

# Postgraduate Certificate

## Ultrasound Update for Rehabilitation Doctors





## Postgraduate Certificate Ultrasound Update for Rehabilitation Doctors

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 7 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/medicine/postgraduate-certificate/ultrasound-update-rehabilitation-doctors](http://www.techtute.com/us/medicine/postgraduate-certificate/ultrasound-update-rehabilitation-doctors)

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01

# Introduction

Ultrasound is a tool that is being used more and more by rehabilitation physicians. This course aims to initiate or complement the teaching of musculoskeletal ultrasound, to meet the demand for training of professionals, seeking usefulness in routine clinical practice and encourage research.





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*This Postgraduate Certificate in Ultrasound Update in Physical Therapy for Rehabilitation Physicians, a sense of security in the performance of your profession, which will help you grow personally and professionally”*

The use of ultrasound by rehabilitation physicians allows greater efficiency in many treatments, as well as to assess the evolution of the patient with objective data and increase the safety of invasive treatments in physiotherapy. We will have the opportunity to learn how to explore the upper limb, lower limb and lumbopelvic region, through the RUSI technique.

This course is an excellent option for training in ultrasound, due to the quality of the material provided and the quality of the teaching team, made up of professors who are highly prestigious professionals with years of experience in both ultrasound and teaching. In addition, some of them have several high impact scientific publications, and are creators and members of the Board of Directors of the Spanish Society of Ultrasound in Physiotherapy (SEEFI).

The documentation process is also of vital importance for effective communication between different health science professionals.

Some topics aim to open up new avenues of research for the clinician by inviting him/her to discover and become interested in a space that is often completely unknown, such as the science of decision making and artificial intelligence.

The program is designed to provide online training equivalent to 7 ECTS credits and 150 hours of study. All theoretical and practical knowledge is presented through the use of high quality multimedia content, analysis of clinical cases prepared by experts, classes, and video techniques that allow for the exchange of knowledge and experience, maintain and update the training level of its members, create protocols for action and disseminate the most important developments in the specialty. With online training, students can organize their time and pace of learning, adapting it to their schedules, in addition to being able to access the contents from any computer or mobile device.

This Postgraduate Certificate in Ultrasound Update for Rehabilitation Doctors contains the most complete and up to date scientific program on the market. The most important features of the program include:

- ♦ Development of case studies presented by experts in Ultrasound Update for Rehabilitation Doctors.
- ♦ 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.
- ♦ Ultrasound Update for Rehabilitation Physicians.
- ♦ It contains practical exercises where the self-evaluation process can be carried out to improve learning.
- ♦ With special emphasis on innovative methodologies in Ultrasound Update for Rehabilitation Doctors.
- ♦ All this will be complemented by 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.



*This training makes professionals in this field increase their ability to succeed, which results in a better practice and performance that will have a direct impact on the educational treatment, on the improvement of the educational system and on the social benefit for the whole community"*

“ *This Postgraduate Certificate may be the best investment you can make in the selection of a refresher program for two reasons: in addition to updating your knowledge, you will obtain an expert degree from TECH Global University*”

It includes in its teaching staff professionals belonging to the field of Ultrasound Update for rehabilitation physicians, who pour into this training the experience of their work, in addition to recognized specialists belonging to 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 to train in real situations.

The design of this program is based on Problem-Based Learning, by means of which the student must try to solve the different professional practice situations that arise throughout the course. For this purpose, the student will be assisted by an innovative interactive video system developed by recognized experts in the field of Ultrasound Update for rehabilitation physicians with extensive teaching experience.

*Increase your decision-making confidence by updating your knowledge through this Postgraduate Certificate*

*Take the opportunity to learn about the latest advances in Ultrasound Update for rehabilitation physicians, and improve the training of your students*



02

# Objectives

The **Postgraduate Certificate in Ultrasound Update for Rehabilitation Doctors** is oriented to facilitate the performance of rehabilitation physicians in their daily practice related to pathology in Ultrasound for rehabilitation physicians.







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*This Postgraduate Certificate is designed for you to update your knowledge in Ultrasound Update for rehabilitation physicians, with the use of the latest educational technology, to contribute with quality and safety to the decision making and monitoring of your students"*

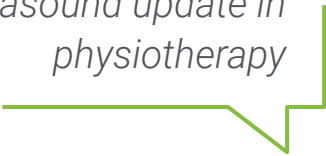


## General Objectives

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- Learn to locate the different anatomical structures of the region.
- Identify the pathologies for a correct ultrasound-guided physiotherapy treatment.
- Define the limits of ultrasound .
- Learn the use of the ultrasound scanner in the context of the rehabilitation Doctor's competencies.

*Update your knowledge through the program in ultrasound update in physiotherapy*

A green callout box with a tail pointing to the text, indicating a key message or update.



