



## Postgraduate Certificate

# Thoracic Ultrasound Scan for Primary Care

» Modality: online

» Duration: 6 weeks

» Certificate: TECH Technological University

» Dedication: 16h/week

» Schedule: at your own pace

» Exams: online

We bsite: www.techtitute.com/us/medicine/postgraduate-certificate/thoracic-ultrasound-scan-primary-care

## Index

p. 30





## tech 06 | Introduction

Ultrasound has been an essential tool in the advancement of medical care. This discipline has evolved in recent decades, from being restricted to radiodiagnostic services, to being included in all healthcare environments.

Therefore, it is necessary for healthcare professionals to receive training in this discipline and learn the techniques and tools to master the ultrasound scanner, as well as its various utilities in healthcare.

With this Postgraduate Certificate you will have the opportunity to take a teaching program that brings together the most advanced and in-depth knowledge of Head and Neck Ultrasound for Primary Care, where a group of teachers of high scientific rigor and extensive international experience offers you the most complete and updated information on the use of ultrasound as a complement to the physical examination in primary care.

It endorses the latest advances in ultrasound with a robust and didactic teaching program, which positions it as a product of the highest scientific rigor at international level, aimed at health professionals. In addition, the program is based on a multidisciplinary approach to its subjects, which allows training and professional development in different areas:

You will have prestigious health professionals as tutors, who will guide you throughout the learning process"

The **Postgraduate Certificate in Thoracic Ultrasound for Primary Care** contains the most complete and up-to-date scientific program on the market.

The most important features of the course are:

- Development of numerous clinical cases presented by experts in ultrasound.
- The graphic, schematic, and eminently practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional.
- New diagnostic-therapeutic developments on evaluation, diagnosis, and intervention in problems or disorders that can be addressed with ultrasound.
- It contains practical exercises where the self-evaluation process can be carried out to improve learning.
- Algorithm-based interactive learning system for decision-making in the presented clinical situations.
- Special emphasis on evidence-based medicine and research methodologies in ultrasound processes.
- Content that is accessible from any fixed or portable device with an Internet connection
- All of this will be complemented by theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments.



This course has been meticulously designed by experts in the field, following the latest educational techniques in the sector"

Its teaching staff is made up of prestigious and renowned professionals, with extensive experience in healthcare, teaching, and research in various countries, contributing their extensive professional to this Postgraduate Certificate.

The methodological design of this master's degree, developed by a multidisciplinary team of e-learning experts, integrates the latest advances in educational technology in order to create numerous multimedia tools that allow the professional to solve real-life situations in their daily practice. These will enable you to advance by both acquiring knowledge and developing new skills in your future professional work.

The contents generated for this Postgraduate Certificate, as well as the videos, self-exams, clinical cases, and modular exams, have been thoroughly reviewed, updated, and integrated by the professors and the team of experts that make up the working group, in order to facilitate, in a gradual and educational manner, a learning process that allows the objectives of the teaching program to be achieved.

Thanks to its multimedia content and e-learning methodology, you will learn and develop your skills more quickly.

Learn where and when you want, thanks to the flexibility of this 100% online course, which will allow you to combine your training with your personal life.





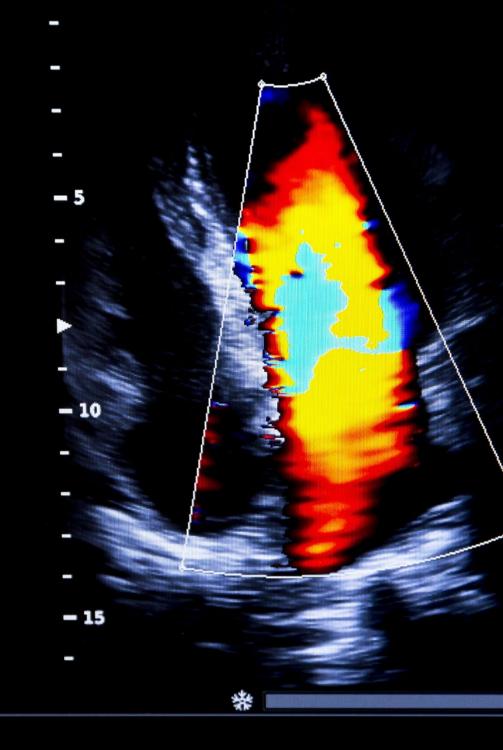


## tech 10 | Objectives



## **General Objectives**

- Acquire the necessary knowledge in the use of ultrasound, in order to manage the routine situations of their practical use in healthcare..
- Apply the skills acquired while performing the duties of an ultrasound specialist..
- Use the latest clinical developments in the day-to-day work of a medical professional..



