

# Postgraduate Certificate Clinical Pediatric Ultrasound





## Postgraduate Certificate Clinical Pediatric Ultrasound

- » 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/clinical-pediatric-ultrasound](http://www.techtute.com/us/medicine/postgraduate-certificate/clinical-pediatric-ultrasound)

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# 01

# Introduction

Technological advances are marking the pace of those that are taking place in modern medicine. This is the case of the diagnostic processes of pediatric pathology. The Clinical Pediatric Ultrasound opens a door to the advanced diagnosis of various pathologies associated with childhood and with multiple etiology. This program is aimed at facilitating the update on the procedures for the use of ultrasound devices when dealing with pediatric patients.





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*Improve your knowledge 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 provide quality medical care"*

Technological advances have made it possible to reduce the size of the equipment, making it cheaper and more portable, and have increased the capabilities of Clinical Ultrasound, leading to a notable increase in its use in various situations. Today, more accurate diagnosis of most of the pediatric pathologies, safe ultrasound-guided interventions, precise non-invasive hemodynamic evaluations and rapid assessment of traumatic injuries can be performed.

When using ultrasound, there is a great dependence on the operator and the method of realization, and numerous studies have shown the need and desire of regulated training for the specialists who performs it, especially in healthcare.

Like with any other aspect, Clinical Pediatric Ultrasound requires an initial basic and advanced specialization, oriented to the activity to be developed. However, no other organization is currently offering a Postgraduate Certificate of the highest level to complete the educational itinerary in Clinical Pediatric Ultrasound.

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

- ♦ Development of clinical cases presented by experts in ultrasound imaging
- ♦ 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-therapeutic developments in the use of ultrasound devices in the child
- ♦ An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- ♦ With a special emphasis on evidence-based medicine and research methodologies in Pediatric Ultrasound
- ♦ 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



*Expand your knowledge through the Postgraduate Certificate in Clinical Pediatric Ultrasound, in a practical way and adapted to your needs”*

“

*This Postgraduate Certificate is the best investment you can make when selecting a refresher program, for two reasons: in addition to updating your knowledge in Clinical Pediatric Ultrasound, you will obtain a qualification endorsed by TECH Technological University"*

It includes in its teaching staff health professionals belonging to the field of clinical ultrasound, who pour into this program the experience of their work, in addition to recognized specialists belonging to scientific societies of reference.

Thanks to its multimedia content developed with the latest educational technology, they will allow the professional a situated and contextual learning, that is to say, a simulated environment that will provide an immersive learning programmed to prepare in real situations.

The design of this program is based on Problem-Based Learning, through which the physician must try to solve the different situations of professional practice that arise throughout the Postgraduate Certificate. For this purpose, they will be assisted by an innovative, interactive video system created by renowned and experienced experts in the field of Clinical Ultrasound with extensive teaching experience.

*This course allows training in simulated environments, which provide immersive learning programmed to train for real situations.*

*It includes clinical cases to bring the program's content as close as possible to the reality of patient care.*



# 02

# Objectives

The main program objective is to develop both theoretical and practical learning, so that the physician can master in a practical and rigorous way the use of Clinical Ultrasound in the pediatric patient.







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*This refresher program will generate a sense of confidence when practicing medicine and will help you grow both personally and professionally”*



## General Objective

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- The main objective of this program in clinical ultrasound, is to complete the specialization of the physician, in order to be able to use ultrasound imaging in diagnostic and therapeutic processes, in the management of emergency situations and critical patients, regardless of the environment they are dealing with





## Specific Objectives

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- Describe the technical requirements of pediatric ultrasounds
- Explain the examination technique for pediatric ultrasounds
- Describe pediatric sonoanatomy and sonophysiology
- Explain the use of ultrasound in the major pediatric syndromes

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*Make the most of this opportunity and take the step to get up to date on the latest developments in Clinical Pediatric Ultrasound”*





# 03

# Course Management

This program includes highly regarded health professionals in the field of Clinical Ultrasound in its teaching staff, who bring the experience of their work to this program. Additionally, renowned specialists, members of prestigious national and international scientific communities, are involved in designing and preparing the program.







“ Learn about the latest advances  
in Clinical Pediatric Ultrasound  
from leading professionals”

## Management



### **Dr. Álvarez Fernández, Jesús Andrés**

- Head of the Intensive Care Medicine Department at the Juaneda Miramar Hospital in Palma de Mallorca
- Collaborating Professor of the Master's Degree in Intensive Care Medicine at the CEU Cardenal Herrera University of Valencia
- Founding Member of the Ecoclub of SOMIAMA
- Collaborating Professor of SOCANECO
- Degree in Medicine and Surgery
- Specialist in Intensive Care Medicine
- Doctor of Medicine (PhD)

