

# Postgraduate Certificate Electrophysical Therapies for Equine Rehabilitation





## Postgraduate Certificate Electrophysical Therapies for Equine Rehabilitation

Course Modality: **Online**

Duration: **6 weeks**

Certificate: **TECH Technological University**

Official N° of hours: **150 h.**

Website: [www.techtute.com/us/veterinary-medicine/postgraduate-certificate/electrophysical-therapies-equine-rehabilitation](http://www.techtute.com/us/veterinary-medicine/postgraduate-certificate/electrophysical-therapies-equine-rehabilitation)

# Index

01

Introduction

---

*p. 4*

02

Objectives

---

*p. 8*

03

Course Management

---

*p. 12*

04

Structure and Content

---

*p. 16*

05

Methodology

---

*p. 20*

06

Certificate

---

*p. 28*

# 01

# Introduction

Electrophysical therapies help to treat and prevent injuries in horses, which is why they are used in equine physiotherapy and rehabilitation. In order to gain a broad understanding of these mechanisms, it is necessary to enrol on programs such as this one. Joining this community of learners will allow students to develop the professional skills needed to deal with these animals.



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*Society demands veterinary professionals experienced in working with equines and with extensive knowledge of Electrophysical Therapies for Equine Rehabilitation. Don't think twice and study with us”*

Most of the electrophysical equipment discussed within this Postgraduate Certificate represents a significant investment for veterinary physiotherapists, so it is necessary to understand its underlying scientific concepts and the therapeutic effects and applications, in order to choose the most appropriate therapies for the cases that often arise in clinical practice.

Thus, this program covers the different types of electrical currents used in physiotherapy and rehabilitation, which continue to be a basic tool in clinical practice, due to their versatility and ease of use: types of TENS, muscular electrostimulation, interferential and other electrical currents of interest. In addition, there will be a review of fundamental underlying concepts and scientific theory. Another important therapy for clinical practice is ultrasound, which has been used in human physiotherapy for many years, while in veterinary medicine it has been relegated by other therapies, but it has enjoyed renewed popularity thanks to new publications on its usefulness.

In the field of equine physiotherapy, shock waves have been used for more than 15 years, with numerous scientific articles supporting their clinical use, making related knowledge and skills for application essential. However, other innovative techniques such as percutaneous electrolysis offer promising results in the treatment of chronic tendinitis.

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

Additionally, as it is a 100% online program, the student is not constrained by fixed timetables or the need to move to another physical location, but can access the contents at any time of the day, balancing their professional or personal life with their academic life.

This **Postgraduate Certificate in Electrophysical Therapies for Equine Rehabilitation** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The examination of practical cases presented by experts in equine physiotherapy and rehabilitation
- ♦ Graphic, schematic, and practical contents with which provide scientific and practical information on the disciplines that are essential for professional practice
- ♦ Practical exercises where the self-assessment process can be carried out to improve learning
- ♦ A special emphasis on innovative methodologies for Electrophysical Therapies for Equine Rehabilitation
- ♦ 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 Electrophysical Therapies for Equine Rehabilitation. It's the perfect opportunity to advance your career"*

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*This Postgraduate Certificate is the best investment you can make in selecting a refresher program to update your knowledge in Electrophysical Therapies for Equine Rehabilitation”*

The teaching staff includes veterinary professionals, who bring their professional experience to this program, as well as recognised specialists from leading societies and prestigious universities.

Its 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 education programmed to learn 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 throughout the program. For this purpose, the professional will be assisted by an innovative interactive video system developed by renowned and experienced experts in Electrophysical Therapies for Equine Rehabilitation.

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

*This 100% online Postgraduate Certificate will allow you to balance your studies with your professional work while increasing your knowledge in this field.*



# 02 Objectives

This Postgraduate Certificate in Electrophysical Therapies for Equine Rehabilitation is aimed at facilitating the performance of the veterinary professional with the latest advances and newest treatments in the sector.





