

Postgraduate Diploma Non-Invasive Pediatric Cardiology





Postgraduate Diploma Non-Invasive Pediatric Cardiology

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 24 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-non-invasive-pediatric-cardiology

Index

01

Introduction

p. 4

02

Objectives

p. 8

03

Course Management

p. 12

04

Structure and Content

p. 16

05

Methodology

p. 20

06

Certificate

p. 28

01

Introduction

The use of ultrasound and stress tests in the cardiology field has made an exhaustive contribution to the early diagnosis of heart pathologies or malformations. These non-invasive techniques are also used in pediatric patients, from whom images of the different structures of the heart are obtained in real time, along with their functional parameters. As a result, specialists can apply specific treatments to alleviate diseases and, therefore, increase patients' quality of life and life expectancy. For this reason, this program is an ideal option for medical professionals to update their knowledge, because it gathers the most up-to-date information related to this field. Therefore, through an online program, students will be able to update and perfect their skills in the approach to patients through non-invasive pediatric cardiology.





“

Are you looking for a program that will bring you up to date on the techniques and strategies of Non-Invasive Pediatric Cardiology? Then you have the perfect option to get started. Are you going to let it pass by?"

Pediatric Cardiology is a vitally important area of medicine. Thanks to the advances that have been made in diagnostic tests and treatments, not only in born patients, but also in fetal patients, today millions of children in the world can lead a normal life when their clinical prognosis was initially fatal. Among the techniques most commonly used and from which the best results are obtained are those related to non-invasive cardiac imaging, such as CT, functional tests or echocardiography. Using these, it has been possible to accurately determine the characteristics of a specific pathology and its level of affection.

In order to allow professionals in this field to keep up to date with the latest developments in the field, TECH and its team of experts in Pediatric Cardiology have developed this comprehensive 100% online program that includes the most exhaustive and innovative information. Therefore, through 600 hours of syllabus, real clinical cases and additional diverse and multidisciplinary material, students will be able to update their knowledge in relation to pulmonary hypertension and fetal cardiology, focusing on the advances in non-invasive cardiac imaging and the use of functional tests.

You will have 6 months to complete all the program's requirements. During this time, you will have unlimited access to the Virtual Campus, an online platform where the content will be stored, which can be accessed from any device with internet connection, whether it is a PC, tablet or cell phone. In addition, everything can be downloaded for offline viewing or even after the academic experience has been completed. In this way, TECH offers a program adapted to your needs and to the very high and demanding level of the medical sector, with which students will be able to update their knowledge without schedules or on-site classes.

This **Postgraduate Diploma in Non-Invasive Pediatric Cardiology** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The development of practical cases presented by experts in Pediatric Cardiology
- ♦ 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 exercises where self-assessment can be used to improve learning
- ♦ Its special emphasis on innovative methodologies
- ♦ 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



A program that delves, in a specialized way, into the latest developments in pulmonary hypertension in pediatric patients, so that you can learn about the most effective and innovative diagnostic techniques and strategies"

“

The Virtual Campus of this Postgraduate Diploma is compatible with any device with internet connection, so you can access it from your cell phone, tablet or computer”

