

# Postgraduate Certificate

## Update on Arrhythmias in Fetal and Pediatric Age Groups





## Postgraduate Certificate

### Update on Arrhythmias in Fetal and Pediatric Age Groups

- » Modality: online
- » Duration: 6 weeks
- » Certificate: Tech Global University
- » Credits: 8 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techitute.com/us/medicine/postgraduate-certificate/update-arrhythmias-fetal-pediatric-age-groups](http://www.techitute.com/us/medicine/postgraduate-certificate/update-arrhythmias-fetal-pediatric-age-groups)

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# 01

# Introduction

The work of the physician in the field of congenital heart disease and pediatric cardiology is very complex. It deals with a wide variety of rare pathologies, with continuous advances in diagnosis and treatment and covers the entire age spectrum, from the fetus to the adult, including the neonate, infant, child and adolescent.



A close-up photograph of a patient's face, showing a clear plastic endotracheal tube and other medical connectors. The patient's skin is visible, and the background is slightly blurred. The image is partially obscured by a dark blue diagonal overlay.

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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 perform a quality medical practice"*

There are a lot of professionals involved in this field who come from a diverse range of areas, from clinics to surgery.

To treat these pathologies it is necessary to have specialized training. This is a long process and difficult to achieve, since it is not covered at the undergraduate stage and is not offered at the postgraduate level. Therefore, it is relegated to the hospital care setting. In hospitals, there are very irregular programs in terms of student selection, teaching content, duration and teacher support. In addition, they do not have any academic or institutional endorsement.

This program aims to address these shortcomings and needs by offering the professional a quality training focused on the acquisition of strong skills.

“  
Update your knowledge through the  
Postgraduate Certificate in Update on  
Arrhythmias in Fetal and Pediatric Age Groups,  
in a practical way and adapted to your needs”

This **Postgraduate Certificate in Update on Arrhythmias in Fetal and Pediatric Age Groups** contains the most complete and up-to-date scientific program on the market.

The most important features of the course are:

- Clinical cases presented by experts in cardiology. 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 practice.
- The latest diagnostic and therapeutic information on how to approach nutrition.
- 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 Arrhythmias in Fetal and Pediatric Age Groups.
- 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.





*This Postgraduate Certificate may be the best investment you can make when choosing a refresher program for two reasons: in addition to updating your knowledge in Arrhythmias in Fetal and Pediatric Age Groups, you will obtain a Postgraduate Certificate from Tech Global University"*

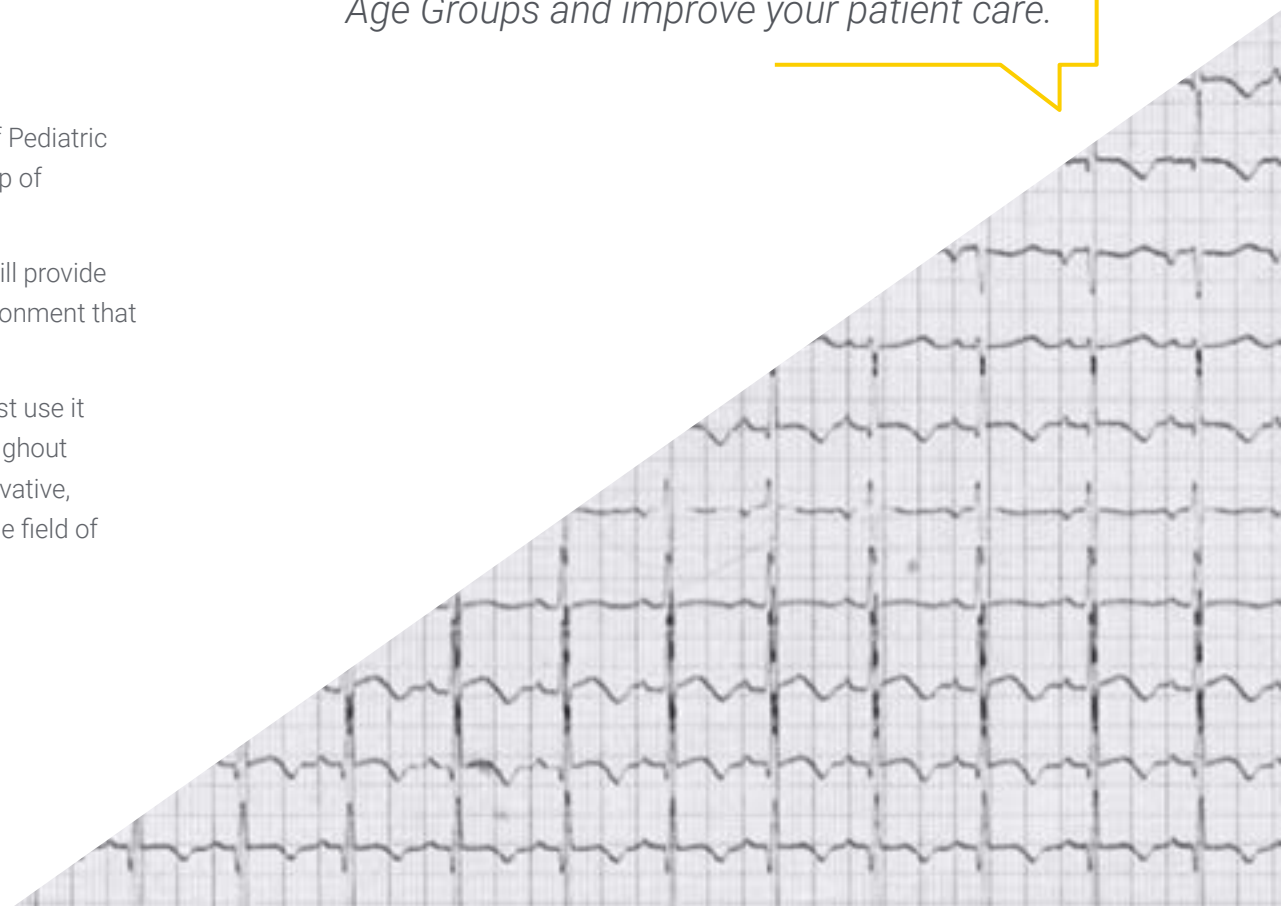
Forming part of the teaching staff is a group of professionals in the world of Pediatric Cardiology, who bring to this course their work experience, as well as a group of renowned specialists, recognised by esteemed scientific communities.

