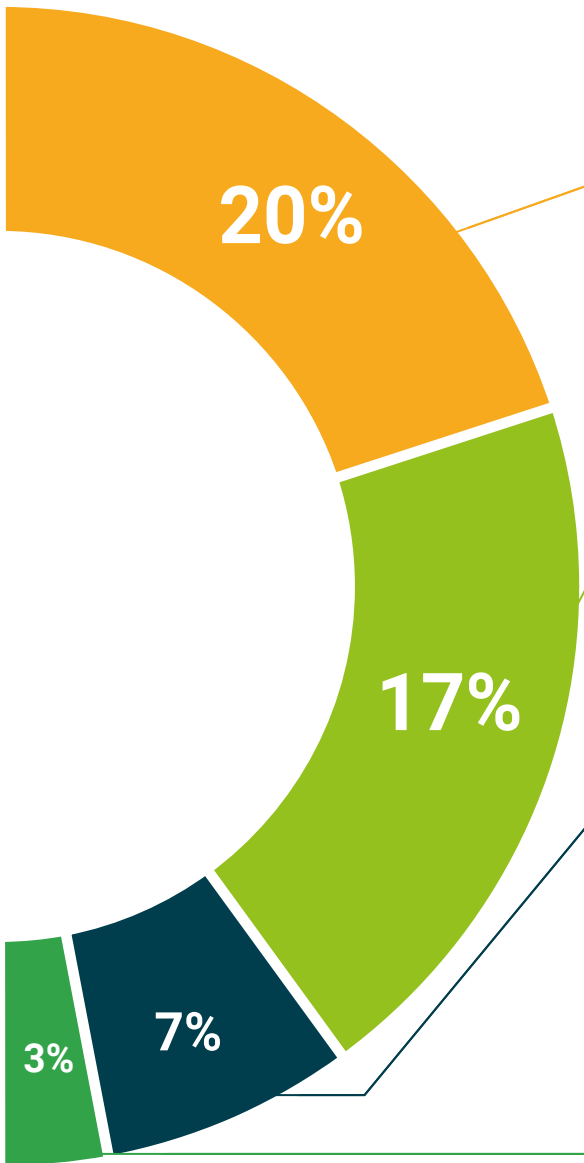
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### 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 Certificate in Physical Therapies and Introduction to Holistic Therapies in Small Animals guarantees you, in addition to the most rigorous and updated training, access to a Postgraduate Certificate issued by TECH Global University.





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

This program will allow you to obtain your **Postgraduate Certificate in Physical Therapies and Introduction to Holistic Therapies in 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 Certificate in Physical Therapies and Introduction to Holistic Therapies in Small Animals**

Modality: **online**

Duration: **12 weeks**

Accreditation: **12 ECTS**



\*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.



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



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