

Postgraduate Diploma

Surgery, Anesthesia and Intensive
Care of Congenital Heart Diseases





Postgraduate Diploma Surgery, Anesthesia and Intensive Care of Congenital Heart Diseases

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/pk/medicine/postgraduate-diploma/postgraduate-diploma-surgery-anesthesia-intensive-care-congenital-heart-diseases

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01

Introduction

The anesthetic management and intensive care required by pediatric patients differ from those of adults, as well as their age, since the techniques and procedures used to treat a newborn are not the same as those used with an adolescent. The attention needed to place medication to block tactile and painful sensitivity in these cases is extremely high, since the field of action is limited and there is a greater risk of invading the blood vessels. For this reason, TECH has designed a program that will serve as a guide for specialists to be up to date in everything related to this field in the pre- and post-operative period, as well as in relation to the intensive care required by congenital heart disease. All in a convenient online format that will allow students to get up to date on Pediatric Cardiology through a program adapted to the rigor of the medical field.



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A rigorous and comprehensive program that will bring you up to date on anesthesia surgery and intensive care in congenital heart disease in pediatric patients, 100% online"

Abnormal heart formation during fetal development occurs in millions of children each year and the causes are still unknown. These congenital heart diseases can seriously affect newborn health, causing a wide range of symptoms: arrhythmias, cyanosis, respiratory difficulties, exaggerated tiredness, edema, etc. This type of disease in children requires specific management differentiated from that of adults based on their age and the degree of development of their bodies. Therefore, in cases where surgery must be performed, where anesthesia is required or where intensive care must be applied, specialists must act with special attention and following the recommended guidelines for each context.

And in order to bring them up to date on what's new in this sector, TECH and its team of pediatric cardiac professionals have developed a comprehensive program that is perfect for this purpose. This is a 450-hour academic experience through which students will be able to learn, in detail, the advances that have been made in managing heart disease, cardiomyopathies and cardiac tumors, as well as the transition and the different conditions that may be encountered in the consultation room. You will also be able to update your knowledge in relation to the most innovative surgical techniques, as well as pre- and post-operative anesthetic management.

All this 100% online and over a period of 6 months, during which students will have unlimited access to the Virtual Campus where the contents are stored. It is compatible with any device with internet connection, whether it is a PC, tablet or cell phone, allowing students to connect whenever they want, with no limits, no schedules and no face-to-face classes. In addition, the entire content can be downloaded for your convenience, so that you can access it even after the academic experience has been completed. Therefore, specialists will be able to keep up to date without neglecting their own practice, implementing the most innovative and effective strategies and techniques in the field of Pediatric Cardiology and Congenital Heart Diseases.

This **Postgraduate Diploma in Surgery, Anesthesia and Intensive Care of Congenital Heart Diseases** 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



You will work with the latest information regarding heart disease, cardiomyopathies and cardiac tumors in infant and neonatal patients”

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You will have 450 hours of diverse audiovisual content, allowing you to contextualize the information in the syllabus and delve into each section in a personalized and dynamic way”

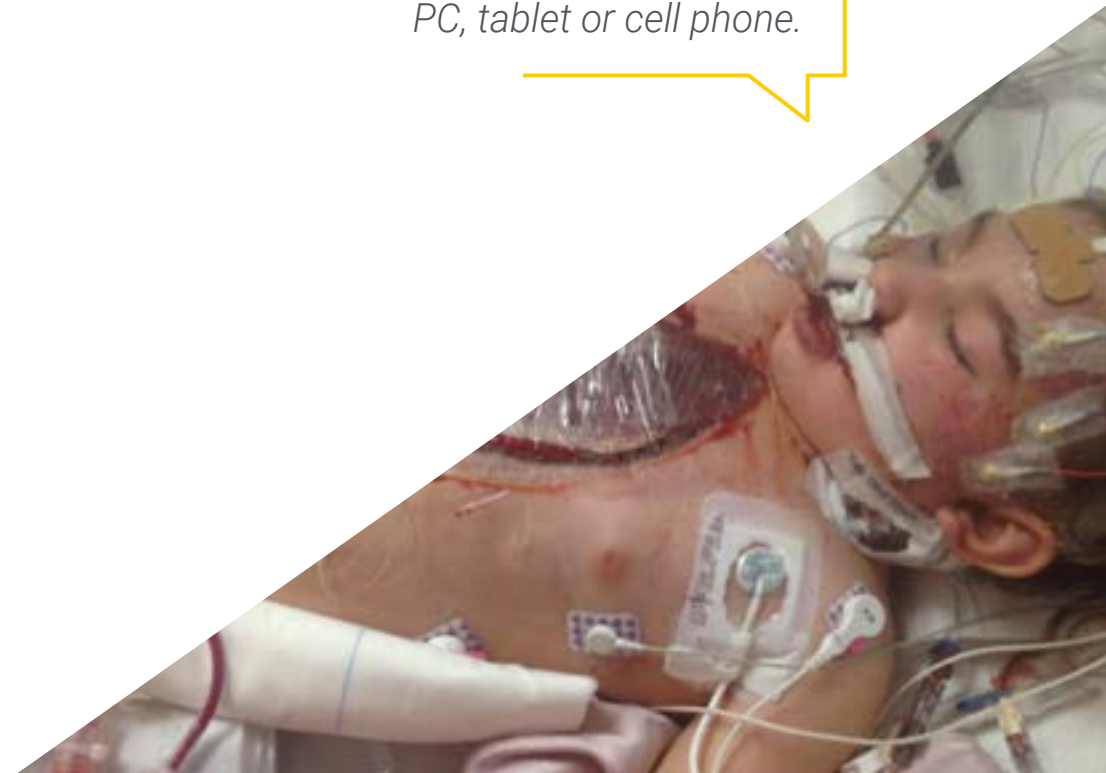
The program’s teaching staff includes professionals from the sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

