

Postgraduate Diploma

Musculoskeletal Ultrasound in Shoulder and Elbow Physiotherapy





Postgraduate Diploma Musculoskeletal Ultrasound in Shoulder and Elbow Physiotherapy

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

Website: www.techtute.com/in/physiotherapy/postgraduate-diploma/postgraduate-diploma-musculoskeletal-ultrasound-shoulder-elbow-physiotherapy

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01

Introduction

Technological development has brought the diagnostic methods used to detect shoulder and elbow complaints to an outstanding level of perfection. This circumstance, in turn, has highlighted the need for rehabilitation centers and health care institutions to have physiotherapists specialized in the use of modern ultrasound scanners to enhance the detection and treatment of various injuries. For this reason, TECH has created this program, with which the professional will expand their knowledge in the exploration by musculoskeletal ultrasound and subsequent therapy of the most common tendon pathologies of the elbow and shoulder, completely online and without relying on pre-established schedules.



A close-up photograph showing a person's arm and hand. A bright yellow fabric strip is being held against the skin of the forearm. The background is a dark blue gradient.

“

The Postgraduate Diploma in Musculoskeletal Ultrasound in Shoulder and Elbow Physiotherapy will allow you to master the new techniques of exploration of lesions in the anterior, lateral and posterior aspect of this muscle and this joint”

The diagnostic procedures used to detect pathologies that cause injuries in different areas of the shoulders and elbows have evolved considerably in recent years thanks to scientific advances. In this line, the use of ultrasound scanners is gradually becoming popular, which, with only a probe that sends images to a cell phone or *tablet*, provides accurate tests at a reduced economic and technical cost. These continuous innovations in the field of musculoskeletal ultrasound force physiotherapists to be constantly updating their knowledge in order not to fall behind and, consequently, to be able to offer the best care to their patients.

Faced with this situation, TECH has developed this Postgraduate Diploma, a program that will enable the professional physiotherapist to know the most advanced diagnostic methods to detect the pathologies of the shoulder and elbow by musculoskeletal ultrasound, as well as the techniques to subsequently undertake a therapy tailored to the injury of each patient. During this academic period, you will master the most avant-garde exploration of the anterior, lateral and posterior structures of the shoulder and elbow, or acquire the skills required to treat the different pathologies of these areas. In addition, you will develop modern tests oriented to analyze the flexibility of this muscle and this joint after an injury.

All this, through a 100% online methodology that will enable the student to combine excellent learning with their own personal and working life. In the same way, you will have first class teaching materials, developed by specialists in Physical Medicine and Rehabilitation and physiotherapists, whose contents are applicable in the professional environment.

This **Postgraduate Diploma in Musculoskeletal Ultrasound in Shoulder and Elbow Physiotherapy** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The development of practical case studies presented by experts in Physical Rehabilitation Medicine
- ♦ The graphic, schematic, and practical contents 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
- ♦ Its special emphasis on innovative methodologies
- ♦ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection work
- ♦ The availability of access to the contents from any fixed or portable device with an Internet connection

“*Manage the most avant-garde techniques to treat tendon injuries that occur in the shoulder and elbow through this program*”

“

100% online and without depending on tight schedules, you will increase your skills in the Postgraduate Diploma in Musculoskeletal Ultrasound in Shoulder and Elbow Physiotherapy in only 6 months”

The program's teaching staff includes professionals from the industry who contribute their work experience to this program, as well as renowned 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 immersive education programmed to learn in real situations.

The design of this program focuses on Problem-Based Learning, by means of which the professional must try to solve the different professional practice situations that arise throughout the educational program. For this purpose, the students will be assisted by an innovative interactive video system created by renowned experts.

Become a first level professional in the management of shoulder and elbow injuries by means of musculoskeletal ultrasound.

Develop your physiotherapeutic skills at your own pace thanks to the Relearning system of this program.



02 Objectives

The design of this Postgraduate Diploma in Musculoskeletal Ultrasound in Shoulder and Elbow Physiotherapy is contemplated to offer the professional of this discipline the most updated techniques of diagnosis and treatment of different pathologies through this method. After this excellent academic experience, you will significantly enhance your physiotherapeutic skills to be at the forefront of this sector, guaranteed by the general and specific objectives of this program.