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*Our goal is to offer quality specialization so that our students become the best in their profession”*



## General objectives

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- ♦ Analyze the electrophysical agents used in equine physiotherapy
- ♦ Establish the physicochemical foundations on which its therapeutics are based
- ♦ Develop its indications, application methodology, contraindications and risks
- ♦ Determine the most appropriate treatments for each pathology from a therapeutic and scientific point of view, based on evidence



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





## Specific objectives

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- ♦ Analyze the use of analgesic electrotherapy and muscle stimulation, its application, scientific basis, indications and contraindications
- ♦ Identify possible applications of percutaneous electrolysis, as well as its scientific basis, indications and contraindications
- ♦ Evaluate the clinical use of diathermy and its application in the horse
- ♦ Develop knowledge on the clinical use of therapeutic lasers
- ♦ Determine the relationship of dose to power, frequency and penetration for effective and safe laser treatment
- ♦ Define the uses of shock waves in veterinary medicine and their application in different pathologies
- ♦ Propose different protocols for the application of electrophysical agents

03

# Course Management

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





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*Our teaching team is the most complete and successful in the educational panorama”*

## Management



### Dr. Hernández Fernández, Tatiana

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

## Professors

### Dr. Castellanos Alonso, María

- ♦ Postgraduate Diploma in Equine Clinic from the Autonomous University of Barcelona
- ♦ Resident in the Equine Area of the Hospital Clínico Veterinario UCM
- ♦ Outpatient veterinary clinic and equine reproduction
- ♦ Member of the veterinary team of Compluvet S.L., in races and anti-doping control in different racetracks nationwide
- ♦ Clinical veterinarian forming part of José Manuel Romero Guzmán's team
- ♦ Member AVEE (Association of Veterinary Specialists in Equidae)

### Dr. Álvarez González, Carlota

- ♦ Degree in Veterinary Medicine from the Universidad Alfonso X El Sabio
- ♦ Certified in Acupuncture and Traditional Chinese Veterinary Medicine by the Chi Institute of Europe
- ♦ Veterinarian in charge of the Holistic Medicine service of the Villalba Veterinary Hospital (Veterinaria)
- ♦ Holistic Medicine Outpatient Service
- ♦ Specialist in animal physiotherapy in Fisioveterinaria
- ♦ Member of the WATCVM (World Association of Traditional Chinese Veterinary Medicine) and AVEE (Association of Equine Veterinarians)."

**Dr. Boado Lama, Ana**

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

**Dr. Cruz Madorrán, Antonio**

- ◆ Full Time Doctor, Catedral Herrera University CEU, Valencia
- ◆ Diploma from the American and European Colleges of Veterinary Surgery (ACVS, ECVS) and Veterinary Anesthesiology (ACVA, ECVA)
- ◆ Author of the book: Manual de técnicas quirúrgicas y anestésicas en la clínica equina

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*Update your knowledge with the Postgraduate Certificate in Electrophysical Therapies for Equine Rehabilitation”*

04

# Structure and Content

The content has been structured and designed by leading professionals in Electrophysical Therapies for Equine Rehabilitation, who have extensive experience and high standing within the profession, backed by a large volume of cases reviewed, studied, and diagnosed, and extensive knowledge of new technologies applied to veterinary medicine.





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

## Module 1. Electrophysical Agents in Equine Physiotherapy

- 1.1. Electrotherapy
  - 1.1.1. Physiological Basis of Electrostimulation
  - 1.1.2. Electrotherapy Parameters
  - 1.1.3. Electrotherapy Classification
  - 1.1.4. Equipment
  - 1.1.5. Precautions
  - 1.1.6. General Contraindications to Electrotherapy
- 1.2. Analgesic Electrotherapy
  - 1.2.1. Therapeutic Effects of Electricity
  - 1.2.2. TENS
    - 1.2.2.1. Endorphin TENS
    - 1.2.2.2. Conventional TENS
    - 1.2.2.3. BURST type TENS
    - 1.2.2.4. Modulated TENS
    - 1.2.2.5. Invasive TENS
  - 1.2.3. Other Types of Analgesic Electrotherapy
  - 1.2.4. Precautions and Contraindications
- 1.3. Muscle Electrostimulation
  - 1.3.1. Preliminary Considerations
  - 1.3.2. Electrostimulation Parameters
  - 1.3.3. Effects of Electrostimulation on Musculature
  - 1.3.4. Stimulation in Denervated Muscle
  - 1.3.5. Horse Application
  - 1.3.6. Precautions and Contraindications
- 1.4. Interferential Currents and Other Currents of Clinical Interest
  - 1.4.1. Interferential Currents
  - 1.4.2. Diadynamic Currents
  - 1.4.3. Russian Currents
  - 1.4.4. Other Currents That the Equine Physiotherapist Should Know About