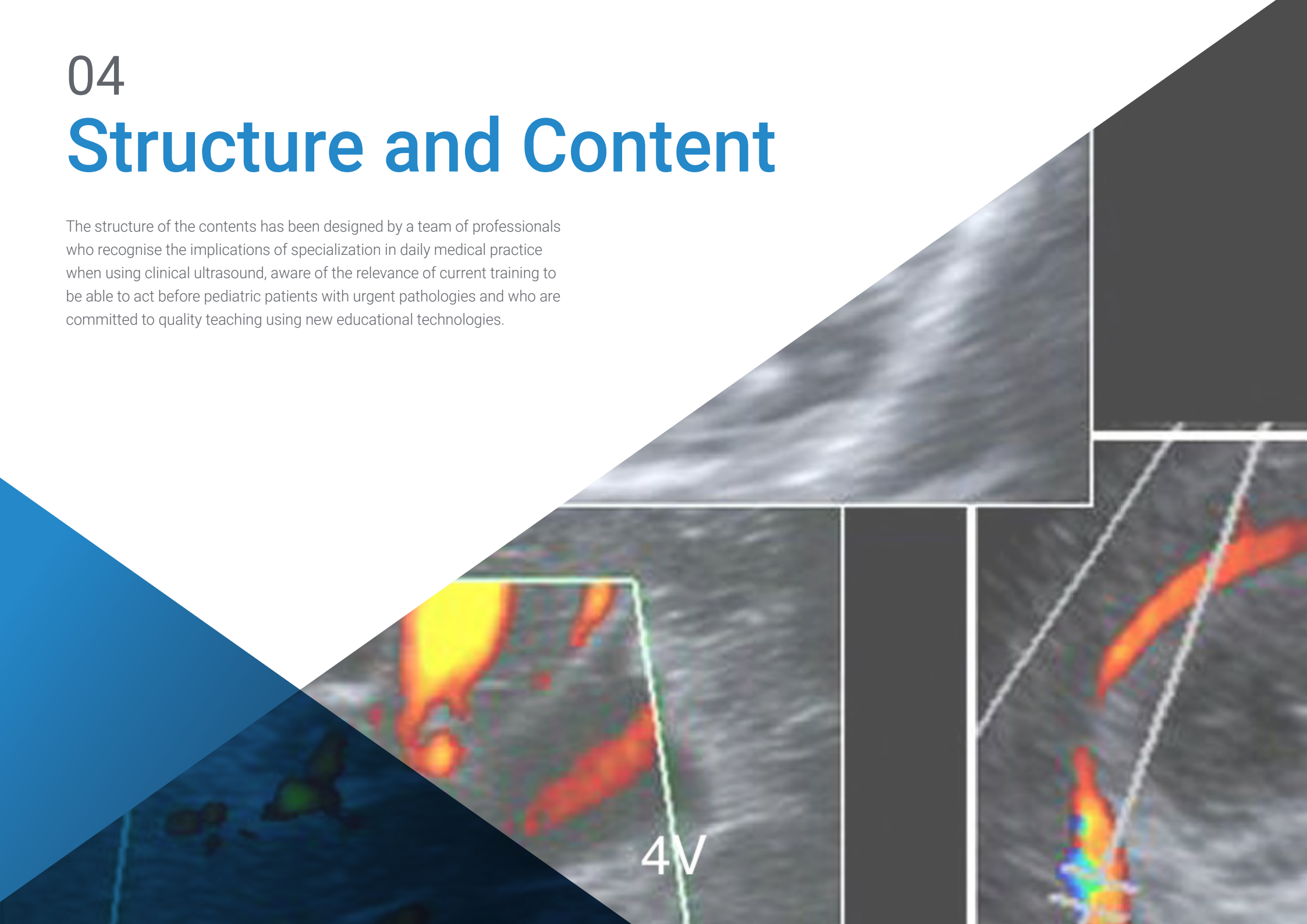




# 04

# Structure and Content

The structure of the contents has been designed by a team of professionals who recognise the implications of specialization in daily medical practice when using clinical ultrasound, aware of the relevance of current training to be able to act before pediatric patients with urgent pathologies and who are committed to quality teaching using new educational technologies.





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*This Postgraduate Certificate in Clinical Pediatric Ultrasound contains the most complete and up-to-date scientific program on the market”*

## Module 1. Clinical Pediatric Ultrasound

- 1.1. Technical Requirements
  - 1.1.1. Ultrasound at the Patients Bedside
  - 1.1.2. Physical Space
  - 1.1.3. Basic Equipment
  - 1.1.4. Equipment for Interventionalist Ultrasounds
  - 1.1.5. Ultrasound Scanners and Probes
- 1.2. Examination Technique
  - 1.2.1. Pediatric Patient Preparation
  - 1.2.2. Tests and Probes
  - 1.2.3. Ultrasound Section Planes
  - 1.2.4. Examination System
  - 1.2.5. Ultrasound-Guided Procedures
  - 1.2.6. Images and Documentation
  - 1.2.7. Test Report
- 1.3. Pediatric Sonoanatomy and Sonophysiology
  - 1.3.1. Normal Anatomy
  - 1.3.2. Sonoanatomy
  - 1.3.3. Sonophysiology of a Child in the Different Stages of Development
  - 1.3.4. Variants of Normality
  - 1.3.5. Dynamic Ultrasound





- 1.4. Ultrasound of the Major Pediatric Syndromes
  - 1.4.1. Emergency Thorax Ultrasound
  - 1.4.2. Acute Abdomen
  - 1.4.3. Acute Scrotum
- 1.5. Ultrasound-Guided Procedures in Pediatrics
  - 1.5.1. Vascular Access
  - 1.5.2. Extraction of Superficial Foreign Bodies
  - 1.5.3. Pleural Effusion
- 1.6. Introduction to Neonatal Clinical Ultrasound
  - 1.6.1. Emergency Transfontanellar Ultrasound
  - 1.6.2. Most Common Examination Indications in Emergencies
  - 1.6.3. Most Common Pathologies in Emergencies

“*A unique, key, and decisive educational experience 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 Clinical Pediatric Ultrasound 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 Certificate in Clinical Pediatric Ultrasound** 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 Certificate** issued by **TECH Technological University** via tracked delivery\*.

The diploma 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 Clinical Pediatric Ultrasound**

Official N° of Hours: **150 h.**



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



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