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Rigorously identify the most complex pathologies affecting the Elbow and Shoulder, establishing the most appropriate therapy for each of them”

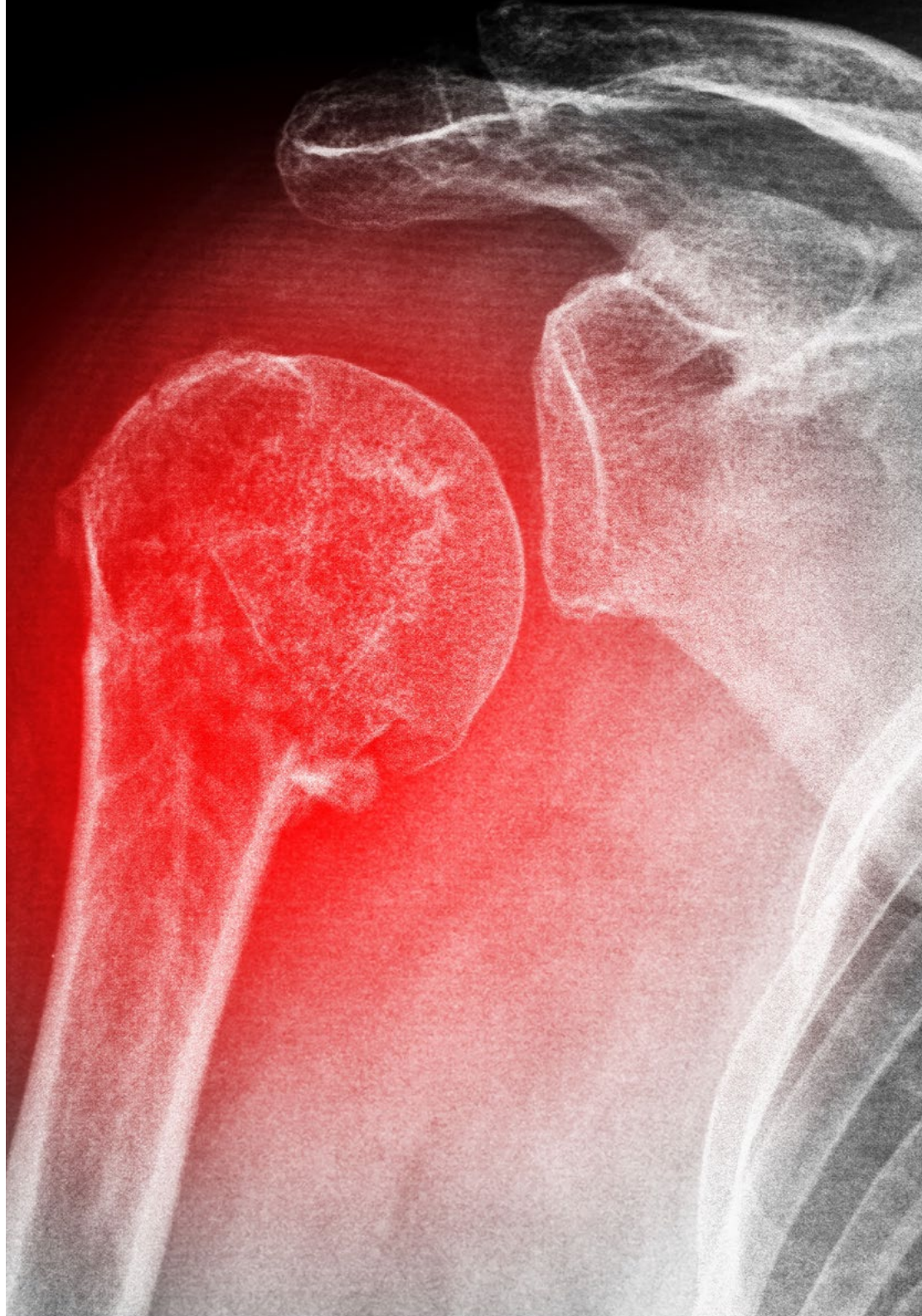


General Objectives

- Learn to locate the different anatomical structures of the region
- Identify pathologies for a correct treatment of ultrasound-guided rehabilitation medicine
- Define the limits of ultrasound
- Learn about the use of ultrasound in the framework of physiotherapist skills



Adopt in your daily practice the latest advances in Musculoskeletal Ultrasound in Shoulder and Elbow Physiotherapy to boost your career in this field"