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 an immersive training program to train in real situations.

Problem-Based Learning underpins this program design, and the doctor must use it to try and solve the different professional practice situations that arise throughout the Postgraduate Certificate. For this reason, you will be assisted by an innovative, interactive video system created by renowned and experienced experts in the field of radiology with extensive teaching experience.

*The course includes real clinical cases and exercises to bring the development of the course closer to the clinical practice of a physician.*

*Make the most of the opportunity to update your knowledge in Arrhythmias in Fetal and Pediatric Age Groups and improve your patient care.*



02

# Objectives

The main objective of the program is the development of theoretical and practical learning, so that the physician can master Arrhythmias in Fetal and Pediatric Age Groups in a practical and rigorous way.





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*This refresher program will generate a sense of security when practising medicine, which will help you grow both personally and professionally”*



## General Objective

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- Provide the theoretical knowledge necessary to understand the environment in which professional care is given to fetuses with heart disease.
- Develop the necessary skills to diagnose and treat a newborn with heart disease.
- Apply the most innovative diagnostic methods to detect congenital heart disease in breastfeeding infants, children and adolescents with heart problems.
- Determine the appropriate treatment for congenital heart disease in the pediatric age group.
- Gain in-depth understanding of the areas in which professionals must be trained, in order for them to be able to provide the best practice when dealing with fetuses, children and adolescents with heart disease, both congenital and acquired.





## Specific Objectives

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- Define cellular and cardiac electrophysiology
- Explain the anatomy and embryology of the conduction system
- Define normal and pathological ECG
- Explain the differences between a patient with a structurally abnormal heart
- Define the different channelopathies and their management
- Explain the different pharmacological tests
- Define the clinical management of pre-excitation
- Define the different tachycardias, bradycardias and blockages
- Define the main fetal arrhythmias



*Make the most of the opportunity and take the step to get up-to-date on the latest developments in and Arrhythmias in Fetal and Pediatric Age Groups”*





03

# Course Management

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





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*Learn the latest advances in Arrhythmias in Fetal and Pediatric Age Groups from leading professionals"*



## International Guest Director

Dr. Bianca Maria Piraccini is a leading expert in the field of Dermatology and Venereal Diseases. As such, with a prolific career spanning several decades, she has made significant contributions, leaving an indelible mark on the field through her scholarly achievements, leadership and dedication to advancing medical knowledge and patient care.

At the University of Bologna, she has held roles in senior positions, including Director of the School of Specialization in Dermatology, as well as Coordinator of the Doctorate in Surgical Sciences. In addition, she has served as Director of the IRCCS Dermatology Service at S. Orsola, overseeing critical research and patient care initiatives in head and neck diseases.

She has also been Head of the Clinic of Allergology and Adjacent Skin Diseases, a reference in Italy and in the International Community in Nail and Hair Diseases. In fact, it is the only Italian hospital center where nail surgery for neoplastic and non-neoplastic disorders is performed, being the first one equipped with the Mohs microscopic surgery technique.

She has also written more than 240 original articles in national and international journals, gaining recognition for her innovative research on nail and hair biology, fungal infections and the development of innovative diagnostic techniques.