- 1.5. Microcurrents, Iontophoresis and Magnetotherapy
  - 1.5.1. Microcurrents
  - 1.5.2. Iontophoresis
  - 1.5.3. Magnetotherapy
- 1.6. Percutaneous Electrolysis
  - 1.6.1. Physiological Fundamentals and Scientific Basis
  - 1.6.2. Procedure and Methodology
  - 1.6.3. Applications in Equine Sports Medicine
  - 1.6.4. Precautions and Contraindications
- 1.7. Diathermy
  - 1.7.1. Therapeutic Effects of Heat
  - 1.7.2. Types of Diathermy
  - 1.7.3. Radiofrequency Diathermy or Tecartherapy
  - 1.7.4. Indications and Horse Application
  - 1.7.5. Precautions and Contraindications
- 1.8. Ultrasound
  - 1.8.1. Definition, Physiological Basis and Therapeutic Effects
  - 1.8.2. Ultrasound Types and Parameter Selection
  - 1.8.3. Indications and Horse Application
  - 1.8.4. Precautions and Contraindications
- 1.9. Laser
  - 1.9.1. Concept of Photobiomodulation, Physical and Biological Basis
  - 1.9.2. Laser Types
  - 1.9.3. Physiological Effects
  - 1.9.4. Indications and Horse Application
  - 1.9.5. Precautions and Contraindications
- 1.10. Shock Waves
  - 1.10.1. Definition, Physiological Fundamentals and Scientific Basis
  - 1.10.2. Indications and Horse Application
  - 1.10.3. Precautions and Contraindications

# 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.





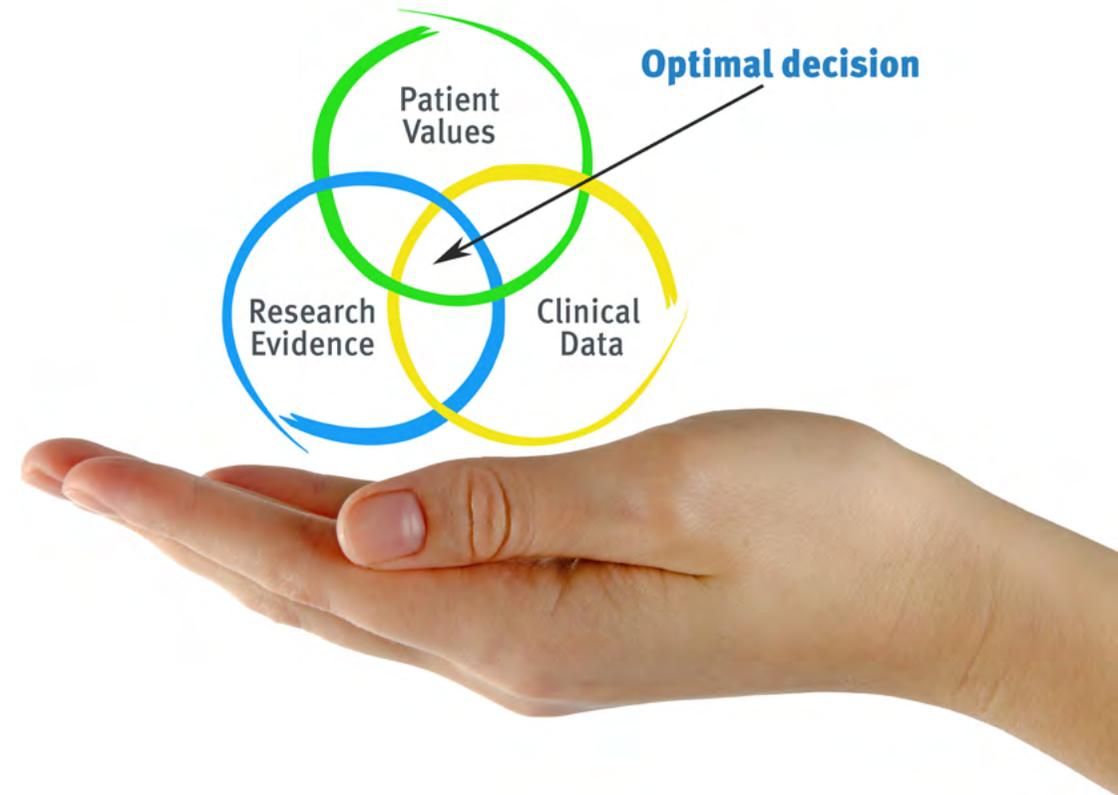
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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## 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