Specific Objectives

Module 1. Basic Ultrasound

- ♦ Learn about ultrasound and an ultrasound scanner, its history and application to physiotherapy
- ♦ Identify the ultrasound patterns of the different structure of the locomotor system
- ♦ Study the different 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
- ♦ Define the types of images obtained by ultrasound and the different tissue patterns

Module 2. Ultrasound of the Upper Limb: Shoulder

- ♦ Identify the main structures of the shoulder that are visible in ultrasound
- ♦ Describe the normal examination of the structures of the anterior aspect of the shoulder
- ♦ Describe the normal examination of the structures of the lateral aspect of the shoulder
- ♦ Describe the normal examination of the structures of the posterior aspect of the shoulder
- ♦ Recognize the most common lesions of the shoulder, to ensure correct ultrasound-guided treatment and/or monitoring of their evolution
- ♦ Describe the least common pathologies that can affect the shoulder joint
- ♦ Learn how to perform ultrasound-guided dynamic assessment tests for the shoulder

Module 3. Ultrasound of the Upper Limb: Elbow

- ♦ Describe the sonoanatomy of the elbow joint
- ♦ Describe the normal examination of the structures of the anterior aspect of the elbow
- ♦ Describe the normal examination of the structures of the lateral aspect of the elbow
- ♦ Describe the normal examination of the structures of the posterior aspect of the elbow
- ♦ Describe the normal examination of the structures of the medial aspect of the elbow
- ♦ Identify the most common lesions of the elbow, to ensure correct ultrasound-guided treatment and/or monitoring of their evolution
- ♦ Learn how to perform ultrasound-guided dynamic assessment tests for the elbow
- ♦ Describe the least common pathologies that can affect the elbow joint

03

Course Management

Thanks to TECH's untiring commitment to maintaining a high educational level in all its programs, this Postgraduate Diploma has a teaching staff made up of professionals who work closely linked to the field of musculoskeletal ultrasound, among which are doctors specialized in Physical Medicine and Rehabilitation and physiotherapists. Likewise, the didactic contents to which the student will have access during the duration of this program are elaborated by these specialists, which ensures the constant updating of the knowledge that they will provide.



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The course is taught by experts in Physiotherapy and specialists in Physical Medicine and Rehabilitation to assimilate high-level skills in the management of musculoskeletal ultrasound”

Management



Dr. Castillo Martín, Juan Ignacio

- ♦ Head of Service of Physical Medicine and Rehabilitation at the University Hospital 12 de Octubre
- ♦ Doctor Specialist in Physical and Rehabilitation Medicine, Hospital Complex Ruber Juan Bravo
- ♦ Rehabilitation Physician at the Traffic Accidents Unit of the Ruber Juan Bravo Hospital Complex
- ♦ Rehabilitation Physician at Hospital Recoletas Cuenca
- ♦ Coordinator of continuing education of the Spanish Society of Cardiology in Exercise Testing with Oxygen Consumption
- ♦ Associate Professor in UCM the Faculty of Medicine
- ♦ Teaching coordinator in continuing education courses at the Madrid Regional La Ministry of Health: "Tertiary prevention in chronic cardiopathic patients. Cardiac Rehabilitation
- ♦ Degree in Medicine and Surgery. University of Salamanca
- ♦ Master's Degree in Cardiac Rehabilitation. SEC-UNED
- ♦ Master in and Disability Assessment UAM
- ♦ Master in Child Disability. UCM
- ♦ PhD in Neuroscience. University of Salamanca
- ♦ Member of: Spanish Society of Pediatric Cardiology

Professors

Dr. Santiago Nuño, Fernando

- ◆ Physiotherapist, Osteopath, Podiatrist and Co-Director of La Clinica Nupofis
- ◆ Physiotherapist and podiatrist at the Armstrong International Clinic
- ◆ Orthopedist at Ortoaccesible
- ◆ Professor of Musculoskeletal Ultrasound and Ultrasound-guided Infiltrations in the UCM and at the Universidad UEM de Madrid
- ◆ PhD in Podiatry from the UDC
- ◆ Physiotherapist specializing in Traumatology, Neurology and Sports Injury Rehabilitation in Armstrong International Clinic
- ◆ Master's Degree in Advanced Clinical Podiatry from the CEU- UCH
- ◆ Master's Degree Own in Clinical Management, Medical and Healthcare Management from the CEU- CEU
- ◆ Professional Master's Degree in Musculoskeletal Ultrasound, CEU-UCH
- ◆ Master's Degree in Manual Therapy from the UCM of Madrid
- ◆ Online Master's in Podiatry Research from URJC
- ◆ Master of Specialist and Supervisor of Orthopedic Products by the UCM

