

Postgraduate Certificate Ultrasound in Emergency Services





Postgraduate Certificate Ultrasound in Emergency Services

Course Modality: **Online**

Duration: **6 weeks**

Certificate: **TECH Technological University**

Official N° of hours: **150 h.**

Website: www.techtute.com/in/medicine/postgraduate-certificate/ultrasound-emergency-services

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01

Introduction

There are currently a multitude of tests that are used to diagnose patients who come to the emergency department. Among them, ultrasound is one of the most effective and most used by professionals around the world. Therefore, for this program the TECH teaching team instructs participants in the use of clinical ultrasound as a diagnostic tool for patients presenting acute chest and abdominal pain, as well as urological manifestations, among other symptoms. All this aims for professionals to take advantage of the utilities this type of testing offers to perform their work with a higher rate of success.



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This Postgraduate Certificate will teach you to take advantage of all the benefits offered by clinical ultrasound as a means of diagnosis so you can begin to grow professionally”

This Postgraduate Certificate in Clinical Ultrasound in Emergency Departments was created with the aim of instructing emergency physicians in the general aspects of the use, indications and limitations of clinical ultrasound as a means to diagnose patients who come to the emergency department. In this way, physicians will learn to know when to use this test and its benefits and drawbacks depending on the type of case.

And the use of ultrasound scans as a diagnostic method will also be discussed. Thus, professionals will also learn how to discern when to request an ultrasound and when not to in benefit of the patient. This will make them not only better emergency physicians, but also more efficient professionals capable of making the best possible use of the available resources.

Likewise, throughout the training, each and every one of the cases where clinical ultrasound could be of great help will be analyzed. Among them, events where patients present acute abdominal pain, polytrauma, fever of unknown origin and hypotension, among other symptoms will be exemplified, including how ultrasound can be of great help as a means to offer a much more accurate medical judgment.

Finally, the program will also address the use of clinical ultrasound during ultrasound-guided procedures such as central and peripheral venous access, arterial punctures, pericardiocentesis, paracentesis, thoracentesis and lumbar puncture, among others. This will allow emergency professionals to learn how to use ultrasound during surgery, so as to visualize internal structures without the need to carry out much more invasive and painful procedures on patients.

This program stands out for being an online training program, so students are not obliged to travel to a specific center or to study at a specific time. On the contrary, this program is totally flexible, so students only need a computer or mobile device with an Internet connection to be able to take this Postgraduate Certificate, setting their own schedule so they can comfortably balance it with the rest of their daily obligations.

This **Postgraduate Certificate in Ultrasound in Emergency Services** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ Numerous practical cases presented in form of In Focus videos and clinical videos made by experts in Emergency Medicine
- ♦ 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
- ♦ Practical activity presentations on procedures and techniques
- ♦ An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- ♦ Action protocols and clinical practice guidelines which cover the most important latest developments in this specialist area
- ♦ All of this will be complemented by theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ♦ Its special emphasis on evidence-based medicine and research methodologies in dealing with patients requiring Emergency services
- ♦ Content that is accessible from any fixed or portable device with an Internet connection



Our immense commitment to your education is materialized by offering the best program available”

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You are just one step away from taking your career to the next level and making all your dreams come true”

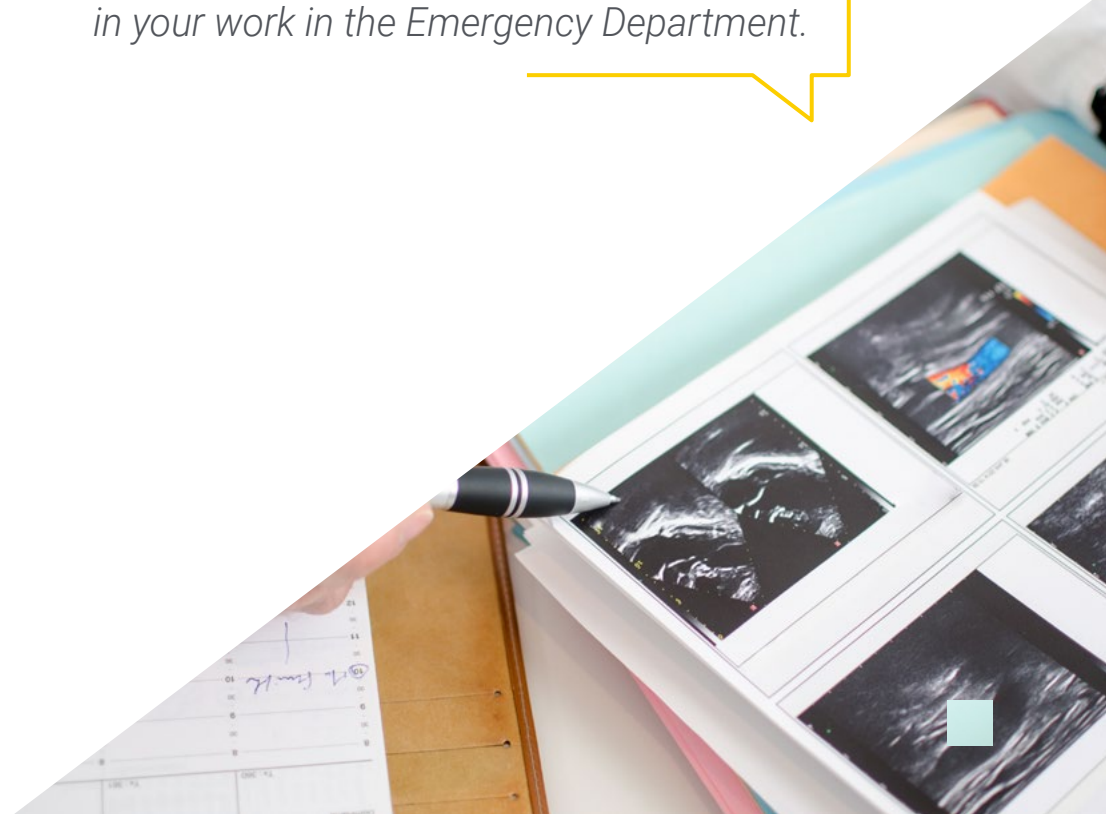
The program's teaching staff includes medical professionals that bring their experience to this program, as well as renowned specialists from leading scientific communities and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive education programmed to learn in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the program.