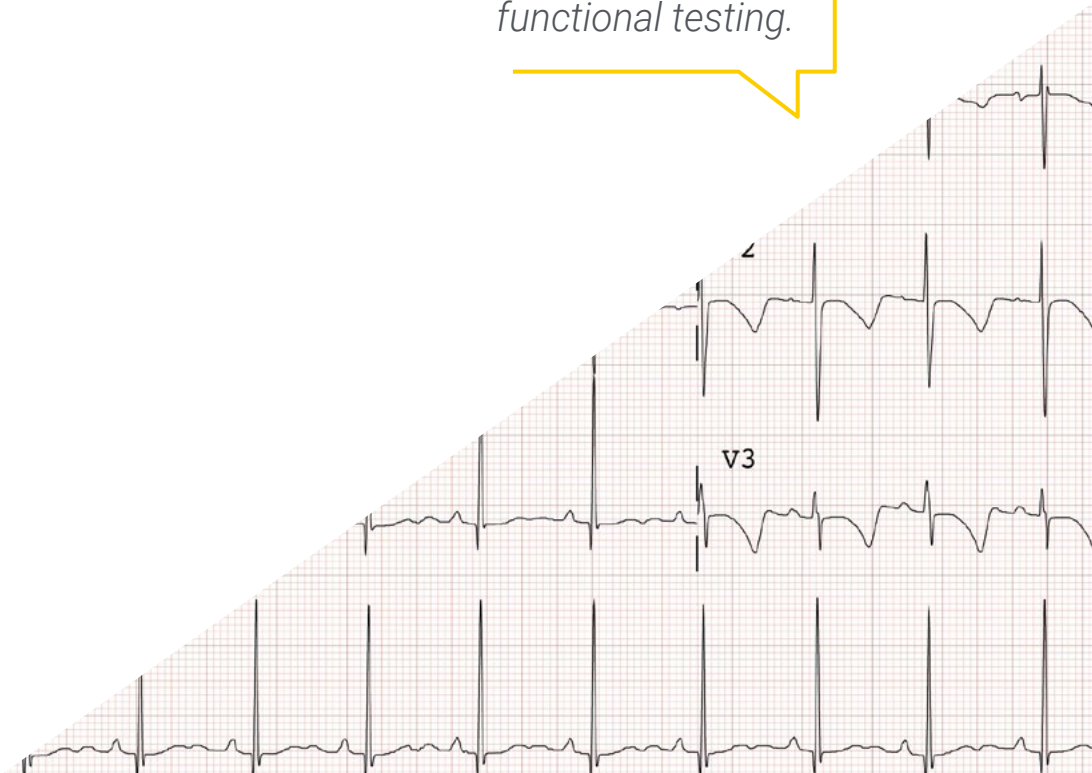
The program's teaching staff includes professionals from the sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

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 professionals must try to solve the different professional practice situations that arise during the academic year. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

You will work with the most up-to-date information on pediatric heart transplantation and the most effective techniques to ensure patient safety.

Thanks to the inclusion of an exclusive module dedicated to this, you will be able to perfect your skills in the use of the main tools for non-invasive functional testing.



02 Objectives

This Postgraduate Diploma's development has been carried out with the aim that students can access the most advanced theoretical, practical and additional content that allows them to get up to date, in just 6 months, on the latest developments in Non-Invasive Pediatric Cardiology and its many possibilities. Thanks to the highly demanding curriculum, any professional will be able to achieve even their highest goals through a program that is tailored to their needs and presented in a convenient and accessible 100% online format.



“

A program designed on the basis of the utmost clinical rigor, so students are guaranteed to exceed their academic objectives”



General objectives

- Update students' knowledge in Pediatric Cardiology
- Provide professionals with the latest and most comprehensive information in the relationship between pulmonary hypertension and fetal cardiology, as well as with tools for non-invasive functional cardiovascular imaging tests



Implementing the most innovative cardiovascular imaging techniques in your practice will help you to offer the highest quality medical service possible"





Specific objectives

Module 1. Update in Pediatric Cardiology

- ◆ Identify, classify and orientate the different types of heart disease in pediatrics
- ◆ Delve into the nutrition and development in breastfeeding infants and children with congenital heart disease
- ◆ Study the pediatric heart failure and transplantation

Module 2. Pulmonary Hypertension

- ◆ Identify, classify and manage pediatric pulmonary hypertension
- ◆ Master the diagnostic protocol for pediatric PHT
- ◆ Define when and how to perform cardiac catheterization
- ◆ Study lung transplantation

Module 3. Non-Invasive Cardiac Imaging and Functional Tests

- ◆ Study the non-invasive diagnostic techniques that currently make it possible to diagnose a lesion and its functional situation
- ◆ Delve into transthoracic and transesophageal echocardiography
- ◆ Master the use of magnetic resonance imaging

Module 4. Fetal Cardiology

- ◆ Define the appropriate evaluation and treatment of a new-born with heart disease
- ◆ Master prenatal screening and indications for fetal echocardiography
- ◆ Distinguish the types of cardiac malformations
- ◆ Study labor preparation and perinatal management

03

Course Management

Not all universities include teaching support in their programs, formed by specialized teams in the field developed in the program. However, TECH does. In addition, this center submits candidates to an exhaustive and demanding analysis, resulting in the formation of the best faculty, made up of experts with a broad and extensive professional experience in the sector, as is the case of this Postgraduate Diploma in Non-Invasive Pediatric Cardiology.