She has also established and directed the Mycology and Parasitology Laboratory, a metropolitan reference for the diagnosis of fungal and parasitic diseases. Not to mention that she has contributed to welfare activities, playing a crucial role in the assistance activities of the UOC of Dermatology of the University of Bologna and the Polyclinic of Sant'Orsola.



## Dr. Piraccini, Bianca Maria

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- Head of the School of Specialization in Dermatology at the University of Bologna, Italy
- Coordinator of the Doctoral Program in Surgical Sciences at the University of Bologna.
- Director of the UOC of Dermatology IRCCS of S. Orsola
- Director of the Specialization School of Dermatology and Venereology at the University of Bologna
- Head of the Clinic of Allergology and Adjacent Skin Diseases
- Head of the Laboratory of Mycology and Parasitology Dermatology
- Coordinator of the Doctoral Program in Surgical Sciences Alma Mater Studiorum at the University of Bologna.
- Course in Medical Mycology at the Mycology Laboratory of St. John's Institute of Dermatology, St. Thomas' Hospital, London.
- Doctorate in Dermatological Sciences at the University of Bologna
- Specialization in Dermatology and Venereology at the University of Bologna
- Degree in Medicine and Surgery from the University of Bologna

Member of:

- Italian Society of Dermatology and Sexually Transmitted Diseases (SIDeMaST)
- European Academy of Dermatology and Venereology (EADV)
- American Academy of Dermatology (AAD)
- European Nail Society (ENS)
- European Hair Research Society (EHRS)
- Council on Nail Disorders (CND)
- International Nail Society (INS)

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

## Management



### Dr. Gutiérrez - Larraya, Federico

- ♦ PhD in Medicine Complutense University Madrid
- ♦ Head of the Pediatric Cardiology at La Paz University Hospital
- ♦ Head of the Pediatric Cardiology at Ruber International Hospital
- ♦ Master's Degree in Clinical and Health Psychology European Institution of Health and Social Wellbeing
- ♦ Executive Master's Degree in Healthcare Organization Management. ESADE.
- ♦ Chairman of the Permanent Management Committee of the Children's Hospital La Paz University Hospital
- ♦ Member of the Platform of Innovation La Paz University Hospital



### Dr. Merino Llorens, José Luís

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

## Professors

### Dr. Campuzano, Oscar

- ♦ PhD in Medicine
- ♦ Post-doctoral researcher, Cardiovascular Genetic Center (University of Girona) Institute of Biomedical Research of Salamanca (IBSAL)

### Dr. Castrejón, Sergio

- ♦ Cardiologist. Electrophysiologist SEC/EHRA
- ♦ Head of the Arrhythmia and Robotized Electrophysiology Unit. La Paz Hospital

### Dr. Centeno, Miriam

- ♦ Pediatric Cardiologist in Gregorio Marañón Hospital

### Dr. Deiros Bronte, Lucía

- ♦ Pediatric and Fetal Cardiologist La Paz University Hospital

### Dr. Franco, Eduardo

- ♦ PhD in Medicine
- ♦ Specialist Cardiologist in Electrophysiology and Arrhythmias at Ramón and Cajal University Hospital.

### Dr. García, Irene

- ♦ Faculty Area Specialist in Pediatrics / Children's Cardiology and Congenital Cardiopathies in the University Hospital Complex of A Coruña

### Dr. Merino, Jose Luis

- ♦ Head of the Arrhythmia and Robotized Electrophysiology Unit.
- ♦ La Paz University Hospital

### Dr. Ortega, Marta

- ♦ Pediatric Cardiology Attending Physician Arrhythmia Department, La Paz University Hospital

### Dr. Peinado, Rafael

- ♦ Head of the Arrhythmias and Electrophysiology Department
- ♦ Associate Professor of Medicine at La Paz University Hospital

### Dr. Rey, Juvenal

- ♦ Pediatric Cardiology and Congenital Cardiopathies Surgeon
- ♦ La Paz University Hospital

### Dr. Roses, Ferrán

- ♦ Pediatric Cardiologist
- ♦ Vall d'Hebron University Hospital Barcelona

04

# Structure and Content

The structure of the contents has been designed by a team of professionals who recognise the implications of training in daily medical praxis for Arrhythmias in Fetal and Pediatric Age Groups, aware of the relevance of current training to treat patients with cardiac pathologies and who are committed to quality teaching using new educational technologies.







