

# Postgraduate Certificate

## Pediatric Orthopedics





## Postgraduate Certificate Pediatric Orthopedics

Course Modality: **Online**

Duration: **10 weeks**

Endorsed by: **TECH Technological University**

**8 ECTS Credits**

Hours **200 hours.**

Website: [www.techtute.com/medicine/postgraduate-certificate/pediatric-orthopedics](http://www.techtute.com/medicine/postgraduate-certificate/pediatric-orthopedics)

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01

# Introduction

Orthopedic surgery has undergone spectacular growth in recent years, and its evolution in children's patients requires the specialist to be constantly updated on the latest specific procedures. This Postgraduate Certificate is designed to help the traumatologist stay updated on the advances in orthopedics in the pediatric patient in a practical way through the latest educational technology.

*The constant updating of the traumatologist is decisive for decision making in orthopedic procedures in children.*



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*Update your knowledge in Pediatric Orthopedic Surgery through this program, where you will find the best teaching material, with real clinical cases. Learn here about the latest advances in orthopedics in the pediatric age to be able to perform quality surgical practice"*

During the growth and development of the child, orthopedic aspects susceptible to be consulted and treated conservatively or surgically may appear. Pediatric Orthopedic Surgery is the part of orthopedic surgery and traumatology specialized in the management of musculoskeletal disorders in children and adolescents and has undergone spectacular growth in recent years, highlighting the findings related to the materials used in prostheses, such as the new models of porous titanium, or the new osteosynthesis plates for the treatment of fractures.

The amount of information is increasing exponentially every year and it has become impossible to keep up to date in all areas of the specialty unless you have a team of experts to work for you: an intelligent differentiation of information. In addition, the current tendency to subspecialize makes it more difficult to keep up to date in fields that are not usually dealt with.

This Postgraduate Certificate offers a detailed review of the most relevant advances in pediatric orthopedics from an eminently practical point of view, to update the specialist through the latest educational technology.

This **Postgraduate Certificate in Pediatric Orthopedics** is the most comprehensive and up-to-date scientific program on the market. The most important features of the University Course are:

- ♦ Contains clinical cases presented by experts. 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.
- ♦ Diagnostic and therapeutic innovations in treating pediatric patients with musculoskeletal diseases.
- ♦ Presentation of practical workshops on surgical and orthopedic procedures in children.
- ♦ Video lessons on different pathologies and how to approach them.
- ♦ Algorithm-based interactive learning system for decision-making in the presented clinical situations.
- ♦ 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.



*Scientific evidence increases the quality of surgical practice. Keeping up-to-date is key to providing better care to pediatric patients”*

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*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 on pediatric orthopedics, you will obtain a postgraduate certificate from TECH Technological University"*

The teaching staff includes renowned specialists in traumatologic surgery, who bring their experience to this training program, as well as specialists from leading scientific societies.

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 University Course. For this reason, you will be assisted by an innovative, interactive video system created by renowned and experienced experts in orthopedic surgery with extensive teaching experience.

*Don't miss the opportunity to update your knowledge in orthopedic intervention for pediatric patients.*

*This Postgraduate Certificate offers training in simulated environments, which provides an immersive learning experience designed to train for real-life situations.*



# 02

# Objectives

This program is aimed at reviewing the main aspects of the orthopedic approach in children, based on scientific evidence and the experience of renowned professionals in the surgical field.





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



## General Objective

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- Update the knowledge of the orthopedic surgeon in orthopedic surgery in pediatric patients, to identify the main signs and symptoms of the pathology and to establish the appropriate therapeutic indication based on the latest scientific evidence.



## Specific Objectives

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- Define the ethical aspects of Orthopedic Surgery and Traumatology (OST).
- Apply the criteria of Evidence-Based Medicine when choosing the treatment in OST.
- Update knowledge on antibiotic prophylaxis in OST.
- Correctly apply the thromboprophylaxis guidelines in OST.
- Update knowledge of blood-saving policies in OST.
- Distinguish the different applications of cell cultures in Orthopedics and Traumatology.
- Explain in which cases it is correct to use BMPs in Orthopedics and Traumatology.
- Interpret the clinical evidence on platelet-rich plasma in tendon and joint pathology.
- Recognize the biopsychosocial model in musculoskeletal pathology.
- Classify and update performance measurement systems in OST.
- Correctly interpret results in interventional radiology of musculoskeletal pathologies.
- Recognize the current concepts of neurophysiology in orthopedic surgery.