Dr. Casado Hernández, Israel

- ◆ Podiatrist and Podiatric Researcher
- ◆ Director of Vitalpie
- ◆ Podiatrist in grassroots soccer clubs such as Getafe CF and AD Alcorcón
- ◆ Associate lecturer in university studies
- ◆ Author of more than 20 scientific articles and 7 book chapters
- ◆ Doctor in Epidemiology and Clinical Research in Health Sciences URJC
- ◆ Degree in Podiatric Medicine from the Complutense University of Madrid
- ◆ Master's in Podiatry Research from URJC

Mr. García Expósito, Sebastián

- ◆ Expert in radiodiagnostic applications and techniques
- ◆ Radiodiagnostic technician at Centro de la Mujer de Sanitas
- ◆ Radiodiagnostic technician at Hospital de la Zarzuela
- ◆ Degree in Bioimage Production from UNLZ

Ms. Moreno, Cristina Elvira

- ◆ Physiotherapist expert in Musculoskeletal Ultrasonography
- ◆ Physiotherapist at the Nupofis Clinic
- ◆ Physiotherapist at fisios Islas21 clinic
- ◆ Physiotherapist at La Clínica Más Fisio
- ◆ Physiotherapist at Parkinson La Association Madrid
- ◆ Degree in Physiotherapy from the UCM
- ◆ Master in Musculoskeletal Ultrasound in Physiotherapy by CEU San Pablo University

Mr. Nieri, Martín Alejandro

- ◆ Diagnostic Imaging Technician expert in Musculoskeletal Ultrasonography
- ◆ Diagnostic Imaging Technician at the University Hospital Son Espases
- ◆ CEO of Ultrasound & Teleradiology Assistance Service SL
- ◆ Director of the Department of Quality Control in Ultrasound in Service at Asistencia Ultrasonido & Teleradiología SL
- ◆ Freelance Diagnostic Imaging Technician
- ◆ Lecturer in Ultrasound training courses
- ◆ Participation in several Ultrasound projects

Dr. Pérez Calonge, Juan José

- ♦ Podiatrist expert in Integral Foot Surgery
- ♦ Podiatrist at La Clínica Podológica Gayarre
- ♦ Author of the article Technique of direct examination of onychomycosis by microscopy with potassium hydroxide
- ♦ Doctorate in Health Sciences, UPNA
- ♦ Master's Degree in Health Expertise by UCM
- ♦ Official Master's Degree in Advanced Podiatry, CEU
- ♦ Postgraduate Diploma in Surgery by UCM
- ♦ Course in Foot Infiltration from UCM

Ms. Sánchez Marcos, Julia

- ♦ Physiotherapist, osteopath and Pilates teacher at Clínica Nupofis
- ♦ Physiotherapist and osteopath at the Isabel Amoedo Physiotherapy Clinic
- ♦ Physiotherapist at the Hospital Vithas Nuestra Señora de Fátima
- ♦ Physiotherapist at ASPODES-FEAPS
- ♦ Physiotherapist at the Fisiosalud Clinic
- ♦ Professional Master's Degree in Electrotherapy, CEU-UCH
- ♦ Expert in Ultrasound Sonoanatomy of the Locomotor Apparatus by the European University
- ♦ Course in Neurodynamics by Zerapi Fisioterapia Avanzada
- ♦ Course in Percutaneous Therapeutic Electrolysis (EPTE)
- ♦ Course in Neurodynamic Myofascial and Articular Fibrolysis "Hooks" by Instema
- ♦ Diathermy Course by Helios in Electromedicine



Mr. Santiago Nuño, José Ángel

- ◆ Physiotherapist, osteopath, dietician, nutritionist and co-director of the Nupofis Clinic
- ◆ Dietician and nutritionist in different physiological situations at Medicadiet
- ◆ Postgraduate Certificate in Physiotherapy, CEU San Pablo University
- ◆ Postgraduate Certificate in Nutrition Human and Dietetics from CEU San Pablo University
- ◆ Postgraduate Specialist in Food Exchange System for the preparation of diets and menu planning from the UPNA
- ◆ Physiotherapist specializing in Traumatology, Neurology and Sports Injury Rehabilitation in Armstrong International La Clinic
- ◆ Master's Degree in Sports Physiotherapy from the UCM of Madrid
- ◆ Expert in Traditional Chinese Medicine and Acupuncture for Physiotherapists La UCLM

