

# Postgraduate Certificate

## Knee Ultrasound for the Rehabilitation Doctor





## Postgraduate Certificate knee Ultrasound for the Rehabilitation Doctor

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

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

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01

# Introduction

Ultrasound is a tool that is being used more and more by rehabilitation physicians. This Postgraduate Certificate aims to initiate or complement the teaching in Knee Ultrasound for the Rehabilitation Doctor, to meet the demand of professionals, seeking usefulness in routine clinical practice and encourage research.



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*This Postgraduate Certificate may be the best investment you can make in the selection of a refresher program because it will allow you to update your knowledge and you will receive a degree endorsed by TECH, the leading private university in Spain".*

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 rehabilitation medicine.

This Postgraduate Certificate 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 program is designed to provide training equivalent to 6 ECTS credits and 150 hours of study. All theoretical and practical knowledge is presented through high quality multimedia content, analysis of clinical cases prepared by experts, master classes and video techniques that allow 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 Knee Ultrasound for the Rehabilitation Doctor** contains the most complete and up to date scientific program on the market. The most important features of the Postgraduate Certificate are:

- ♦ The development of case studies presented by experts in Knee Ultrasound for the Rehabilitation Doctor.
- ♦ The graphic, schematic and eminently practical contents with which they are conceived, which gather scientific and assistance information on those disciplines that are essential for professional practice.
- ♦ News on the role of the rehabilitation physician.
- ♦ 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.
- ♦ Special emphasis on evidence-based rehabilitative medicine and research methodologies in Knee Ultrasound for the Rehabilitation Doctor.
- ♦ Theoretical lessons, questions to the expert, discussion forums on controversial issues and individual reflection papers.
- ♦ Content that is accessible from any fixed or portable device with an Internet connection.



*Upgrade your knowledge through the Postgraduate Certificate program in Knee Ultrasound for the Rehabilitation Doctor"*

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*In this Postgraduate Certificate you will find the best didactic material, with real clinical cases. As it is 100% online, you can do it from anywhere with a mobile device with an internet connection "*

It includes in its teaching staff professionals belonging to the field of Knee Ultrasound for the Rehabilitation Doctor, who bring to this training the experience of their work, in addition to recognized specialists belonging to scientific societies of reference.

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.

The design of this program is based on Problem-Based Learning, by means of which the rehabilitation physician must try to solve the different professional practice situations that arise throughout the Postgraduate Certificate. For this purpose, the rehabilitation physician will be assisted by an innovative interactive video system developed by recognized experts in the field of ultrasound for the rehabilitation physician 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 Knee Ultrasound for the Rehabilitation Doctor, and develop yourself in this exciting field*



# 02 Objectives

The Postgraduate Certificate in Knee Ultrasound for the Rehabilitation Doctor is oriented to facilitate the performance of the rehabilitation doctor in his daily practice related to this pathology.







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*Advance in your profession thanks to the completion of this Postgraduate Certificate, which you can combine with your professional work and your private life"*



## General Objectives

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- Learn to locate the different anatomical structures of the region.
- Identify pathologies for a correct treatment of ultrasound-guided rehabilitative medicine.
- 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 Knee Ultrasound for the Rehabilitation Doctor program”*





## Specific Objectives

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- ◆ Recognize the tendon and ligament structures of the knee and their most frequent injuries.
- ◆ Describe the normal examination of the structures of the anterior face.
- ◆ Describe the normal examination of the lateral facet structures.
- ◆ Describe the normal examination of the structures of the posterior face.
- ◆ Describe the normal examination of the medial facet structures.
- ◆ Identify the most common lesions, for a correct ultrasound-guided treatment and/or follow-up of their evolution.
- ◆ Learn how to perform dynamic ultrasound-guided assessment tests.
- ◆ Describe less common pathologies that may affect the knee.

03

# Course Management

The program includes in its teaching staff reference specialists in Knee Ultrasound for the Rehabilitation Doctor, who bring to this training the experience of their work. Additionally, other recognized specialists participate in its design and preparation, which means that the program is developed in an interdisciplinary manner.



A close-up photograph of a person's hand and forearm, showing the skin texture and hair. The hand is positioned near the elbow, with the fingers slightly curled. The background is a solid blue color.

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*Learn about the latest advances in procedures in the field of Knee Ultrasound for the Rehabilitation Doctor from leading experts in the field”*

## Management



### 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 Podiatric 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.