*Seize the opportunity and take the step to get up-to-date on the most important aspects of Pediatric Orthopedics.*



# 04

# Course Management

The program's teaching staff includes leading traumatologists in treating pediatric patients, who bring the experience of their work to this training. Additionally, other recognized specialists participate in its design and preparation, which means that the program is developed in an interdisciplinary manner.



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*Learn from leading professionals the latest advances in orthopedic procedures in children”*

## Management



### Dr. Doménech Fernández, Julio.

- ♦ Degree in Medicine from the University of Navarra.
- ♦ PhD in Medicine from the University of Valencia.
- ♦ Specialist in Orthopedic Surgery and Traumatology at the Ramón y Cajal Hospital, Madrid.
- ♦ Professor in the Faculty of Medicine at Cardenal Herrera University CEU, Valencia.
- ♦ Master's Degree in Healthcare from the University of Valencia.
- ♦ Head of Service of the Arnau de Vilanova Hospital in Valencia and Liria Hospital.
- ♦ Pro Academia Award of the European Society of NMR.
- ♦ Two-time winner of the Best Paper Award from the Spine Society of Europe Two-time winner of the Spanish Spine Society Award (GEER).
- ♦ 2nd Prize Ángel Herrera Research Award from the San Pablo CEU Foundation, member of the Board of Directors of the Spanish Society for Research in Orthopedic Surgery (INVESCOT).
- ♦ Head researcher in several research projects with competitive funding from public agencies.

## Coordinator

### Dr. Doménech Fernández, Pedro

- ♦ Specialist in Orthopedic Surgery and Traumatology. Alicante University General Hospital.

## Professors

### Dr. Collado Gastalver, Diego

- ♦ Assistant physician of the OST service. Sant Joan de Déu hospital, Barcelona.

### Dr. Comte Verdaguer, Antonio

- ♦ Assistant physician of the OST service. Sant Joan de Déu hospital, Barcelona.

**Dr. De Sena de Cabo, Lydia**

- ♦ Assistant physician of the OST service. Sant Joan de Déu hospital, Barcelona.

**Dr. Doménech Fernández, Pedro**

- ♦ Specialist in Orthopedic Surgery and Traumatology. Alicante University General Hospital.

**Dr. Knorr, Jorge**

- ♦ Head of the OST Service. Sant Joan de Déu hospital. Barcelona:

**Dr. Soldado Carrera, Francisco**

- ♦ Head of the Upper Limb Unit at Sant Joan de Déu Hospital

**Dr. Torner Rubies, Ferrán**

- ♦ Head of the Musculoskeletal Tumor Unit at Sant Joan de Déu Hospital.

**Dr. Ullot Font, Rosendo**

- ♦ OST coordinator. Sant Joan de Déu hospital, Barcelona.



05

# Structure and Content

The structure of the contents has been designed by a team of professionals who recognise the implications of training in the practice of pediatric orthopedic surgery, aware of the relevance of current training to treat the patient with osteoarticular issues, and are committed to quality teaching using new educational technologies.