“

A team of specialists in Pediatric Cardiology will be at your disposal through the Virtual Campus to answer any questions you may have during the course of this Postgraduate Diploma"

International Guest Director

Dr. Luc Mertens is a leading international figure in the field of Pediatric Cardiology, with a special focus on echocardiography. A graduate of the Faculty of Medicine of the University of Leuven in Belgium, he has built a remarkable career since then. As such, he has trained as a Pediatrician and Pediatric Cardiologist at the University Hospitals of Leuven, acquiring a solid clinical and research background.

Since then, he has played a crucial role as a Pediatric Cardiologist at the same hospitals, having risen to a position of high responsibility as Section Head of Echocardiography at the Hospital for Sick Children in Toronto, Canada, thanks to his well-deserved merits as a medical professional.

Furthermore, there is no doubt that Dr. Mertens has left an indelible mark on the field of pediatric echocardiography, both clinically and academically. Indeed, his leadership in the organization of accreditation in this field in Europe has been fundamental, being recognized for his contribution within the European Association of Pediatric Cardiology and the European Association of Echocardiography. He has also played a leading role in the Pediatric Council of the American Society of Echocardiography.

In addition to his clinical and leadership work, Dr. Mertens is a prolific researcher, with more than 150 peer-reviewed articles and significant contributions to the development and validation of new echocardiographic techniques to assess cardiac function in children. Likewise, his commitment to academic excellence is reflected in his participation in the editorial board of several scientific journals, as well as in his role as editor of one of the leading textbooks in the field of pediatric and congenital echocardiography.



Dr. Mertens, Luc

- Section Head, Echocardiography, The Hospital for Sick Children, Toronto, Canada
- Pediatric Cardiologist at the University Hospitals of Leuven
- Specialist in Pediatrics and Pediatric Cardiology at the University Hospitals of Leuven and at the Mayo Clinic in Rochester
- Doctor of Medical Sciences from the University of Leuven
- Degree in Medicine from the University of Leuven
- Member of: ,European Association of Pediatric Cardiology ,European Association of Echocardiography, American Society of Echocardiography

“

Thanks to TECH, you will be able to learn with the best professionals in the world”

Management



Dr. Gutiérrez Larraya, Federico

- ♦ Head of the Pediatric Cardiology at La Paz University Hospital Madrid, Spain
- ♦ Head of the Pediatric Cardiology at Ruber International Hospital Madrid, Spain
- ♦ Chairman of the Permanent Management Committee of the Children's Hospital La Paz University Hospital Madrid, Spain
- ♦ Member of the Platform of Innovation La Paz University Hospital Madrid, Spain
- ♦ PhD in Medicine from the Complutense University of Madrid
- ♦ Degree in Medicine and Surgery
- ♦ Master's Degree in Health Management and Economics from the European Institute of Health and Social Welfare.
- ♦ Executive Master's Degree in Healthcare Organization Management by ESADE



Dr. Merino Llorens, José Luís

- ♦ Head of the Robotized Cardiac Electrophysiology and Arrhythmia Research Unit
- ♦ Physician at La Paz University General Hospital. Madrid, Spain
- ♦ Degree in Medicine and Surgery



Professors

Dr. Deiros Bronte, Lucía

- ◆ Head of Section of the Ultrasound and Fetal Medicine Department, La Paz University Hospital
- ◆ Attending Physician at La Paz University Hospital

Dr. Labrandero de Lera, Carlos

- ◆ Pediatric Cardiologist
- ◆ Pediatric Cardiologist at La Paz University Hospital

“

A path to achieve knowledge and professional growth that will propel you towards a greater level of competitiveness in the job market”

04

Structure and Content

The curriculum of this Postgraduate Diploma includes 600 hours of theoretical, practical and additional content which specialists will have access to for a period of 6 months. The extra material includes detailed videos and complementary readings, allowing students to contextualize the information in the syllabus, as well as to delve deeper into the different sections in a personalized way. In addition, the convenient and flexible 100% online format will allow students to take the course from wherever they want and with a schedule totally adapted to their availability.



“

On the Virtual Campus you will find in-depth videos, research articles, further reading, dynamic summaries and much more additional material!”