We base our programs on practice as a means to teach you how to solve real problems that may arise in your work in emergency medicine.

With this Postgraduate Certificate you will learn to understand and put into practice the utilities of clinical ultrasound as a means of diagnosis in your work in the Emergency Department.



02 Objectives

TECH's main objective is clear: to train the most competent professionals in the medical field and, therefore, the most sought after. To do so, it makes use of a very complete content bank designed in multimedia formats and adapted to the needs of 2.0 students. Likewise, TECH assures professionals that, by studying here, they will have access to the most reputable emergency physicians in the field, who pour their years of practical experience into this program. In short, the perfect union of professionals, syllabus and content make it possible for this University to optimally train the best physicians in the field.





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TECH has only one goal: To offer you high level specialization that will serve as a vehicle for you to grow professionally”



General Objectives

- ◆ Specialize emergency medicine professionals in the methods that enable highly effective and efficient care in hospital emergency departments and primary care centers
- ◆ Apply the most complete and updated syllabus on the market, designed by the best professionals in the field, to offer the most complete specialization to students
- ◆ Successfully treat patients in the emergency department with the knowledge to respond



TECH has set itself the goal of helping you to build your professional career so you can achieve everything you deserve"





Specific Objectives

- ◆ Review general aspects of clinical ultrasound in the emergency department
- ◆ Gain a deeper understanding of the tools for clinical ultrasound in acute abdominal pain in the emergency department
- ◆ Master the tools for clinical ultrasound used on patients with acute renal failure and urological manifestations in the emergency department
- ◆ Expand the tools for clinical ultrasound in chest pain and other cardiovascular symptoms in the emergency department
- ◆ Learn the uses of clinical ultrasound in patients with acute dyspnea of uncertain origin in the emergency department
- ◆ Expand the tools for clinical ultrasound in patients with pain and increased volume of the lower limb in the emergency department
- ◆ Expand the tools for clinical ultrasound in patients with fever of unknown origin in the emergency department
- ◆ Establish the tools for clinical ultrasound in patients with hypotension and shock in the emergency department
- ◆ Know the tools for clinical ultrasound in acute cardiorespiratory arrest in the emergency department
- ◆ Recognize the tools for clinical ultrasound in polytraumatized patients in the emergency department
- ◆ Increase the tools for clinical ultrasound in ultrasound-guided procedures: central and peripheral venous access, arterial puncture, pericardiocentesis, paracentesis, thoracentesis, lumbar puncture in the emergency department

03

Course Management

The design and creation of the theoretical and multimedia materials has been carried out by a team of leading professionals in emergency medicine, who actively working at the main hospitals in the country. They will be in charge of teaching you, transferring all their practical experience so you will be able to thoroughly implement the uses of clinical ultrasound as a means of diagnosis in hospital and out of hospital Emergency Departments.