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*This Postgraduate Certificate in Pediatric Orthopedics has the most comprehensive and updated scientific program on the market”*

### Module 1. General aspects

- 1.1. Evidence-Based Medicine For Choosing the Correct Treatment in Orthopedic Surgery and Traumatology.
- 1.2. Bone Bank.
- 1.3. Update on Antibiotic Prophylaxis in Orthopedic Surgery and Traumatology.
- 1.4. Thromboprophylaxis in Orthopedic Surgery and Traumatology.
- 1.5. Update on Blood-Saving Policies in Orthopedic Surgery and Traumatology.
- 1.6. Applications of Cell Cultures in Orthopedics and Traumatology.
- 1.7. Use of BMP in Orthopedics and Traumatology.
- 1.8. Clinical Evidence on Platelet-Rich Plasma in Tendon and Joint Pathology.
- 1.9. Update in the Management of a Polytraumatized Patient.
- 1.10. Biopsychosocial Model in Musculoskeletal Pathology.
- 1.11. Update on Results Measurement in Orthopedic Surgery and Traumatology.
- 1.12. Interventional Radiology in Musculoskeletal Pathology.
- 1.13. Current Concepts of Neurophysiology in Orthopedic Surgery.



## Module 2. Child Orthopedics

- 2.1. Arthroscopic Techniques in Children.
- 2.2. Musculoskeletal Tumors in Children.
- 2.3. Clubfoot and Congenital Foot Pathology.
- 2.4. Spondylolisthesis in Childhood.
- 2.5. Surgery in Childhood Paralysis.
- 2.6. Early Onset Scoliosis.

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



# 06

# Methodology

Our **Postgraduate Certificate in Pediatric Orthopedics** offers you an innovative method to strengthen your clinical skills based on the study of clinical cases and content in a cyclical way. This method has been the most widely used learning system by the most prestigious medicine schools in the world and by relevant publications such as the New England Journal of Medicine.





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*This type of teaching-learning encourages curiosity and skill development, as well as allowing the doctor to feel like an active part of the process”*

In a given situation, what would you do? Throughout these weeks, the doctor will face multiple simulated clinical cases based on real patients in which he/she will have to investigate, establish hypotheses and finally, resolve the situation. This method makes doctors learn better as they accept more responsibility and get closer to the reality of their professional future.



*Did you know that this method was developed in 1912 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"*



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 the physician's professional practice.

*It is a technique that develops critical skills and prepares the doctor to make decisions, defend their arguments, and contrast opinions.*

According to Reynolds, there are four fundamental reasons that support the effectiveness of the case method applicable to Medicine:

**01**

**Doctors develop their mental capacities better by evaluating real situations and applying concepts.**

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**02**

**Doctors will be better prepared for the development of their professional activity.**

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**03**

**Ideas and concepts are better assimilated when they are analyzed in situations that have arisen from reality.**

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**04**

**Doctors voluntarily dedicate more time to work because they find it more interesting to work with cases.**

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## Re-learning Methodology

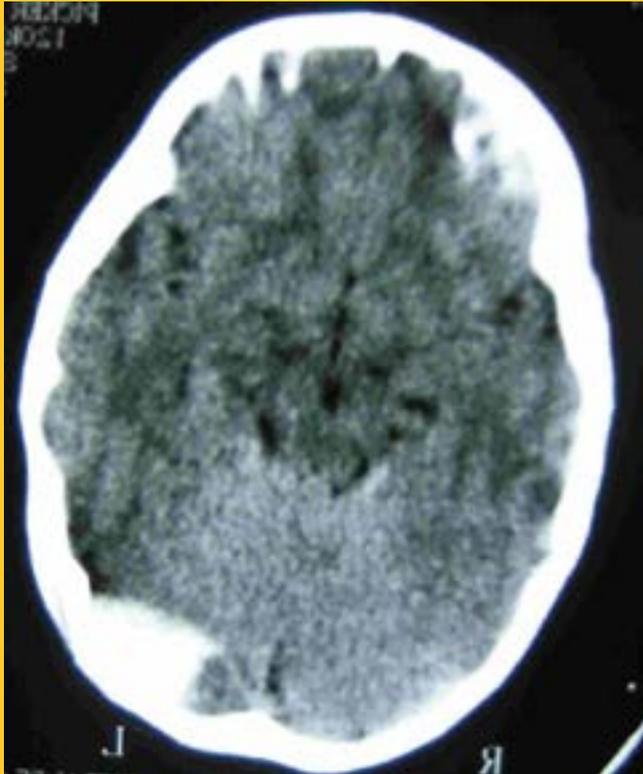


*The physician will learn through real cases and by solving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning”*

*...we enhance them with the best 100% online teaching method: Relearning...*

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 8 different elements in each lesson, which represent a revolution with respect to simply studying and analyzing cases.