Module 1. Update in Pediatric Cardiology

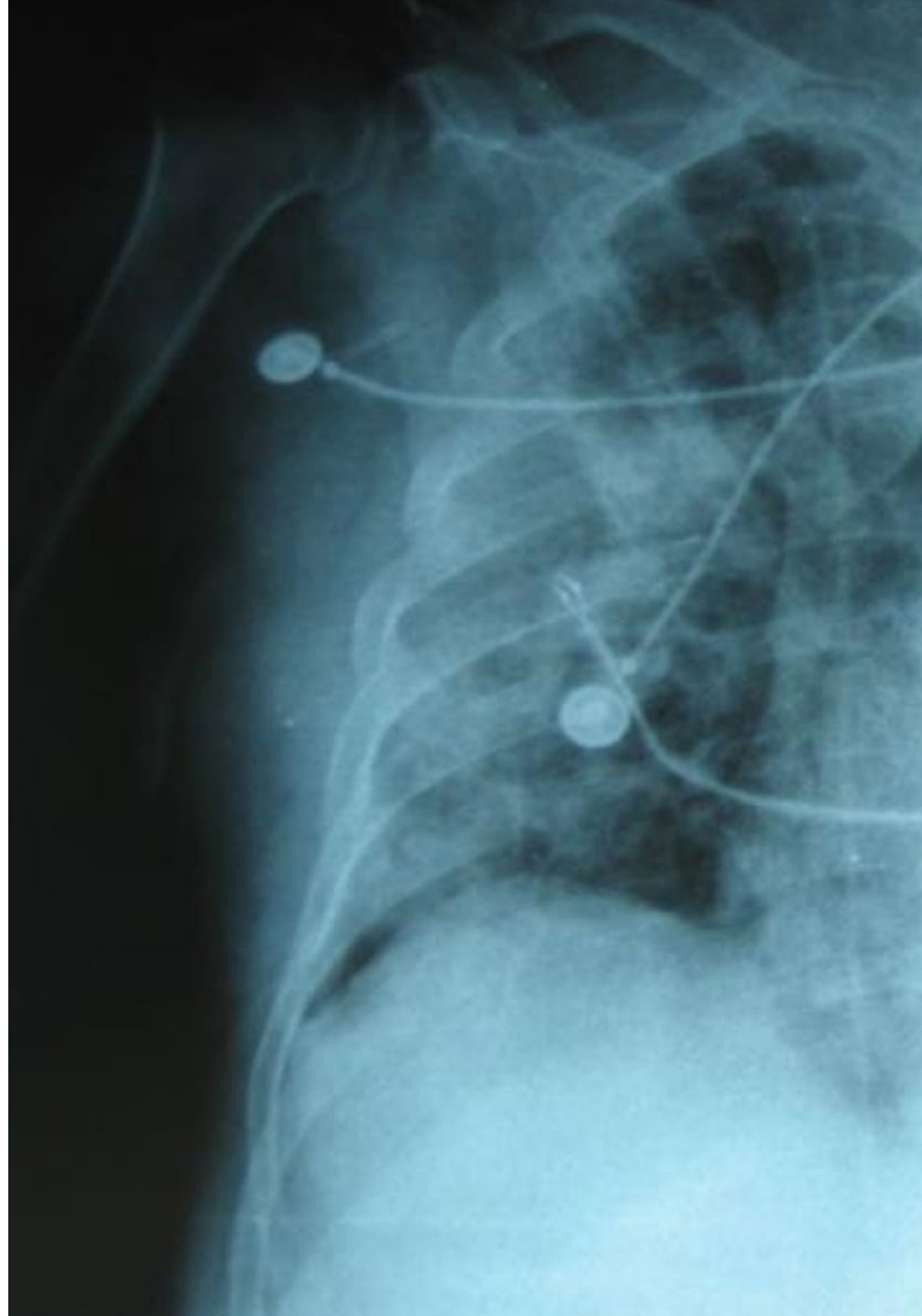
- 1.1. Epidemiology: Incidence and Prevalence. Terminology. Etiology of Congenital Heart Disease
- 1.2. Genetic Principles and Congenital Heart Disease
- 1.3. Cardiac Embryology and Cardiac Anatomy
 - 1.3.1. Cardiac Anatomy: Elena Sanz
 - 1.3.2. Cardiac Embryology: Natalia Rivero
- 1.4. Cardiovascular Pathophysiology, Diagnosis, Support Techniques
- 1.5. Pediatric Heart Failure and Transplantation
- 1.6. Nutrition and Development in Breastfeeding Infants and Children with Congenital Heart Disease
- 1.7. General Aspects in the Management of Heart Disease, both Congenital and Acquired