## Specific Objectives

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- ◆ Learn about ultrasound and an ultrasound scanner, its history and application to physical therapy.
- ◆ Identify the ultrasound patterns of the different structures of the Locomotor System.
- ◆ Study the various devices available in ultrasound and learn how to use them beneficially.
- ◆ Explain the use of ultrasound by the rehabilitation physician and its legal considerations.
- ◆ Describe the piezoelectric effect and the physical basis of ultrasound.
- ◆ Explain the different components of the equipment
- ◆ Explain the production of the ultrasound image.
- ◆ Describe the terminology used in ultrasound scanning
- ◆ Define the types of images obtained by ultrasound and the different tissue patterns.

03

# Course Management

The program includes in its teaching staff reference specialists in Ultrasound Updating for rehabilitation physicians, who bring to this training the experience of their work. In addition, other specialists of recognized prestige participate in its design and elaboration, completing the program in an interdisciplinary manner.



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*Learn from leading professionals, the latest advances in procedures in the field of Ultrasound Update in physiotherapy for rehabilitation physicians"*

## Management



### D. Santiago Nuño, Fernando

- ◆ Physiotherapist - Osteopath, Podiatrist and Co-director of Clínica Nupofis N° 3993 - Madrid Community College of Physiotherapists.
- ◆ Postgraduate Certificate in Physiotherapy from the San Pablo CEU University.
- ◆ Postgraduate Certificate in Podiatry from the San Pablo CEU University.
- ◆ Expert in Osteopathy CO by the School of Osteopathy of Madrid - University of Alcalá
- ◆ Currently, teaching professor in Ultrasound courses for podiatrists and physiotherapists and in the Master of Advanced Ultrasound Sonoanatomy for physiotherapists at the European University of Madrid.
- ◆ Expert in Advanced Musculoskeletal Ultrasound Donostia-San Sebastián
- ◆ Specialist in Biomechanical Gait Exploration
- ◆ Master's Degree in Manual Therapy from the Complutense University of Madrid.
- ◆ Master's Degree in Podiatry Research Online by Rey Juan Carlos University.
- ◆ Avanfi Expert in Echoguided Infiltrations
- ◆ International Course on Musculoskeletal Ultrasound by the Spanish Society of Ultrasound.
- ◆ International Podiatric Surgical Specialist Course by the New York College of Podiatric Medicine
- ◆ Expert Course in Medical and Surgical Podiatry of the foot by the Complutense University of Madrid.

## Professors

### **García Expósito, Sebastián**

- ♦ Degree in Diagnostic Imaging and Radiation Therapy.
- ♦ Expert in musculoskeletal ultrasound.
- ♦ Professor of Ultrasound.
- ♦ Armstrong International Clinic.

### **García Urbina, Isabel**

- ♦ Physiotherapist - Osteopath and Professor of Physio-Pilates N° 8783 - Madrid Community Physiotherapists College
- ♦ Diploma in Physiotherapy.
- ♦ Expert in Osteopathy CO.
- ♦ Master's Degree in Manual Therapies (training in Vojta method, Perfetti method, Neurodynamics, etc.).

### **Moreno, Cristina Elvira**

- ♦ Physiotherapist - Osteopath and Professor of Physio-Pilates N° 10196 - Madrid Community Physiotherapists College
- ♦ Graduate in Physiotherapy from the Complutense University.
- ♦ Studying Master in Osteopathy Specialist Course in Neurodynamics by Fisiofocus.
- ♦ Specialist Course in Myofascial Pain Syndrome and Conservative and Invasive (Dry Needling) Treatment of Trigger Points by ITNM.

### **Nieri, Martín Alejandro**

- ♦ Degree in Diagnostic Imaging and Radiation Therapy.
- ♦ Degree in Industrial Radiology.
- ♦ Degree in Electrophysiology.
- ♦ Publications: Book, Ultrasound of abdominal organs, theoretical and practical study, 2012, ISBN-13 978-84-615-6603-7

### **Sánchez Marcos, Julia**

- ♦ Physiotherapist - Osteopath and Professor of Physio-Pilates N° 11226 - Madrid Community Physiotherapists College
- ♦ Graduate in Physiotherapy from the University of Salamanca.
- ♦ Expert in Osteopathy CO by the School of Osteopathy of Madrid - University of Alcalá
- ♦ Course on Myofascial Pain Syndrome, Conservative Treatment and Dry Needling of Trigger Points by the Institute of Neuromyofascial Therapies.
- ♦ University Expert in Ultrasound Sonoanatomy of the Locomotor System by the European University.
- ♦ Course of Ultrasound by IACES.
- ♦ Course of Neurodynamics by Zerapi Fisioterapia Avanzada.
- ♦ Course of Percutaneous Therapeutic Electrolysis "EPTÉ".
- ♦ Myofascial and Joint Neurodynamic Fibrosis Course "Hooks" by Instema.