Dr. Teijeiro, Javier

- ◆ Director and physiotherapist of La Clínica Atlas Fisioterapia
- ◆ Physiotherapist and technical director of the Physiotherapy Service of the San Pablo and San Lázaro de Mondoñedo Welfare Center
- ◆ Regional Delegate of the Spanish Society of Ultrasound and Physical Therapy
- ◆ Physiotherapist of the Dinán Viveiro Clinic
- ◆ Doctorate in Health, Disability, Dependence and Welfare
- ◆ Master in Natural Medicine and its applications in Primary Care by the USC
- ◆ Master's Degree in Pharmacology for Physiotherapists from the University of Valencia
- ◆ Official Master's Degree in Intervention in Disability and Dependency by the UDC
- ◆ Master in Diagnostic Imaging by the University of Valencia
- ◆ Postgraduate Diploma in Musculoskeletal Ultrasound at the UFV

04

Structure and Content

The curriculum of this Postgraduate Diploma consists of 3 modules through which the student will increase their physiotherapeutic knowledge in the management of musculoskeletal ultrasound to address the diagnosis and treatment of the pathologies of the shoulder and elbow. The didactic resources that you will consult and study throughout this academic experience are available in a wide range of textual and multimedia supports, with the aim of providing a 100% online learning, enjoyable and focused on the particular needs of each student.





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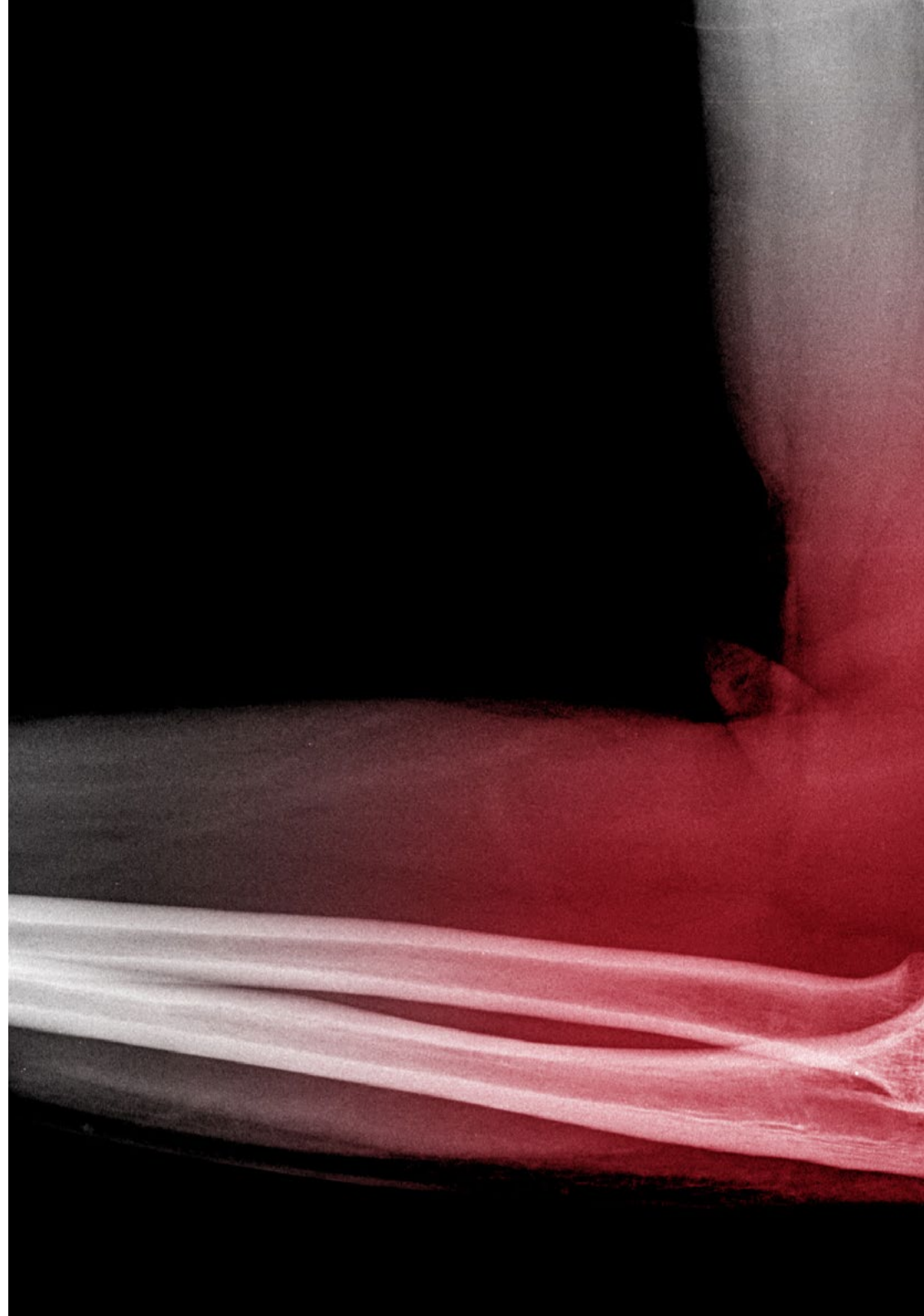
The syllabus of this Postgraduate Diploma is developed by professionals with experience in the field of musculoskeletal ultrasound to ensure the professional applicability of the contents offered”

