

# Postgraduate Certificate

## Musculoskeletal Ultrasound and Radiological Studies in Trauma Emergencies





## Postgraduate Certificate Musculoskeletal Ultrasound and Radiological Studies in Trauma Emergencies

Course Modality: **Online**

Duration: **2 months**

Certificate: **TECH Technological University**

Official N° of hours: **150 h.**

Website: [www.techtute.com/in/medicine/postgraduate-certificate/musculoskeletal-ultrasound-radiological-studies-trauma-emergencies](http://www.techtute.com/in/medicine/postgraduate-certificate/musculoskeletal-ultrasound-radiological-studies-trauma-emergencies)

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# 01

# Introduction

One of the most frequent reasons for hospital emergency room visits is fractures and other acute trauma pathologies.

Acute trauma pathologies are a challenge for any physician working in an emergency department; in fact, in most developed countries, physicians involved in trauma emergency care come from different specialties.



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*Improve your knowledge in Musculoskeletal Ultrasound and Radiological Studies in Trauma Emergencies through this program, where you will find the best didactic material with real clinical cases. Learn here about the latest advances in the specialty to be able to perform a quality medical practice"*

The aim of this educational program is to bring together the experience accumulated over the years in the care of this type of pathologies and pictures, which have allowed the authors to participate with enthusiasm, involvement and commitment in the development of a program with an eminently practical profile, with a background based on the body of knowledge of one of the broadest and most exciting specialties in the world.

Time management, direct and early care of the patient with trauma emergencies, and all within a holistic approach, make this program a unique and time-sensitive effort in which specific expertise determines an accurate and safe approach to the patient, and not only to the particular pathology. In short, it insists on the need to individualize and personalize care, in an extraordinary effort to harmonize art with science in the care of acute and urgent pathology in traumatology.



*Update your knowledge through the program in Musculoskeletal Ultrasound and Radiological Studies in Trauma Emergencies"*

This **Postgraduate Certificate in Musculoskeletal Ultrasound and Radiological Studies in Trauma Emergencies** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ Development of more than 75 clinical cases presented by experts in Musculoskeletal Ultrasound and Radiological Studies in Trauma Emergencies
- ♦ The graphic, schematic, and practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional practice
- ♦ New diagnostic and therapeutic developments on evaluation, diagnosis and intervention in Musculoskeletal Ultrasound and Radiological Studies in Trauma Emergencies
- ♦ It contains practical exercises where the self-assessment process can be carried out to improve learning
- ♦ An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- ♦ With special emphasis on evidence-based medicine and research methodologies in Musculoskeletal Ultrasound and Radiological Studies in Trauma Emergencies
- ♦ All of 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

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*This Postgraduate Certificate is the best investment you can make in the selection of a refresher program for two reasons: besides updating your knowledge in Musculoskeletal Ultrasound and Radiological Studies in Trauma Emergencies, you will obtain a Postgraduate Certificate from TECH Technological University"*

It includes in its teaching staff professionals belonging to the field of Musculoskeletal Ultrasound and Radiological Studies in Trauma Emergencies who pour the experience of their work into this program, in addition to recognized specialists belonging to scientific societies of reference.

Thanks to their multimedia content developed with the latest educational technology, they will allow professionals to learn in a situated and contextual way, i.e., a simulated environment that will provide immersive learning programmed to prepare them for real situations.

The design of this program focuses on Problem Based Learning, through which physicians should try to solve the different professional practice situations that are presented to them throughout the academic program. For this purpose, physicians will be assisted by an innovative interactive video system developed by renowned experts in the field of Musculoskeletal Ultrasound and Radiological Studies in Trauma Emergencies 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 Musculoskeletal Ultrasound and Radiological Studies in Trauma Emergencies and improve the care of your patients.*





# 02 Objectives

The program in Musculoskeletal Ultrasound and Radiological Studies in Trauma Emergencies is oriented to facilitate the performance of the physician in all types of patients at serious toxicological risk or with acute intoxication.







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*This program is designed for you to update your knowledge in Musculoskeletal Ultrasound and Radiological Studies in Trauma Emergencies, with the use of the latest educational technology, to contribute to the quality and safety of your patients”*



## General objectives

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- Update the knowledge of medical personnel involved in emergency care with special interest in the field of acute trauma pathology
- 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 modern audiovisual system, with the possibility of development through online simulation workshops and/or specific preparation
- Provide incentives for professional encouragement through continuing education and research in their daily practice





## Specific objectives

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- ◆ Learn the practical applications of ultrasound, both for the rapid diagnostic approach and in support of invasive techniques in trauma emergency
- ◆ Develop a systematic approach to reading imaging studies commonly used during emergency trauma care



*This Postgraduate Certificate is the best way to get up to date in Musculoskeletal Ultrasound and Radiological Studies in Trauma Emergencies"*



03

# Course Management

The program's teaching staff includes leading specialists in Musculoskeletal Ultrasound and Radiological Studies in Trauma Emergencies and other related areas, who bring their years of work experience to this program. Additionally, other recognized specialists participate in its design and preparation, which means that the program is developed in an interdisciplinary manner.