## Four Chambers V





### **Specific Objectives**

- Guiding invasive therapeutic procedures to minimize their risks.
- Master the basic and advanced procedures of Ultrasound, both at diagnostic and therapeutic level.
- Predict the results of invasive diagnostic procedures non-invasively by using ultrasound, with the possibility of replacing them..
- Determine the indications and limitations of ultrasound and its application in the most common clinical situations.
- Optimize ultrasound imaging through in-depth knowledge of the physical principles of ultrasound and the controls and operation of ultrasound scanners
- Understand how to extend the concept of Ultrasound to healthcare, research, and academic environments.







## tech 14 | Course Management

#### Management



#### Dr. Fumadó Queral, Josep

- Family physician at Els Muntells Primary Care Center (Amposta, Tarragona).
- Graduate in Clinical Ultrasound and Training of Trainers from the University of Montpelier-Nîmes (France).
- Lecturer at the Associació Mediterrània of General Medicine
- Teacher at the Spanish School of Ultrasound of the Spanish Society of General and Family Physicians (SEMG)
- Honorary Member of the Canary Society of Ultrasound (SOCANECO) and Professor of its Annual Symposium.
- Lecturer on the Master's Degree in Clinical Ultrasound for Emergencies and Critical Care at the CEU Cardenal Herrera University.



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- Expert in Abdominal and Musculoskeletal Clinical Ultrasound for Emergency and Critical Care. CEU Cardenal Herrera University.
- ullet President and Professor of the Canary Society of Ultrasound (SOCANECO) and Director of its Annual Symposium
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## tech 20 | Structure and Content

#### Module 1. Thoracic Ultrasound

- 1.1. Thoracic Ultrasound Fundamentals
  - 1.1.1. Anatomy Recap
  - 1.1.2. Echoes and Artifacts in the Thorax
  - 1.1.3. Technical Requirements
  - 1.1.4. Exploration Systematics
- 1.2. Ultrasound of the Chest Wall, Mediastinum, and Diaphragm
  - 1.2.1. Soft Tissues
  - 1.2.2. Thoracic Cage
  - 1.2.3. Mediastinum
  - 1.2.4. Diaphragm
- 1.3. Pleural Ultrasound
  - 1.3.1. Normal Pleura
  - 1.3.2. Pleural Effusion.
  - 1.3.3. Pneumothorax
  - 1.3.4. Solid Pleural Pathology
- 1.4. Pulmonary Ultrasound
  - 1.4.1. Pneumonia and Atelectasis
  - 1.4.2. Pulmonary Neoplasms
  - 1.4.3. Diffuse Lung Disease
  - 1.4.4. Pulmonary Infarction
- 1.5. Cardiac Ultrasound and Basic Hemodynamics
  - 1.5.1. Normal Cardiac Sonoanatomy and Hemodynamics
  - 1.5.2. Examination Technique
  - 1.5.3. Structural Alterations.
  - 1.5.4. Hemodynamic Alterations
- 1.6. Trends in Thoracic Ultrasound
  - 1.6.1. Pulmonary Sonoelastography
  - 1.6.2. 3D/4D Thoracic Ultrasound
  - 1.6.3. Other Modes and Techniques