### Castillo, Juan Ignacio

- ♦ Head of Physical Medicine and Rehabilitation Service. 12 de Octubre Hospital. Madrid.
- ♦ Associate Professor Complutense University of Madrid. Faculty of Medicine. 2016
- ♦ Collaborating Professor at Complutense University of Madrid. 2011-2016
- ♦ Teaching coordinator in continuing education courses of the Health Department of the Community of Madrid: "Tertiary Prevention in Chronic Cardiopathic Patients. Cardiac Rehabilitation".
- ♦ Master's Degree in Cardiac Rehabilitation. SEC-UNED
- ♦ Master's Degree in Disability Assessment. Autonomous University of Madrid.
- ♦ Master's Degree in Children's Disability. Complutense University of Madrid.
- ♦ Doctorate Course: Neurosciences. University of Salamanca.
- ♦ Degree in Medicine and Surgery. University of Salamanca.
- ♦ Coordinator of continuing education of the Spanish Society of Cardiology in Exercise Testing with Oxygen Consumption.

## Professors

### Dr. Rivillas Gómez, Alberto

- ♦ Resident intern in Physical Medicine and Rehabilitation at University Hospital 12 de Octubre.
- ♦ Graduate in Medicine from Rovira i Virgil University.
- ♦ Director of doctoral theses at the Rovira i Virgil University, Faculty of Medicine.
- ♦ Course Management of spinal cord injury, multidisciplinary approach at the National Hospital of Paraplegics in Toldedo.
- ♦ Online continuing education course on Analgesics Management at Grunenthal
- ♦ Course "Center of Excellence in Peripheral Neuropathic Pain" at the University Hospital of La Princesa, Madrid.
- ♦ Course "Initiation to Cardiac Rehabilitation" in University Hospital Doce de Octubre, Madrid.

### Dr. Juano Bielsa, Álvaro

- ♦ Resident intern in Physical Medicine and Rehabilitation at the University Hospital 12 de Octubre.
- ♦ Degree in Medicine from the University of Zaragoza
- ♦ Master's Degree in Clinical Medicine at Camilo José Cela University
- ♦ Introductory Course on Pain Treatment at the Madrid Pain Society, Rey Juan Carlos University.
- ♦ Introductory course on Musculoskeletal Ultrasound at the Official College of doctors of Madrid.
- ♦ Postgraduate Course in Musculoskeletal Ultrasound. Panamericana/UFV
- ♦ Spinal Cord Injury Course. Multidisciplinary Approach. (National Hospital of Paraplegics)

### Dr. Uzquiano Guadalupe, Juan Carlos

- ♦ Resident intern of Physical Medicine and Rehabilitation at the University Hospital 12 de Octubre, Madrid.
- ♦ Collaborating physician in practical teaching at the Department of Radiology, Rehabilitation and Physiotherapy of the Faculty of Medicine of the Complutense University of Madrid 20218- 2029
- ♦ Master's Degree in Musculoskeletal Ultrasound and Interventional Ultrasound by San Pablo CEU Foundation.
- ♦ Postgraduate Course in Children's Rehabilitation by Francisco de Vitori University.
- ♦ Extracorporeal Shock Waves Course by European College of Physical Medicine and Rehabilitation
- ♦ Master's Degree in Clinical Reasoning and Practice from the University of Alcalá, Spain
- ♦ Medical Degree from the University of Alcalá in Madrid, Spain.
- ♦ Specialist in Physical Medicine and Rehabilitation at the University Hospital 12 de Octubre, in Madrid, Spain.



**Dr. Carmona Bonet, María A.**

- ♦ Associate Professor in Health Sciences. Complutense University of Madrid. Faculty of Medicine. Department of Radiology, Rehabilitation and Physiotherapy
- ♦ Specialist Physician in Physical Medicine and Rehabilitation University Hospital 12 de Octubre, Madrid
- ♦ Collaborating doctor of practical teaching, Department of Physical Medicine and Rehabilitation and Medical Hydrology at the University Hospital 12 de Octubre, in the subject "Physical Medicine and Rehabilitation" of the 3rd year of Medicine at the Complutense University of Madrid 2008-2019.
- ♦ Doctor of Medicine, Complutense University of Madrid, Faculty of Medicine, Department of Physical Medicine and Rehabilitation.
- ♦ Master's Degree in Childhood Disability. Complutense University of Madrid
- ♦ Degree in Medicine and Surgery from the Complutense University of Madrid
- ♦ Member of the Spanish Society of Rehabilitation and Physical Medicine.