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Learn the uses of clinical ultrasound and its advantages in the emergency department from leading professionals”

Management



Dr. Torres Santos-Olmo, Rosario María

- ◆ Degree in Medicine and Surgery
- ◆ Doctor of Medicine and Surgery
- ◆ Specialist in Family and Community Medicine
- ◆ Master's Degree in Palliative Care and Supportive Neoplastic Patients Care
- ◆ Life Support Instructor (BLS, ALS, ILS, ATLS)
- ◆ Master's Degree in Palliative Care and Supportive Neoplastic Patient Care
- ◆ Master's Degree in Patient Safety and Health Risk Management
- ◆ Clinical Collaborator at the Autonomous University of Madrid
- ◆ Area Specialist in the Adult Emergency Department at La Paz Hospital, Madrid



Dr. Rivera Núñez, María Angélica

- ◆ Surgeon at Universidad de Chile, Santiago de Chile
- ◆ Specialist in Internal Medicine from the Catholic Pontificia University, Chile
- ◆ PhD Cum Laude in Medicine and Surgery from the Autonomous University of Madrid
- ◆ Certificate in Emergency Medicine
- ◆ Assistant Coordinator in the Emergency Department at La Paz University Hospital, Madrid
- ◆ Specialist Physician in Emergency Medicine at La Paz University Hospital, Madrid

Professors

Dr. Cancelliere, Nataly

- ♦ HULP Emergency Department Specialist
- ♦ Doctorate in Medicine from the Autonomous University Madrid
- ♦ Specialist in Ophthalmology at University Hospital La Paz
- ♦ Master's Degree in Emergency Medicine, SEMES

Dr. Calvin García, Elena

- ♦ Degree in Medicine
- ♦ Specialist in Family and Community Medicine
- ♦ Master's Degree in Emergency Medicine, Complutense University, Madrid
- ♦ HULP Emergency Department Attending Physician
- ♦ Clinical Reference in Emergency Services HULP

Dr. González Viñolis, Manuel

- ♦ Degree in Medicine and Surgery from La Laguna University
- ♦ Master's Degree in Clinical Unit Management from the University of Murcia
- ♦ HULP Emergency Department Attendant

Dr. Mayayo Alvira, Rosa

- ♦ Degree in Medicine from Rovira i Virgili University
- ♦ HULP Emergency Department Attending Physician
- ♦ Head of the Toxicology Unit in the HULP Emergency Department

Dr. Martínez Zarza, Ana María

- ♦ Graduate in Medicine and Surgery from the University of Valladolid
- ♦ PhD in Medicine and Surgery from the Autonomous University of Madrid
- ♦ Master's Degree in Medical and Clinical Management, National University of Distance Education, Spain
- ♦ Medical Surgical Emergencies Expert
- ♦ HULP Emergency Department Attending Physician
- ♦ Quality and Teaching Coordinator in the HULP Emergency Department

Dr. Maroun Eid, Charbel

- ♦ Degree in Medicine and Surgery from Gallegos Rómulo University
- ♦ Master's Degree in Cardiovascular Risk Prevention from Alcalá University
- ♦ Attending Emergency Physician at HULP

Dr. Martín Quirós, Alejandro

- ♦ Degree in Medicine and Surgery from the University of Cadiz
- ♦ PhD from the Autonomous University of Madrid within the Program in Medicine
- ♦ HULP Emergency Department Attending Physician

Rubio Bolivar, Javier

- ♦ CEASEC Simulation Technician
- ♦ HULP Simulation Technician

04

Structure and Content

The structure of the curriculum has been designed by a team of medical professionals who are fully aware of the importance of university studies in hospital and out of hospital emergencies, especially in the area of new technologies. This team, aware of the relevance and timeliness of specialization, and committed to quality teaching through the use of innovative formats, has created this academic program especially designed for physicians to learn to successfully manage the needs of emergency department patients.



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*A comprehensive teaching program,
structured in well developed teaching units,
oriented towards efficient and swift learning”*

Module 1. Emergency Ultrasound

- 1.1. Introduction Clinical Ultrasound Indications and Limitations in the Emergency Department
 - 1.1.1. Clinical Ultrasound Utility in Different Acute Abdominal Pain Manifestations
 - 1.1.2. Clinical Ultrasound in Acute Renal Failure and Urological Manifestations
 - 1.1.3. Clinical Ultrasound in Chest Pain and Other Cardiovascular Symptoms (Syncope, Murmur, Electrocardiographic Alterations)
 - 1.1.4. Clinical Ultrasound in Patients with Dyspnea of Uncertain Origin
 - 1.1.5. Clinical Ultrasound in Patient with Edema or Pain in the Lower Limb
 - 1.1.6. Clinical Ultrasound in Patients with Fever of Uncertain Origin
 - 1.1.7. Clinical Ultrasound in Hypotension and Undifferentiated Shock
 - 1.1.8. Ultrasound in Cardiac Arrest
 - 1.1.9. Ultrasound in Patients with Polytrauma
 - 1.1.10. Echoguided Procedures: Central and Peripheral Venous Access, Arterial Puncture, Pericardiocentesis, Paracentesis, Thoracocentesis, Lumbar Puncture





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*Welcome to the training that will
take your career to the next level.
Don't let this opportunity slip away”*

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 Ultrasound in Emergency Services guarantees students, in addition to the most rigorous and up to date education, access to a Postgraduate Certificate issued by TECH Technological University.





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

This **Postgraduate Certificate in Ultrasound in Emergency Services** 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 Ultrasound in Emergency Services**

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
development languages
virtual classroom



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