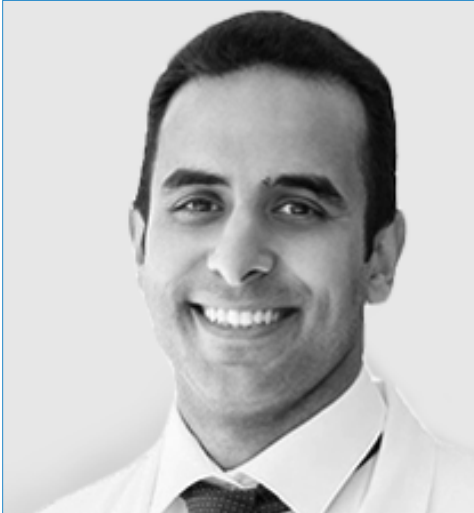


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*Learn the latest advances in the procedures  
in the field of Musculoskeletal Ultrasound and  
Radiological Studies in Trauma Emergencies  
from leading professionals"*



## Management



### Dr. Elgeadi Saleh, Ghassan

- ♦ Trauma physician
- ♦ General Manager of Elgeadi Traumatology
- ♦ Chief of the Traumatology and Emergency Department, Santa Elena Hospital
- ♦ Specialized in Advanced Reconstructive Surgery of Upper Limbs
- ♦ Specialized in Advanced Reconstructive Surgery of the Lower Limbs
- ♦ Specialized in Full Endoscopic Spine Surgery Fellowship Full endoscopic Spine Surgery
- ♦ Specialized in Advanced Endoscopic Neck and Lower-Back Surgery



### Dr. Domenech De Frutos, Santiago

- ♦ Emergency physician
- ♦ Master's Degree in Ultrasound in Rheumatology and Traumatology
- ♦ Master's Degree in Emergency Medicine
- ♦ Master's Degree in Acute Pathology and Pediatric Emergencies
- ♦ University specialist in subaquatic and hyperbaric medicine
- ♦ Postgraduate Diploma in Teaching and Digital Skills in Health Sciences
- ♦ Member of the Elgeadi Traumatology team



## Professors

### Dr. Alarcia Pineda, José Manuel

- ♦ Traumatologic emergency physician
- ♦ Attending Physician. Emergency - Traumatology Service at the Vithas Nuestra Señora de América Hospital
- ♦ Vithas Nuestra Señora de América Hospital
- ♦ HM Hospital, Móstoles
- ♦ General Medical Council- United Kingdom

### Dr. Alcobe, Javier

- ♦ Trauma physician
- ♦ Member of the Elgeadi Traumatology team

### Dr. Contreras, Miguel Angel

- ♦ Anesthesiologist

### Dr. Cuevas González, Jorge Luis

- ♦ Emergency physician
- ♦ Member of the Elgeadi Traumatology team
- ♦ Founder Ultratm (medical simulation)
- ♦ Santa Elena Clinic
- ♦ Member of the Elgeadi Traumatology team

**Dr. Carbó Laso, Esther**

- ♦ Resident Intern, Orthopedic Surgery and Traumatology Department, Hospital Gregorio Marañón General University Hospital, Madrid
- ♦ On-call duty in the Traumatology Emergency Department of CEMTRO Clinic, Madrid
- ♦ Assistant Specialist, Department of Orthopedic Surgery and Traumatology, Gregorio Marañón General University Hospital, Madrid
- ♦ Accredited Expert for the Illustrious Official College of Physicians of Madrid

**Dr. Chana Rodríguez, Francisco**

- ♦ Associate Professor of Surgical Pathology, Faculty of Medicine, University Complutense of Madrid
- ♦ Assistant Physician, Department of Traumatology and Orthopedic Surgery, Gregorio Marañón General University Hospital, Madrid
- ♦ Assistant Physician, Department of Traumatology and Orthopedic Surgery, La Paz General University Hospital, Madrid

**Dr. Forriol Campos, Francisco**

- ♦ Specialist in Orthopedic Surgery and Traumatology. Professor at the University of Alcalá, Madrid
- ♦ Professor at the School of Medicine of the University of Navarra, consultant in the Department of Orthopedic Surgery and Traumatology, Clínica Universidad de Navarra, Pamplona, and director of the Experimental Orthopedics Laboratory
- ♦ Research Director of Fremap Mutua de Accidentes developing a research center for the musculoskeletal system
- ♦ Corresponding member of the Orthopedic Surgery and Traumatology Societies of Germany, Argentina, Chile, Ecuador, Peru, Colombia, Mexico and Venezuela

**Dr. Gironés, Alberto**

- ♦ Anesthesiologist, Sanitas La Moraleja University Hospital

**Dr. Jiménez, Daniel**

- ♦ Trauma physician
- ♦ Member of the Elgeadi Traumatology team
- ♦ Director at TraumaSalud