**Santiago Nuño, José Ángel**

- ♦ Physiotherapist - Osteopath, Dietician - Nutritionist and Co-Director of Clínica Nupofis
- ♦ Nº 6691 - Physiotherapists Association of the Community of Madrid
- ♦ Postgraduate Certificate in Physiotherapy from the San Pablo CEU University.
- ♦ Postgraduate Certificate in Human Nutrition and Dietetics from San Pablo CEU University.
- ♦ Expert in Osteopathy CO by the School of Osteopathy of Madrid - University of Alcalá
- ♦ Master's Degree in Sports Physiotherapy from the Complutense University of Madrid.
- ♦ Trigger Point Myofascial Pain Syndrome (Dry needling) Course by Travell and Simons
- ♦ Specialist Course in Pediatric Physical Therapy by Medical R2
- ♦ Postgraduate in Percutaneous Therapeutic Electrolysis (EPTE) - (Basic Level) by the Universidad Rey Juan Carlos
- ♦ Postgraduate in Percutaneous Therapeutic Electrolysis (EPTE) - (Advanced Level) by Helios Medical
- ♦ Postgraduate in Percutaneous Intratisular Electrolysis (PIE) by EPI Advanced Medicine (Cerede)
- ♦ Basic and Advanced Ultrasound Courses and RUSI Method by Helios Medical
- ♦ International Course on Musculoskeletal Ultrasound by the Spanish Society of Ultrasound (San Sebastian).
- ♦ Clinica Nupofis Madrid.







“Update your knowledge through the program in ultrasound update in physiotherapy.”

04

# Structure and Content

The structure of the contents has been designed by a team of professionals from the best educational centers, universities and companies in the national territory, aware of the relevance of current training in order to intervene in the training and support of students, and committed to quality teaching through new educational technologies.





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## Module 1. Basic Ultrasound

- 1.1. Basic Ultrasound I.
  - 1.1.1. General Aspects of Ultrasonography.
  - 1.1.2. Physical Basis of Ultrasound. Piezoelectric effect.
- 1.2. Basic Ultrasound II.
  - 1.2.1. Knowledge of the Equipment.
  - 1.2.2. Equipment Operation: Parameters.
  - 1.2.3. Technological Improvements.
- 1.3. Basic Ultrasound III.
  - 1.3.1. Artifacts in Ultrasound.
  - 1.3.2. Foreign Bodies.
  - 1.3.3. Types of Ultrasound Images and Different Tissue Patterns in Ultrasound.
  - 1.3.4. Dynamic Maneuvers.
  - 1.3.5. Advantages and Disadvantages of Ultrasound.





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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: ***Re-learning***.

This teaching system is used 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.



“

*Discover Re-learning, 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

In a given situation, what would you do? 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 can experience a way of learning that is shaking the foundations of traditional universities around the world*



According to Dr. Gervas, 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 potential 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 professional medical 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 grasp concepts, but also develop their mental capacity by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on 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.



## Re-learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

Our 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, which represent a real revolution with respect to simply studying and analyzing cases.



*The Doctor will learn through real cases and by solving 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 Re-learning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best Spanish-speaking online university (Columbia University).

With this methodology we have trained more than 250,000 Doctors with unprecedented success, in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

*Re-learning 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 (we learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by our learning system is 8.01, according to the highest international standards.



In this program you will have access to the best educational material, prepared with you 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 really specific and precise.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



#### Latest Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



#### Interactive Summaries

We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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



#### Additional Reading

Recent articles, consensus documents, international guides. in our virtual library you will have access to everything you need to complete your training.





#### Expert-led case studies and case analysis

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through the development of attention and the resolution of different situations: a clear and direct way to achieve the highest degree of understanding.



#### Testing & Retesting

We periodically evaluate and re-evaluate your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your goals.



#### Classes

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

Learning from an expert reinforces knowledge and memory, and builds confidence in our difficult future decisions.



#### Quick Action Guides

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.



06

# Certificate

Through a different and stimulating learning experience, you will be able to acquire the necessary skills to take a big step in your training. An opportunity to progress, with the support and monitoring of a modern and specialized university, which will propel you to another professional level.



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*Add to your CV a title of University Course in updating in ultrasound in physiotherapy, for the rehabilitation physician and become a competitive professional"*

This program will allow you to obtain your **Postgraduate Certificate in Ultrasound Update for Rehabilitation Doctors** 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 Ultrasound Update for Rehabilitation Doctors**

Modality: **online**

Duration: **6 weeks**

Accreditation: **7 ECTS**





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



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