Module 1. Basic Ultrasound

- 1.1. Basic Ultrasound I
- 1.2. General Aspects of Musculoskeletal
- 1.3. Physical Bases of Ultrasound. Piezoelectric Effect
- 1.4. Basic Ultrasound II
- 1.5. Knowledge of the Equipment
- 1.6. Equipment Management: Parameters
- 1.7. Technological Improvements
- 1.8. Basic Ultrasound III
- 1.9. Artifacts in Ultrasound
- 1.10. Foreign Bodies
- 1.11. Types of Images and Different Tissue Patterns in Ultrasound
- 1.12. Dynamic Maneuvers
- 1.13. Advantages and Disadvantages of Ultrasound

Module 2. Ultrasound of the Upper Limb: Shoulder

- 2.1. Normal Sonoanatomy of the Shoulder
- 2.2. Examination of the Anterior Aspect Structures
- 2.3. Examination of the Posterior Aspect Structures
- 2.4. Examination of the Lateral Aspect Structures
- 2.5. Shoulder Pathology
- 2.6. Most Common Tendon Pathology
- 2.7. Other Shoulder Joint Pathology
- 2.8. Dynamic Tests on the Shoulder
- 2.9. Clinical Cases
- 2.10. Clinical Videos
- 2.11. In Focus Video