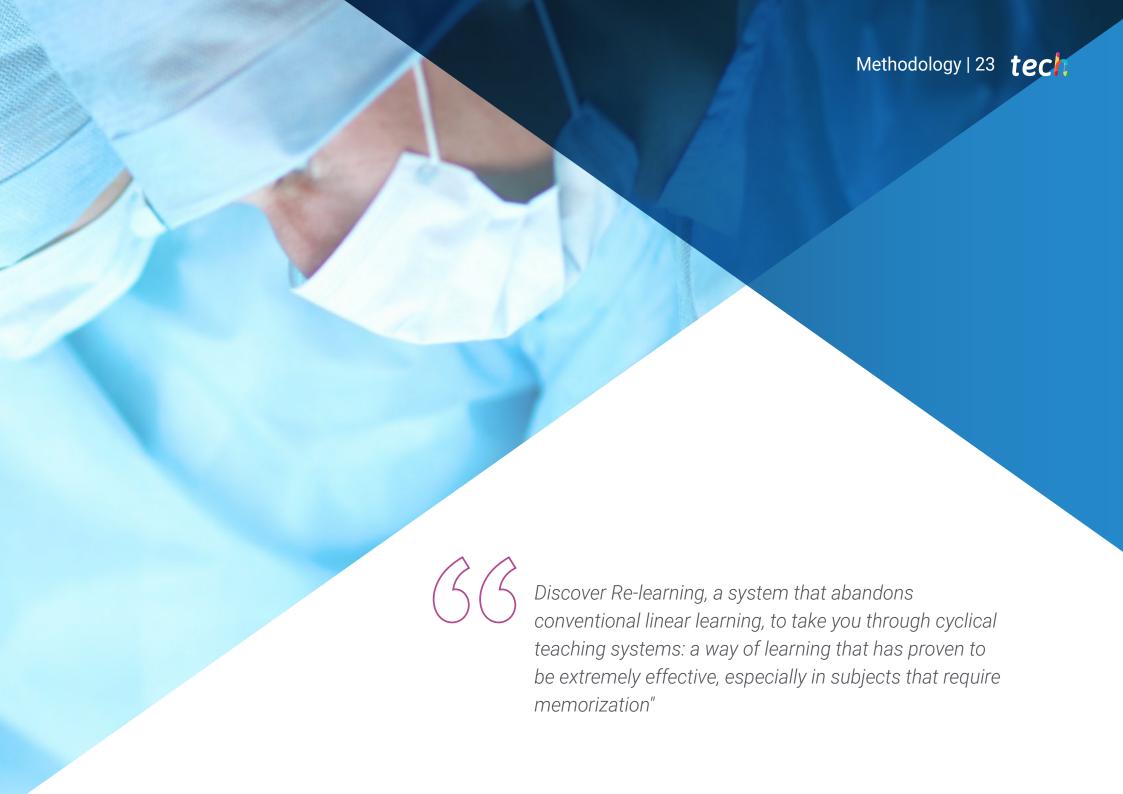






A unique, key, and decisive training experience to boost your professional development"





## tech 24 | Methodology

#### 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 abundant 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.



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:

- 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.
- 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 physician will learn through real cases and by solving complex situations in simulated learning environments. These simulations are developed using state-of-theart software to facilitate immersive learning.



### Metodology | 27 tech

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 physicians 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 highly 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**

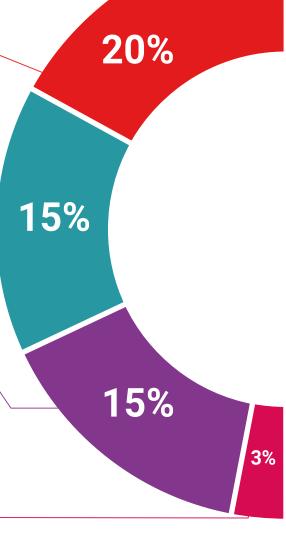
We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



#### **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.

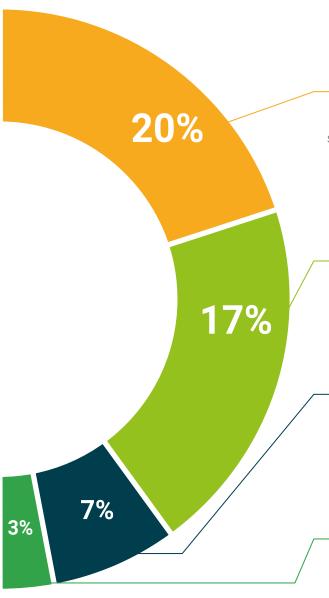
This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".





#### **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 focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### **Testing & Re-testing**

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.





#### **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.







## tech 32 | Certificate

Official Number of Hours: 150

This **Postgraduate Certificate in Thoracic Ultrasound in Primary Care** contains the most complete and up-to-date scientific program on the market.

After students have passed the assessments, they will receive by certified mail their **Postgraduate Certificate** issued by TECH Technological University.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the master's degree, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

 $\label{thm:condition} \mbox{Title: Postgraduate Certificate in Thoracic Ultrasound for Primary Care} \\ \mbox{ECTS: } \mathbf{6}$ 



technological university



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