**Dr. Teijeiro, Javier**

- ♦ Physiotherapy and Osteopathy.
- ♦ Professor of Musculoskeletal Ultrasound.
- ♦ SEEFI SEECO.
- ♦ Service Director in Ultrasound Assistance Teleradiology SL.

**Dr. Santiago Nuño, José Ángel**

- ♦ Physiotherapy, Osteopathy and Nutrition.
- ♦ Expert in Musculoskeletal Ultrasound.
- ♦ Nupofis Clinic Madrid.

**Dr. Sevilla Torrijos, Gustavo**

- ♦ Area Specialist in the Rehabilitation Service of the University Hospital 12 de Octubre, Madrid.
- ♦ Area Specialist in the Rehabilitation Service of the University Hospital of Torrejón, Madrid 2012 - 2018.
- ♦ Specialist Physician in the Rehabilitation Unit of the Hospital de Guadarrama 2008 - 2012
- ♦ "Specialist in Comprehensive Assistance in Emergencies and Health Emergencies", own title of the European University Miguel de Cervantes.
- ♦ Member of the Spanish Society of Rehabilitation and Physical Medicine (SERMEF).
- ♦ Course in Diagnostic Imaging in Musculoskeletal Pain
- ♦ Refresher Course in Localized Neuropathic Pain
- ♦ Course on Osteoarthritis and Pain Sensitization
- ♦ Degree in Medicine from the Complutense University of Madrid..

**Dr. Casado Hernández, Israel**

- ♦ Podiatrist Ultrasonographer.
- ♦ Master's Degree in Podiatric Research.
- ♦ Expert in Podiatric foot surgery and podiatry.
- ♦ GP, PhD, MSc, BSc, PG Cert Vitalpie Clinic.

**Dr. Fernández Carnero, Samuel**

- ♦ Physiotherapist.
- ♦ Master en Neurocontrol.
- ♦ Musculoskeletal Ultrasonographer Level I and II SEECO.
- ♦ President of the Spanish Society of Ultrasound in Physiotherapy. SEEFi.
- ♦ PT, PhDs, MSc, BSc, PG Cert.
- ♦ Centro Sur Clinic.

**Dr. García Expósito, Sebastián**

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

**Dr. Moreno, Cristina Elvira**

- ♦ Physiotherapist.
- ♦ Expert in dry needling and MSK ultrasound.
- ♦ Floor Pilates and Hypopressive Abdominal Gymnastics teacher.
- ♦ Nupofis Clinic, Madrid.

**Dr. Nieri, Martín**

- ♦ Advanced Technician in Diagnostic Imaging and Radiation Therapy.
- ♦ Expert in musculoskeletal ultrasound.
- ♦ Professor of Ultrasound.

**Dr. Pérez Calonge, Juan José**

- ♦ Podiatric Sonographer.
- ♦ Master's Degree in health expertise.
- ♦ Expert in medical-surgical podiatry of the foot.
- ♦ PhDs, MSc, BSc, PG Cert Clinica Gayarre.

**Dr. Sánchez Marcos, Julia**

- ♦ Physiotherapist, Osteopath
- ♦ Expert in sonoanatomy of the locomotor system Nupofis Clinic Madrid.

**Dr. López Sáez, Mireya**

- ♦ Specialist in Physical Medicine and Rehabilitation at the University Hospital 12 de Octubre, Madrid.
- ♦ Post-Covid assessment unit, through the evaluation of possible sequelae after COVID-19 infection in the rehabilitation office.
- ♦ Collaborating doctor in practical teaching at the Department of Physical Medicine and Rehabilitation, Medical Hydrology of the Faculty of Medicine at the Complutense University of Madrid. 2015-2019
- ♦ Degree in Medicine from Rey Juan Carlos University, Madrid, Spain.
- ♦ Basic and Advanced Cardio-Pulmonary Resuscitation Course. Doce de Octubre University Hospital, Madrid
- ♦ Member of ICOMEN: Illustrious Official College of doctors of the Community of Madrid
- ♦ Full Member of the Rehabilitation Center Society

**Dr. García Gómez, Nuria**

- ♦ Specialist in Physical Medicine and Rehabilitation. Hospital Doce de Octubre. Madrid
- ♦ Specialist in Family and Community Medicine: Gregorio Marañón General University Hospital
- ♦ Collaborating doctor of the Department of Physical Medicine and Rehabilitation and Medical Hydrology of the Complutense University of Madrid, at the University Hospital 12 de Octubre 2013-2020.
- ♦ Multiprofessional Teaching Unit of Family and Community Care, Southeast Health Area, Madrid 2011
- ♦ Postgraduate in Neurorehabilitation, Institute of Continuing Education of the University of Barcelona.
- ♦ Degree in Medicine and Surgery: Alcalá de Henares University.