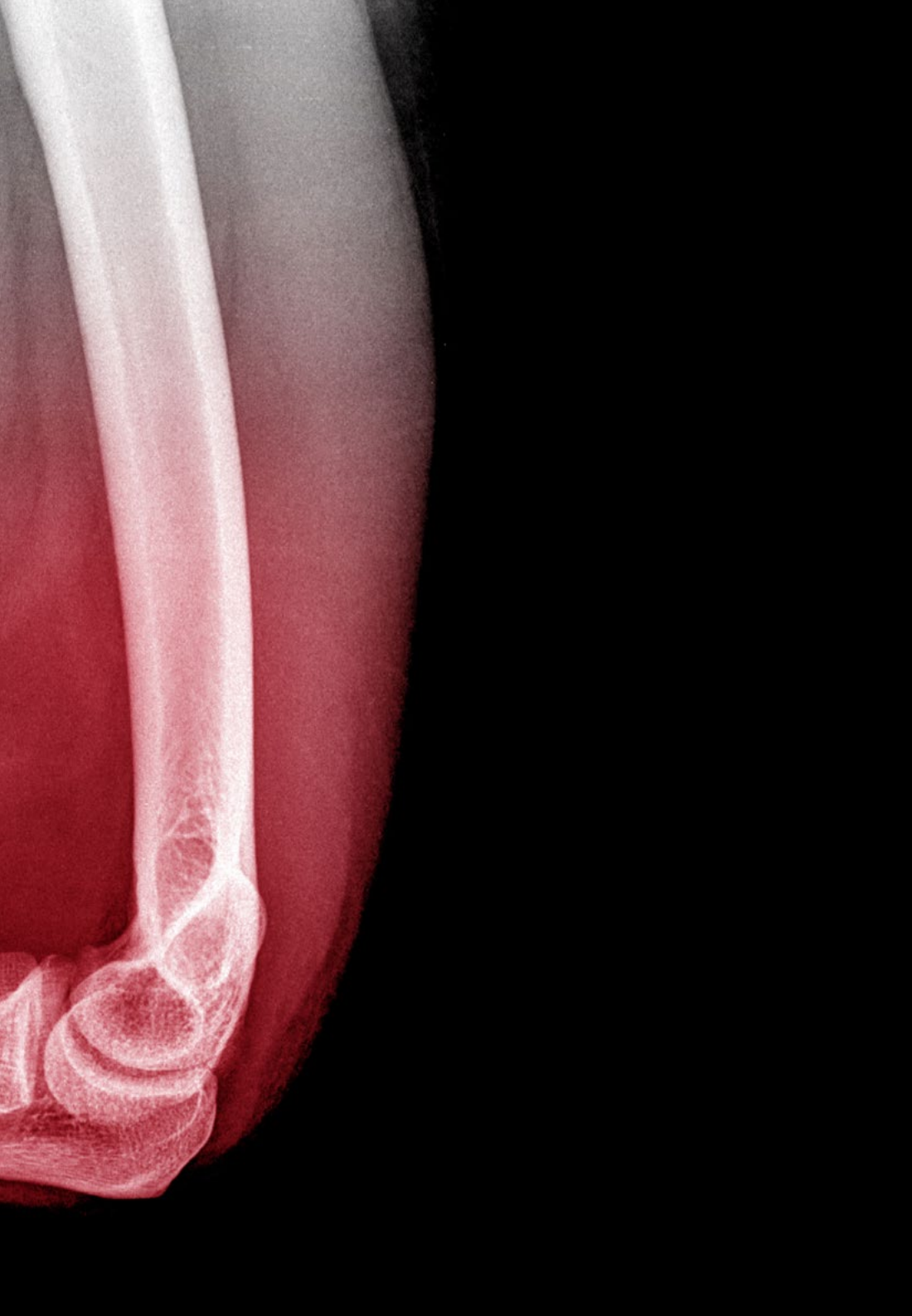


Module 3. Ultrasound of the Upper Limb: Elbow

- 3.1. Normal Sonoanatomy of the Elbow
- 3.2. Examination of the Anterior Aspect Structures
- 3.3. Examination of the Lateral Aspect Structures
- 3.4. Examination of the Medial Aspect Structures
- 3.5. Examination of the Posterior Aspect Structures
- 3.6. Elbow Pathology
- 3.7. Most Common Tendon Pathology
- 3.8. Other Elbow Joint Pathology
- 3.9. Dynamic Tests on the Elbow
- 3.10. Clinical Cases
- 3.11. In Focus Video

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You will consult, throughout this program, its didactic contents by means of formats such as video or self-assessment tests”



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, 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. Physiotherapists/kinesiologists 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 of professional physiotherapy 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. Physiotherapists/kinesiologists 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 physiotherapist/kinesiologist 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 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.



The physiotherapist/kinesiologist 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 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 we trained more than 65,000 physiotherapists/kinesiologists with unprecedented success in all clinical specialties, regardless of the workload. 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 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 our 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 really 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.



Physiotherapy Techniques and Procedures on Video

TECH brings students closer to the latest techniques, the latest educational advances and to the forefront of current Physiotherapy techniques and procedures. 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 them as many times as you want.



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 unique multimedia content presentation training 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 their goals.



Classes

There is scientific evidence on the usefulness of learning by observing experts. The system known as 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 Diploma in Musculoskeletal Ultrasound in Shoulder and Elbow Physiotherapy guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.



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Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork”

This **Postgraduate Diploma in Musculoskeletal Ultrasound in Shoulder and Elbow Physiotherapy** contains the most complete and up-to-date scientific on the market.

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

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

Title: **Postgraduate Diploma in Musculoskeletal Ultrasound in Shoulder and Elbow Physiotherapy**

Official N° of Hours: **400 h.**



*Apostille Convention. In the event that the student wishes to have their paper certificate issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

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

tech technological
university

Postgraduate Diploma
Musculoskeletal Ultrasound
in Shoulder and Elbow
Physiotherapy

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

Postgraduate Diploma

Musculoskeletal Ultrasound in Shoulder and Elbow Physiotherapy