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.

Would you like to know more about the advances that have been made in myocarditis and cardiomyopathy care? Then this Postgraduate Diploma is perfect for you.

You will have unlimited access to the Virtual Campus, which has been optimized for any device with an internet connection, whether it is a PC, tablet or cell phone.



02 Objectives

Pediatric Cardiology, like all medical disciplines, is constantly being updated thanks to the advances that are made every year in science. For that reason, having a qualification like this is essential for specialists to be able to get up to date through a program adapted to their needs and the high demands of the sector. Therefore, the objective is to provide students with all the material they need to achieve this in just 6 months, with the best results guaranteed.





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Whatever your goals are, this program has been designed so that you are guaranteed to achieve them in less than 6 months"



General objectives

- Update specialists' knowledge of intensive care, anesthesia use and surgical techniques in congenital heart disease in pediatric patients
- Know, in detail, the scientific advances that have been made in the clinical management of different heart diseases, cardiomyopathies and tumors in these cases



A program that includes a catalog of preconception advice prepared by a team of experts in Pediatric Cardiology"





Specific objectives

Module 1. Heart Disease, Cardiomyopathies, Tumors

- ♦ Study the basic aspects of invasive cardiology essential for clinical cardiology professionals
- ♦ Specialize in Kawasaki disease
- ♦ Differentiate myocarditis and cardiomyopathy

Module 2. Transition and Congenital Heart Disease in Adults

- ♦ Gain in-depth understanding of the transition of patients from pediatric to adult age, focusing especially on the new problems which they could face
- ♦ Analyze the patient with single ventricle
- ♦ Master the types of arrhythmias, conduction disturbances and electrophysiological abnormalities in adults with congenital heart disease
- ♦ Delve into follow-up protocols

Module 3. Surgery, Anesthesia and Intensive Care of Congenital Heart Diseases

- ♦ Master the surgical techniques of septal defects and rings
- ♦ Management of postoperative anesthetics
- ♦ Analysis of cardiac tamponade
- ♦ Distinguish the different types of coronary abnormalities

03

Course Management

Among TECH's highest expectations is to always offer the best programs, which will help students to update their knowledge in a guaranteed way and in the most complete and exhaustive way possible. For this reason, TECH believes that including a team of top-quality professionals in its teaching staff is a significant asset that it can use to achieve this. Therefore, this Postgraduate Diploma's faculty is made up of specialists in Pediatric Cardiology characterized by their long and extensive professional experience, which they will make available to the students, allowing them to update their knowledge based on their experience.



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The teaching team will be at your disposal through the Virtual Campus to help you solve any doubts that may arise during the course of this Postgraduate Diploma"

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. González Rocafort, Álvaro

- ♦ Pediatric Cardiology and Congenital Cardiopathies Surgeon

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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 development of this Postgraduate Diploma content has been carried out following the guidelines of the prestigious and effective Relearning methodology, which consists of reiterating the most important concepts throughout the syllabus to ensure that students' knowledge is up to date in a natural and progressive manner. This way, you don't have to spend extra hours memorizing. In addition, it is based on the inclusion of real use cases, which must be solved by students in order to improve their skills and better internalize the techniques and strategies of the profession.





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Expertly crafted curriculum and quality content are the key to a successful update”

Module 1. Heart Disease, Cardiomyopathies, Tumors

- 1.1. Congenital Heart Disease
 - 1.1.1. Introduction
 - 1.1.2. Non-Cyanogenic Heart Disease
 - 1.1.3. Cyanogenic Heart Disease
- 1.2. Myocarditis and Cardiomyopathy
- 1.3. Pericarditis, Endocarditis and Kawasaki Disease
- 1.4. Cardiologic Involvement in Pediatric Systemic Diseases

Module 2. Transition and Congenital Heart Disease in Adults

- 2.1. Medical History, Anamnesis Key Points Echocardiogram Imaging Tests in CHD in Adults Diagnostic Catheter
- 2.2. Left to Right and Right to Left Short Circuits
- 2.3. Patients with a Single Ventricle
- 2.4. Post-Surgery Without Complications
- 2.5. Arrhythmias, Conduction Disturbances and Electrophysiological Abnormalities in Adults with Congenital Heart Disease
- 2.6. Monitoring Protocols
- 2.7. Preconception Counseling