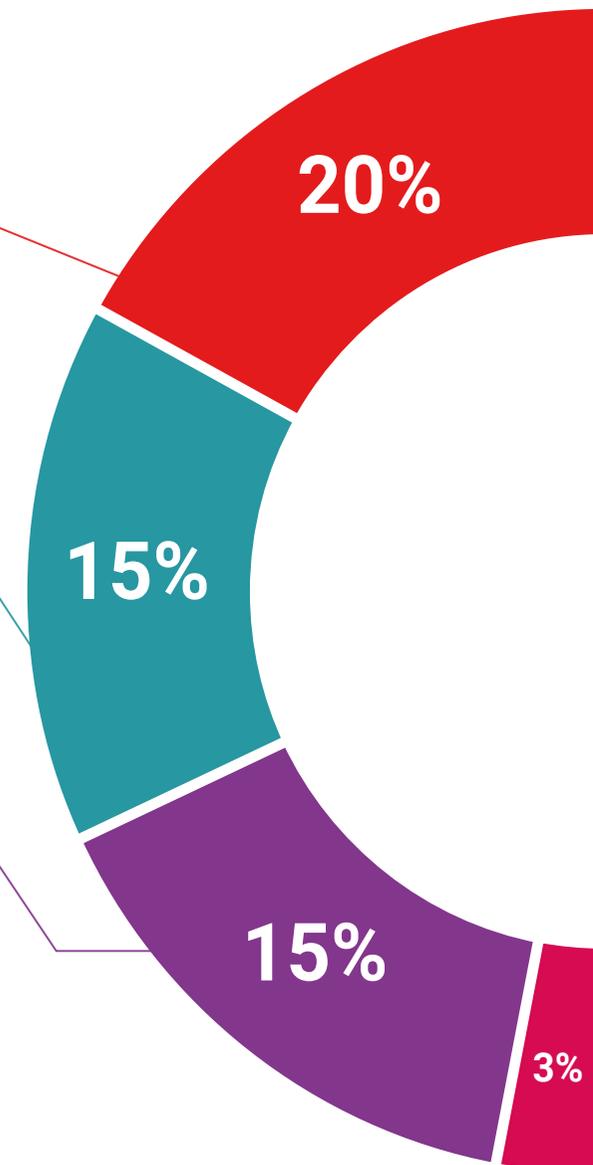
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