04

# Structure and Content

The structure of the contents has been designed by a team of professionals from the best centers and universities in the country, aware of the relevance of current training to intervene in situations that require the use of ultrasound as a complement to physiotherapy diagnosis and subsequent treatment, and committed to quality teaching through new educational technologies.





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*This Postgraduate Certificate in Knee  
Ultrasound for the Rehabilitation Doctor  
contains the most complete and up to date  
scientific program on the market ”*

## Module 1. Lower Limb Ultrasound: Knee

- 1.1. Normal Sonoanatomy of the Knee.
  - 1.1.1. Exploration of Structures of the Anterior Face.
  - 1.1.2. Exploration of Structures of the Medial Face.
  - 1.1.3. Exploration of Structures of the Lateral Face.
  - 1.1.4. Exploration of Structures of the Posterior Face.
    - 1.1.4.1. Exploration of the Sciatic Nerve.
- 1.2. Knee Pathology.
  - 1.2.1. Most Common Tendon Pathology.
    - 1.2.1.1. Patellar Tendinopathy.
    - 1.2.1.2. Quadriceps Tendinopathy.
    - 1.2.1.3. Iliotibial Band Syndrome.
    - 1.2.1.4. Superficial Goosefoot Tendinopathy.
  - 1.2.2. Other Pathologies of the Knee Joint.
    - 1.2.2.1. Meniscal Lesions.
    - 1.2.2.2. Ligament Injuries.
      - 1.2.2.2.1. Internal Lateral Ligament Injury.
      - 1.2.2.2.2. External Lateral Ligament Injury.
    - 1.2.2.3. Quiste of Baquer.
    - 1.2.2.4. Cartilaginous Lesions.
- 1.3. Dynamic Knee Tests.
  - 1.3.1. Tvaro or Valgus of the Knee.
  - 1.3.3. Test for Deep Vein Thrombosis.
  - 1.3.2. Patella Slip Test to Assess Posterior Face.





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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 has been considered one of the most effective by major publications such as the *New England Journal of Medicine*.





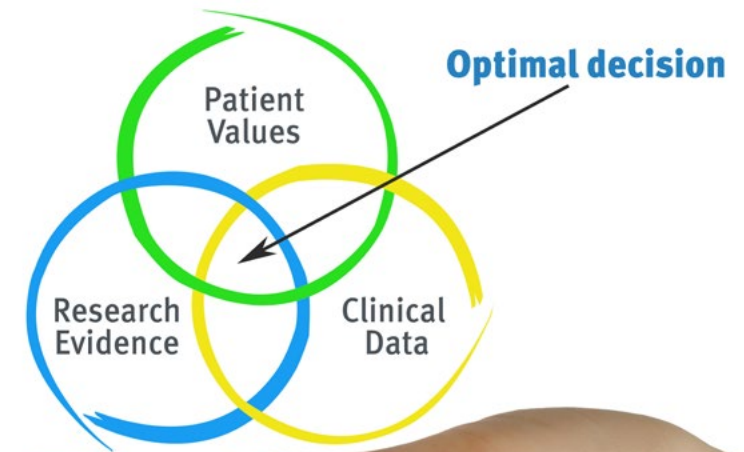
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*Discover Re-learning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## 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. 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 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 Postgraduate Certificate in Knee Ultrasound for the rehabilitation doctor and become a competitive professional"*

This Postgraduate Certificate in Knee Ultrasound for the Rehabilitation Doctor contains the most complete and up to date scientific program on the market.

After the student has passed the evaluations, they will receive their corresponding Postgraduate Certificate issued by **TECH - Technological University**

The diploma issued by **TECH - Technological University** will express 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 Knee Ultrasound for the Rehabilitation Doctor.**

Nº Hours: **150**



\*Apostille Convention. In the event that the student wishes to have their paper diploma Apostilled, TECH EDUCATION will make the necessary arrangements to obtain it at an additional cost of €140 plus shipping costs of the Apostilled diploma.

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



**Postgraduate Certificate**  
knee Ultrasound for the  
Rehabilitation Doctor

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

# Postgraduate Certificate

## Knee Ultrasound for the Rehabilitation Doctor