Module 3. Surgery, Anesthesia and Intensive Care of Congenital Heart Diseases

- 3.1. Basis of Congenital Cardiac Surgery
 - 3.1.1. Introduction and History of Congenital Heart Disease
 - 3.1.2. Basis of ECLS and ECMO
 - 3.1.3. Ventricular and Transplant Care
- 3.2. Surgical Techniques on Septal Defects and Rings Updates
 - 3.2.1. ICA and IVC
 - 3.2.2. Partial Pulmonary Venous Abnormalities
 - 3.2.3. AV Channel
 - 3.2.4. AP Window Cor Triatriatum
 - 3.2.5. TAPVR
 - 3.2.6. Vascular Rings, DAP





- 3.3. Right Heart Surgical Techniques Updates
 - 3.3.1. TOF
 - 3.3.2. PAIVS and PAVSD
 - 3.3.3. Tricuspid Valve
 - 3.3.4. Vascular Rings, DAP: Raúl Sanchez
 - 3.3.5. RVOT and Pulmonary Valve: Félix Serrano
- 3.4. Left Heart Surgical Techniques Updates
 - 3.4.1. Aortic Valve
 - 3.4.2. Mitral Valve
 - 3.4.3. Coronary Abnormalities
- 3.5. Surgical Techniques of the Main Veins Updates
 - 3.5.1. Aorta, Coarctation of the Aorta, IAA
 - 3.5.2. TGA and Truncus
 - 3.5.3. Single Ventricle Text and Slide
- 3.6. Postoperative Anesthetic Management
 - 3.6.1. Strategies to Reduce Perioperative Neurologic Vulnerability Neurological Lesions
 - 3.6.2. Low Postoperative Expense Cardiac Dysfunction
 - 3.6.3. Renal Complications Renal Purification Techniques
 - 3.6.4. Pulmonary Complications Ventilatory Support Techniques Pulmonary from Hypertension Crisis
- 3.7. Other Complications
 - 3.7.1. Post-Operation Infections Pneumonia, Sepsis
 - 3.7.2. Infection of Surgical Wounds Mediastinitis
 - 3.7.3. Cardiac Tamponade
 - 3.7.4. Phrenic Plication and Others

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

This Postgraduate Diploma in Surgery, Anesthesia and Intensive Care of Congenital Heart Diseases guarantees you, in addition to the most rigorous and up-to-date training, access to a Postgraduate Diploma issued by TECH Technological University.





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

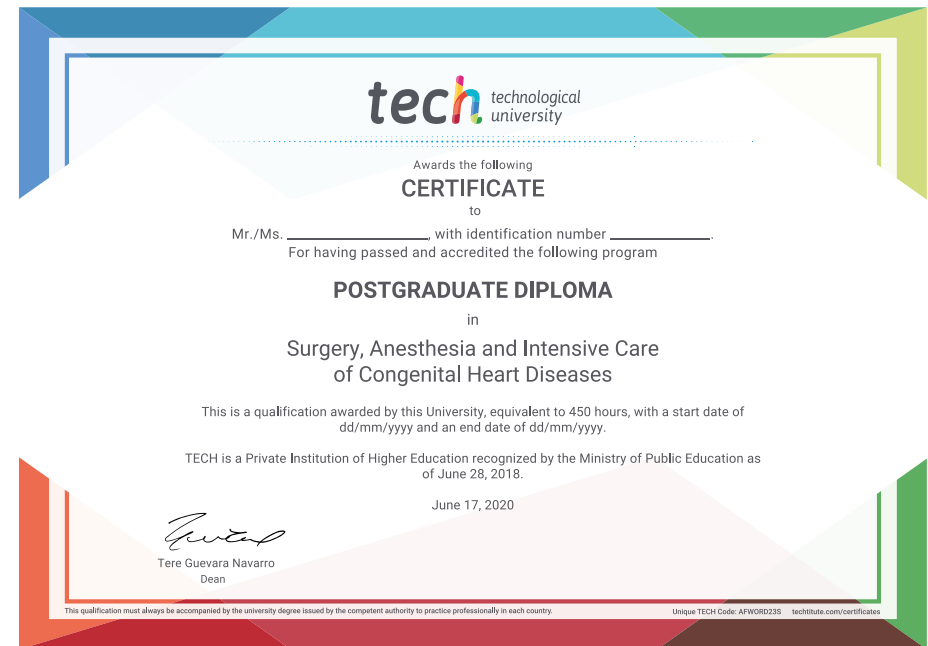
This **Postgraduate Diploma in Surgery, Anesthesia and Intensive Care of Congenital Heart Diseases** contains the most complete and up-to-date scientific program on the market.

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

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

Title: **Postgraduate Diploma in Surgery, Anesthesia and Intensive Care of Congenital Heart Diseases**

Official N° of hours: **450 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.

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community commitment
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virtual classroom

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university

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