

# Postgraduate Certificate

## Galvanic Currents Iontophoresis





## Postgraduate Certificate

### Galvanic Currents Iontophoresis

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

Website: [www.techtitute.com/us/medicine/postgraduate-certificate/postgraduate-certificate-galvanic-currents-iontophoresis](http://www.techtitute.com/us/medicine/postgraduate-certificate/postgraduate-certificate-galvanic-currents-iontophoresis)

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# 01

# Introduction

The application of electrotherapy through galvanic currents and iontophoresis offers the professional the advantages of a safe and highly efficient transcutaneous use in analgesia and muscle stimulation. This type of intervention offers the advantages of ease of use. In order to achieve efficiency and safety, the professional must work with adjusted knowledge of parameters such as current intensity, electrode size, substance concentration and current mode to be used. This Postgraduate Certificate is a compilation of the most updated knowledge and techniques that will allow the student to grow in their skills quickly and easily.





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*Include in your knowledge the ability to of safe application of Galvanic Currents and Iontophoresis in the appropriate cases, guaranteeing the best results”*

Galvanic currents are a sustained flow of electrons that propagate from the negative to the positive pole, without change of polarity and with the intensity that adjusts to the dose required by the treatment. This type of direct current is mainly used in iontophoresis. The major side effect that can result from the application of galvanic currents is the acidic reactions that occur at the anode and the basic reactions that will take place at the cathode.

The analgesic effects of galvanic currents are produced both in low frequency currents and in those of medium frequency between 1 to 10 Kz. In this case, the advantage is that there will be no chemical effects and a good muscle stimulation will be achieved. By means of iontophoresis, greater penetration of the desired substances through the skin is achieved. This non-invasive technique offers great therapeutic opportunities in local applications.

The objective of the Postgraduate Certificate in Galvanic Currents Iontophoresis is to allow students to learn the basics and classification of the TENS type current, making it the perfect opportunity to study the applications and contraindications of this type of practice. All this will be possible thanks to a 100% online program that adapts to the needs of professionals.



*A complete and highly interesting learning for the professional, which will allow you to complete your knowledge with the advantages of the most traditional and contrasted techniques"*

This **Postgraduate Certificate in Galvanic Currents Iontophoresis** contains the most complete and up-to-date scientific program on the market. The most important features of the program include:

- More than 75 practical cases presented by experts in electrotherapy
- 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
- New developments on the role of the rehabilitation physician in the application of electrotherapy
- Practical exercises where the self-assessment process can be carried out to improve learning
- Algorithm-based interactive learning system for decision-making in the situations that are presented to the student
- Its special emphasis on research methodologies on electrotherapy applied to Rehabilitation Medicine
- 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

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*Grow as a professional with the best training in the online market in Galvanic Currents and Iontophoresis and their specific use in different pathologies”*

The teaching staff includes professionals from the field of medicine, who bring their experience to this training program, as well as renowned specialists from leading 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 immersive training programmed to train in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. For this, the professional will have the help of an innovative interactive video system made by recognized experts in Electrotherapy in Rehabilitation Medicine, with great experience.

*You will learn by studying simulated environments and cases, providing you with an integrated, more efficient approach to real situations.*

*Focused on practical learning, this Postgraduate Certificate will teach you the techniques and their effective and safe application.*



02

# Objectives

Acquire mastery of this field of work is essential to advance in clinical practice. In this way, it will be possible to incorporate the most current and relevant knowledge and techniques in the sector. Thus, this Postgraduate Certificate in Galvanic Currents Iontophoresis, through an approach focused on efficiency, will allow students to achieve the necessary knowledge to become an elite specialist in this field.







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*A quick and easy competency growth that will put you on the front line of intervention as an up-to-date and efficient professional”*



## General objectives

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- ♦ Update the knowledge of the Rehabilitation Medicine professional in the field of Electrotherapy
- ♦ Promote work strategies based on a comprehensive approach to the patient as a standard model for achieving excellent care
- ♦ Encourage the acquisition of technical skills and abilities, through a powerful audiovisual system, and the possibility of development through online simulation workshops and/or specific training
- ♦ Encourage professional stimulation through continuing education and research





## Specific objectives

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- ♦ Know the fundamentals and classification of the TENS type current
- ♦ Identify the types and application of electrodes, depending on the importance of pulse width
- ♦ Study the applications and contraindications of TENS
- ♦ Analyze the effects of high and low frequencies

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*A comprehensive study of the proper applications of Galvanic Currents and Iontophoresis, their safe approach and contraindications”*



# 03

## Course Management

During the course, students will work on their professional development through a group of specialists with long experience in the application of the different systems and techniques of electrotherapy, professionals chosen for their wide prestige in the profession. All of them have an excellent background in rehabilitation medicine and are professionals with years of teaching experience that offer the student of this Postgraduate Certificate, the most complete, direct and real vision of the work with electrotherapy in rehabilitation medicine.