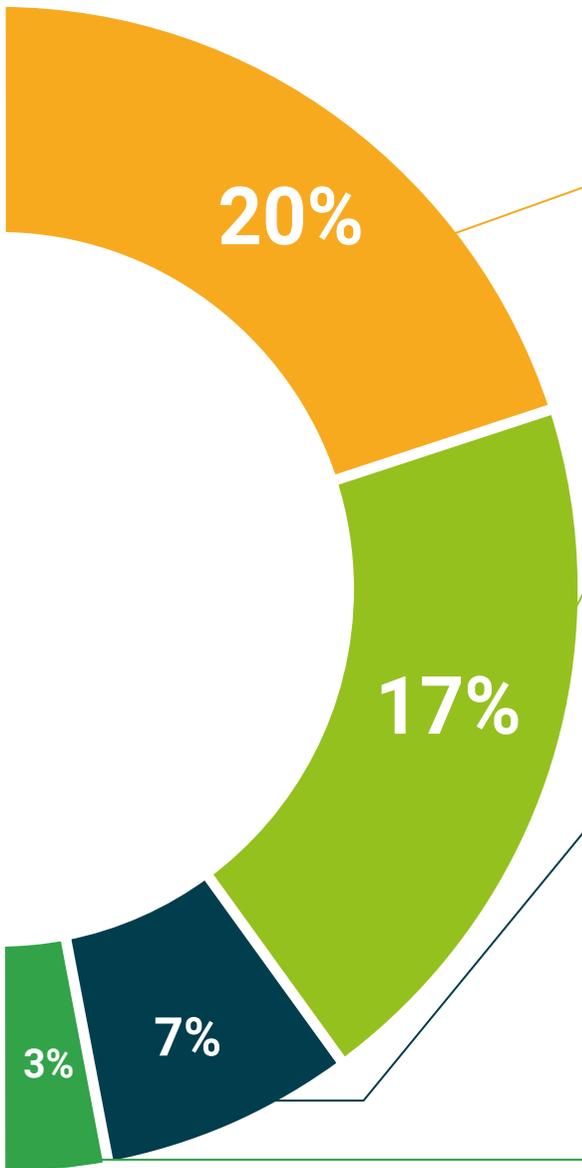
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



### 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 Electrophysical Therapies for Equine Rehabilitation guarantees you, in addition to the most rigorous and updated training, access to a Postgraduate Certificate issued by TECH Technological University.





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

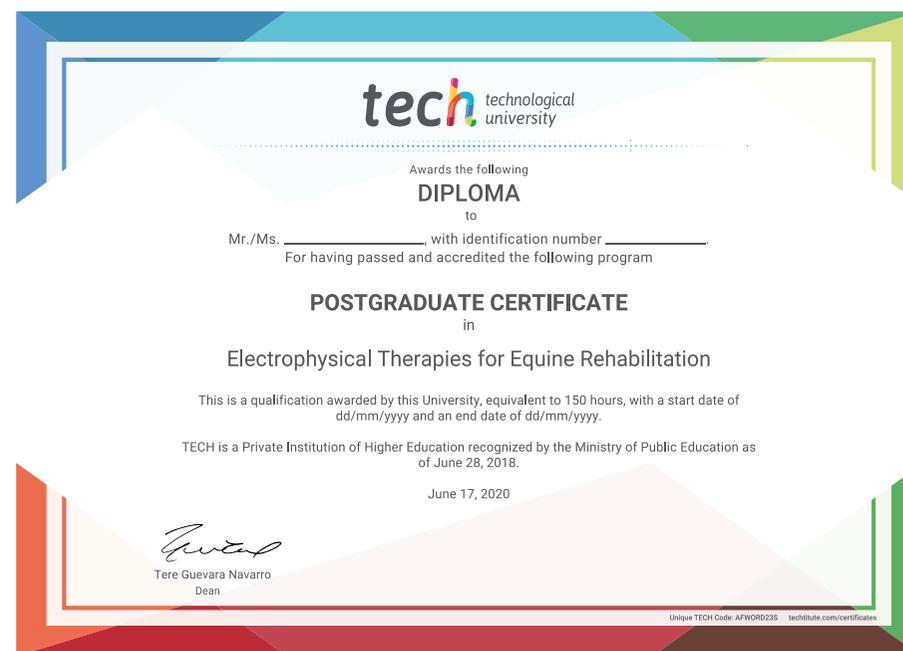
This **Postgraduate Certificate in Electrophysical Therapies for Equine Rehabilitation** contains the most complete and up-to-date scientific program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Certificate** issued by **TECH Technological University** via tracked delivery\*.

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

Title: **Postgraduate Certificate in Electrophysical Therapies for Equine Rehabilitation**

Official N° of hours: **150 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 quality  
online development language  
classroom



**Postgraduate Certificate**  
Electrophysical Therapies  
for Equine Rehabilitation

Course Modality: Online

Duration: 6 weeks

Certificate: TECH Technological University

Official N° of hours: 150 h.

# Postgraduate Certificate Electrophysical Therapies for Equine Rehabilitation