**Dr. Méndez Arias, Agustín**

- ♦ Occupational Physician. Prevention Service CEF Center for Financial Studies
- ♦ Member of the Elgeadi Traumatology team

**Dr. Meza González, José**

- ♦ Family and sports medicine physician
- ♦ Member of the Elgeadi Traumatology team

**Dr. Matas Díaz, Jose Antonio**

- ♦ Assistant Physician of the extinct INSALUD, at the hospital of the Mayoress of San Lorenzo de El Escorial
- ♦ Senior specialist, contracted by the Autonomous Community of Madrid, Gregorio Marañón Hospital, Traumatology Service
- ♦ Specialist doctor by competitive examination for the community of Madrid
- ♦ Member of the Infection and Antibiotic Policy Committee
- ♦ Member of the Clinical Documentation, Operating Room and Antibiotic Policy Committees of the Gregorio Marañón Hospital
- ♦ Patient safety referent of the COT service at the Gregorio Marañón Hospital

**Dr. Núñez Medina, Alberto**

- ♦ Trauma Physician
- ♦ Member of the Elgeadi Traumatology team

**Dr. Rodríguez, Angel L**

- ♦ Trauma physician
- ♦ Member of the Elgeadi Traumatology team

**Dr. Miguel Rodríguez, Johanna**

- ♦ Graduate in Nursing
- ♦ Master's Degree in Specialized Nursing Care in Emergency, Critical Care and Post Anesthesia Areas
- ♦ Anatomical Pathology and Cytology Technician
- ♦ Course in Nursing Care in the Initial Assistance to the Polytraumatized Patient
- ♦ Course on Nursing Interventions in Disasters
- ♦ Course in Nursing Care and Interventions in Emergencies
- ♦ Currently Coordinator of Operating Room and Instrumentalist. Elgeadi Traumatology Clinic. Madrid
- ♦ DUE in Ward, Emergency, ICU and in charge of the Department of Hematology and Transfusions. Vigo
- ♦ Operating Room DUE. Madrid

**Dr. Rodríguez, Tamara**

- ♦ Trauma Physician
- ♦ Member of the Elgeadi Traumatology team

**Dr. Villanueva, Ghino Patricio**

- ♦ Occupational physician
- ♦ SPRL University Hospital Rey Juan Carlos Hospital. General de Villalba University Hospital Infanta Elena
- ♦ Member of the Elgeadi Traumatology team

**Dr. Vaquero Martín, Javier**

- ♦ Chief of Orthopedic Surgery and Traumatology Service, Gregorio Marañón General University Hospital, Madrid
- ♦ Professor of Orthopedic Surgery and Traumatology, Complutense University of Madrid

**Dr. Fajardo, Mario**

- ♦ Medical Anesthesiologist, Chief Executive Officer at UltraDissection Group



*The leading professionals in the field have come together to offer you the most comprehensive knowledge in this field, so that you can develop with total guarantees of success"*

# 04

# Structure and Content

The structure of the contents has been designed by a team of professionals from the best hospitals and universities in Spain, aware of the relevance of current trends in order to be able to intervene in the diagnosis, treatment and follow-up of Musculoskeletal Ultrasound and Radiological Studies in Trauma Emergencies, and committed to quality teaching using new educational technologies.







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*This Postgraduate Certificate in Musculoskeletal Ultrasonography and Radiological Studies in Traumatological Emergencies contains the most complete and up-to-date scientific program on the market"*

**Module 1.** Musculoskeletal Ultrasound and Radiological Studies in Trauma Emergencies

- 1.1. General Aspects of Musculoskeletal Ultrasound
- 1.2. Indications of Musculoskeletal Ultrasound
- 1.3. Ultrasound Support for Invasive Techniques
- 1.4. Indications for Simple X-Rays
- 1.5. Interpretation of Bone X-Rays
- 1.6. Radiological Characteristics of Fractures
- 1.7. Higher Resolution Imaging Studies Indicated in the Emergency Department (CT)



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





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



#### Additional Reading

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







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

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



#### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



#### Classes

There is scientific evidence 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 Certificate in Musculoskeletal Ultrasound and Radiological Studies in Trauma Emergencies guarantees you, in addition to the most rigorous and up-to-date training, access to a Postgraduate Certificate issued by TECH Technological University.



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

This **Postgraduate Certificate in Musculoskeletal Ultrasound and Radiological Studies in Trauma Emergencies** contains the most complete and up-to-date scientific program on the market.

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

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

Title: **Postgraduate Certificate in Musculoskeletal Ultrasound and Radiological Studies in Trauma Emergencies**

Official N° of hours: **150 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

health confidence people

education information tutors

guarantee accreditation teaching

institutions technology learning

community commitment

personalized service innovation

knowledge present quality

online training

development languages

virtual classroom

**tech** technological  
university

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in Trauma Emergencies

Course Modality: Online

Duration: 2 months

Certificate: TECH Technological University

Official N° of hours: 150 h.

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