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*This Postgraduate Certificate in Update on Arrhythmias in Fetal and Pediatric Age Groups contains the most complete and up-to-date scientific program on the market”*

## Module 1. Arrhythmias in Fetal and Pediatric Age Groups

- 1.1. General Basis
  - 1.1.1. Cellular and Cardiac Electrophysiology
  - 1.1.2. Anatomy and Embryology of the Conduction System
  - 1.1.3. Normal and Pathological ECG
  - 1.1.4. Changes During Development
  - 1.1.5. The Normal Patient
  - 1.1.6. With a Structurally Abnormal Heart
- 1.2. Canalopathies
  - 1.2.1. Pharmacological Tests
  - 1.2.2. Genetics
- 1.3. Preexcitation Clinical Management
- 1.4. Atrial and Supraventricular Tachycardias
- 1.5. Ventricular Tachycardias
- 1.6. Bradycardias and Blockages
- 1.7. Invasive EPS, Endocavitary Recordings
  - 1.7.1. Equipment
  - 1.7.2. Electroanatomical Mapping
  - 1.7.3. RF Ablation
  - 1.7.4. Cryoablation
- 1.8. Fetal Arrhythmias
- 1.9. Syncope
- 1.10. Sudden Death
- 1.11. Antiarrhythmic Pharmacology
- 1.12. Temporary and Definitive Stimulation ICD
- 1.13. Perioperative Arrhythmias







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

05

# Methodology

This training program provides you with a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning***.

This teaching system is used 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 Re-learning, 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

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. Gervas, 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.

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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 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.
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.



## 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-the-art software to facilitate immersive learning.*



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 the teaching materials are specifically created for the course, by specialists who teach on 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

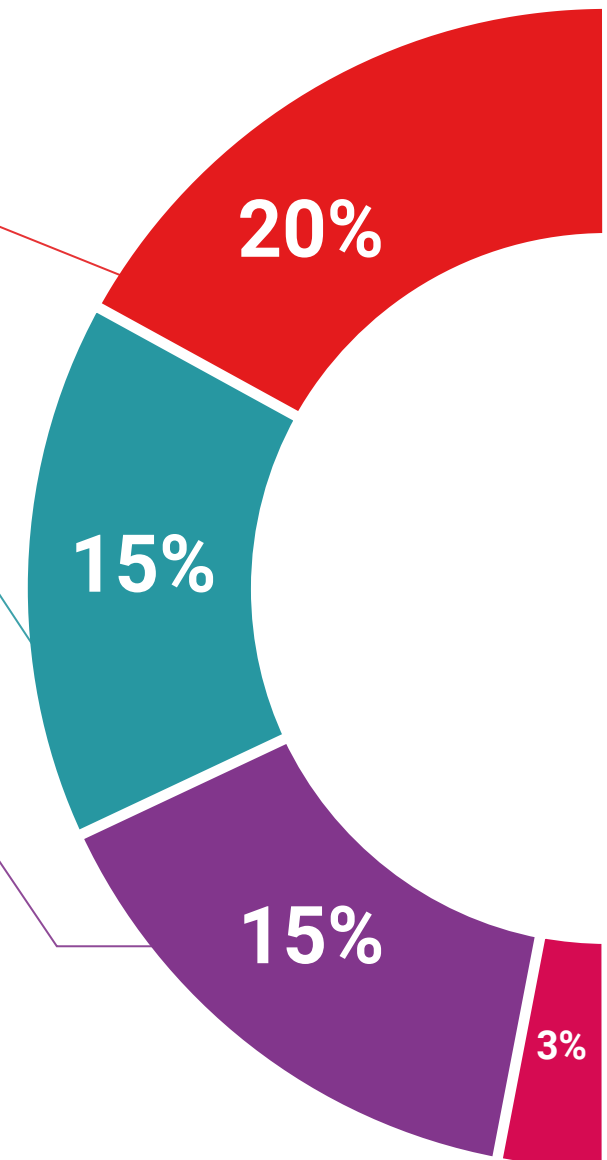
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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.  
Learning from an expert strengthens knowledge and memory, and generates confidence in our difficult future decisions.



**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.



# 06 Certificate

The Postgraduate Certificate in Update on Arrhythmias in Fetal and Pediatric Age Groups guarantees you, in addition to the most rigorous and up-to-date training, access to a Postgraduate Certificate issued by Tech Global University.



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*Successfully complete this training and receive your diploma without the hassle of travel or paperwork”*



This program will allow you to obtain your **Postgraduate Certificate in Update on Arrhythmias in Fetal and Pediatric Age Groups** 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** title 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 Certificate in Update on Arrhythmias in Fetal and Pediatric Age Groups**

Modality: **online**

Duration: **12 weeks**

Accreditation: **12 ECTS**





## Postgraduate Certificate

Update on Arrhythmias in Fetal and Pediatric Age Groups

- » Modality: online
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- » Certificate: Tech Global University
- » Credits: 8 ECTS
- » Schedule: at your own pace
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# Postgraduate Certificate

## Update on Arrhythmias in Fetal and Pediatric Age Groups