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*With the complete guide of specialists in this field you will advance unstoppably towards the highest professional competitiveness”*

## Management



### Dr. del Villar Belzunce, Ignacio

- ♦ Head of the Rehabilitation and Physical Medicine Department of the Rey Juan Carlos I Hospital in Móstoles. Madrid
- ♦ Specialist in Physical Medicine and Rehabilitation, University Hospital La Paz, Madrid
- ♦ Head of the Rehabilitation and Physical Medicine Associate Department of the Rey Juan Carlos I Hospital in Móstoles
- ♦ Specialist Physician in the Rehabilitation and Physical Medicine Service of the Rey Juan Carlos I Hospital in Móstoles
- ♦ Professor of ultrasound Quierón Salud guided interventional techniques in the locomotor system
- ♦ Degree in Medicine and Surgery from the University of Zaragoza
- ♦ Specialist in Physical Medicine and Rehabilitation, University Hospital La Paz, Madrid

## Professor

### Dr. Sánchez Gómez, Gema

- ♦ Attending Physician in the specialty of Physical Medicine and Rehabilitation at the Rey Juan Carlos de Móstoles University Hospital, Madrid
- ♦ Medical Specialist in Physical Medicine and Rehabilitation at Jaca Clinic, Madrid
- ♦ Specialist Physical Medicine and Rehabilitation. Rey Juan Carlos Hospital, Móstoles, Madrid
- ♦ Degree in Medicine from the Complutense University of Madrid



# 04

## Structure and Content

To ensure that the student's work and dedication to learning are converted into real achievements is the basis of the teaching approach of this Postgraduate Certificate, which has quantifiable objectives that will maintain the stimulus and motivation throughout the process. Throughout the modules that make up the Postgraduate Diploma, students will study each and every one of the aspects that the rehabilitation physician must master to ensure their competence in this type of intervention.







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*A high training Postgraduate Certificate structured as an intensive but flexible process of exceptional quality”*

### Module 1. Galvanic Currents Iontophoresis

- 1.1. Fundamentals of TENS Type Current
- 1.2. Classification of TENS Type Current
- 1.3. Concept of Accommodation
- 1.4. Analgesic Effects of High and Low Frequency TENS and Burst Type TENS
- 1.5. Electrodes: Types and Application Importance of Pulse Width
- 1.6. Applications and Contraindications of TENS
- 1.7. Fundamentals and Parameters of Interferential Currents
- 1.8. Effects oh High and Low Frequency
- 1.9. Electrodes: Type and Application Importance and Adjustment of the Frequency Spectrum Concept of Accommodation
- 1.10. Applications and Contraindications





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*A unique, key, and decisive training experience to boost your professional development”*

# 05

# Methodology

This training program provides you with 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, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately 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, trying to recreate the real conditions in the physician'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. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
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. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



## Relearning Methodology

At TECH we enhance the Harvard 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.

*Professionals 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 250.000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

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



#### Surgical Techniques and Procedures on Video

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



#### Interactive Summaries

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

This exclusive multimedia content presentation training Exclusive system was awarded by Microsoft as a "European Success Story".



#### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





#### Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### Testing & 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 your goals.



#### Classes

There is scientific evidence on the usefulness of learning by observing experts: The system termed Learning from an Expert strengthens knowledge and recall capacity, and generates confidence in the face of difficult decisions in the future.



#### Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.



# 06 Certificate

This Postgraduate Certificate in Galvanic Currents. Iontophoresis, 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 training and receive your university degree without travel or laborious paperwork”*

This program will allow you to obtain your **Postgraduate Certificate in Galvanic Currents Iontophoresis** 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 Galvanic Currents Iontophoresis**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



future

health

confidence people

education information tutors

guarantee accreditation teaching

institutions technology learning

community commitment

personalized service information

knowledge present quality

online technologies

development languages

virtual classroom

**tech** global  
university

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