Module 2. Pulmonary Hypertension

- 2.1. Pediatric Pulmonary Hypertension: Epidemiology, Classification and Clinical Process
- 2.2. Diagnostic Protocol for Pediatric PHT Assessment of Functional Grade
- 2.3. Cardiac Catheterization in Pulmonary Hypertension Percutaneous Treatment
- 2.4. Specific Conventional Pharmacological Treatment of Pharmacological Treatment
- 2.5. Surgical Treatment of PHT Potts Shunt Lung Transplant

Module 3. Non-Invasive Cardiac Imaging and Functional Tests

- 3.1. General Basis of an Echocardiography Equipment
- 3.2. Transthoracic and Transesophageal Echocardiography
- 3.3. Cardiac CAT Scan
- 3.4. Magnetic Resonance
- 3.5. Functional Tests



Module 4. Fetal Cardiology

- 4.1. Physiology of Fetal Circulation and Normal Transition
- 4.2. Cardiocerebral Development
- 4.3. Genetics
- 4.4. Prenatal Screening Indications for Fetal Echocardiograph
- 4.5. Acute Heart Failure
- 4.6. Heart Malformations
 - 4.6.1. Septal Defects
 - 4.6.2. Conotruncal Defects
 - 4.6.3. Right and Left Heart Failure
 - 4.6.4. Coarctation of Aorta
- 4.7. Fetal Arrhythmias
- 4.8. Preparation of Birth and Perinatal Management
 - 4.8.1. Obstetric Management
 - 4.8.2. Management of the New-born
- 4.9. Fetal Interventionism



TECH advocates clinical excellence through the offer of complete and innovative programs with which all its students reach the highest level through the most up-to-date and exhaustive content"

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.



“

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.

“

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

This Postgraduate Diploma in Non-Invasive Pediatric Cardiology guarantees you, in addition to the most rigorous and up-to-date training, access to a Postgraduate Diploma issued by TECH Global University.



“

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

This private qualification will allow you to obtain a **Postgraduate Diploma in Non-Invasive Pediatric Cardiology** endorsed by **TECH Global University**, the world's largest online university.

TECH Global University is an official European University publicly recognized by the Government of Andorra (*official bulletin*). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

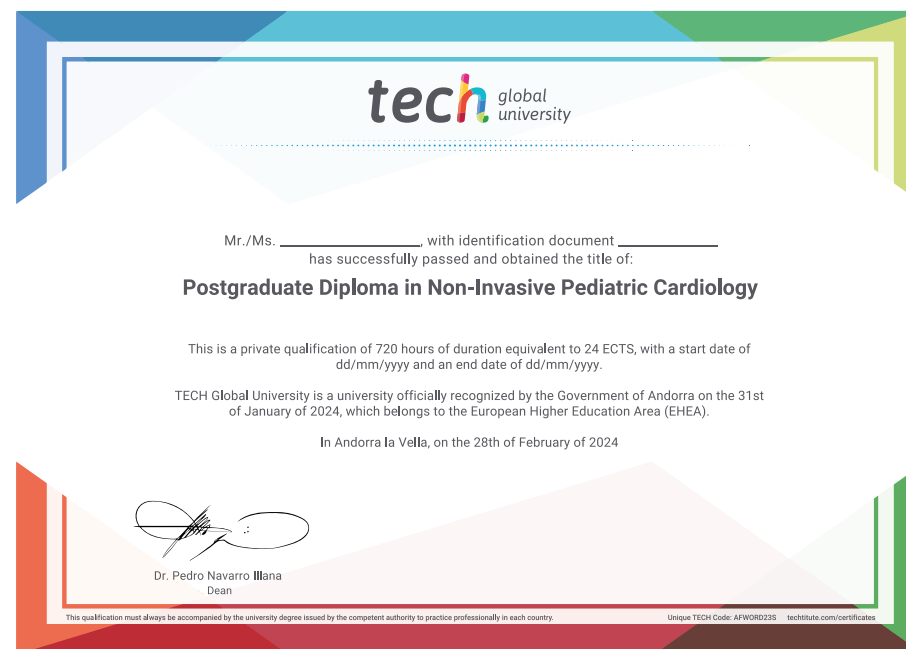
This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Non-Invasive Pediatric Cardiology**

Modality: **online**

Duration: **6 months**

Accreditation: **24 ECTS**



*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University 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 language

virtual classroom

tech global
university

Postgraduate Diploma
Non-Invasive
Pediatric Cardiology

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 24 ECTS
- » Schedule: at your own pace
- » Exams: online

Postgraduate Diploma Non-Invasive Pediatric Cardiology