This methodology, at the forefront of world teaching, is called Re-learning. Our school is the first in Spanish-speaking countries licensed to use this successful method, having achieved in 2015 to improve the overall satisfaction levels (teaching quality, quality of materials, structure of the Postgraduate Certificate, objectives...) of doctors who complete the courses with respect to the indicators of the best online university in Spanish-speaking countries.

*The overall score obtained by our learning system is 8.01, according to the highest international standards.*

In our **Postgraduate Certificate in Pediatric Orthopedics** learning is not a linear process, but happens in a spiral (we learn-unlearn (forget) and relearn); that is why we combine each of these elements in a concentric way.

With this methodology we have trained more than 40,000 doctors with unprecedented success, in fields such as pediatrics, surgery, infectious diseases, hepatology, etc. All this in a highly demanding environment, with a university student body with a high socioeconomic profile and an average age of 42 years.

*...and all this with the best learning materials at the forefront of technology and pedagogy...*

In this Postgraduate Certificate you will have access to the best educational material, prepared with you in mind:



### Study Material

After a complex production process, we transform the best content into high-quality educational and audiovisual multimedia. We select the best syllabus and make it available to you. Everything you need to acquire in-depth knowledge of a discipline, from A to Z. Lessons written and chosen by specialists in each of the disciplines.



### Surgical techniques and clinical procedures on video

We bring you closer to the newest techniques, to the latest scientific advances, to the forefront of doctor news. 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.



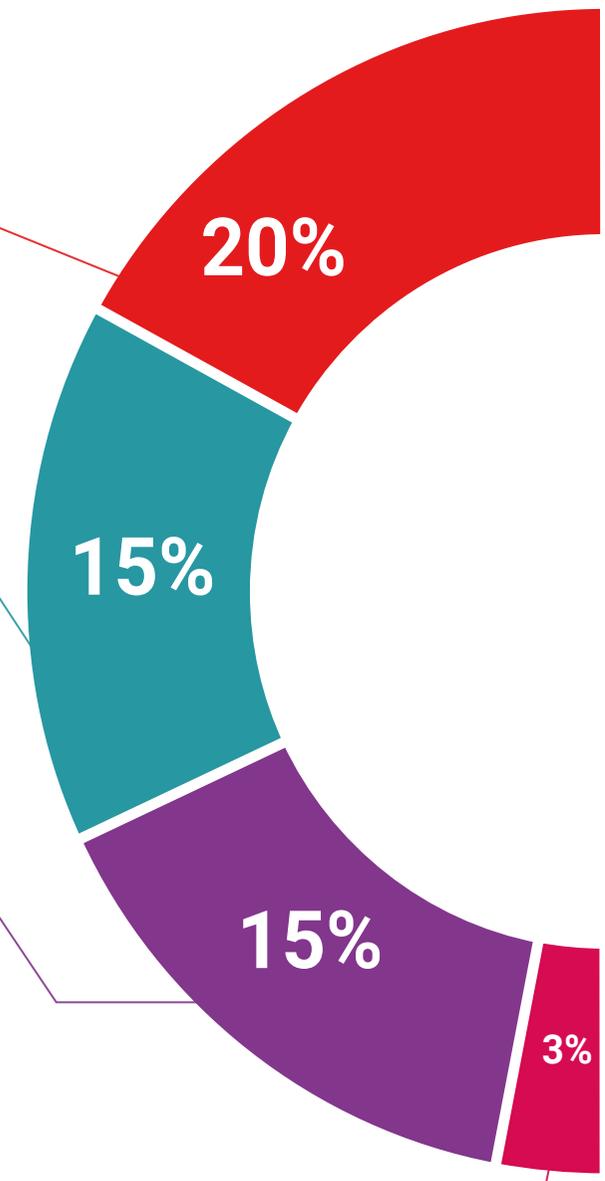
### Interactive Summaries

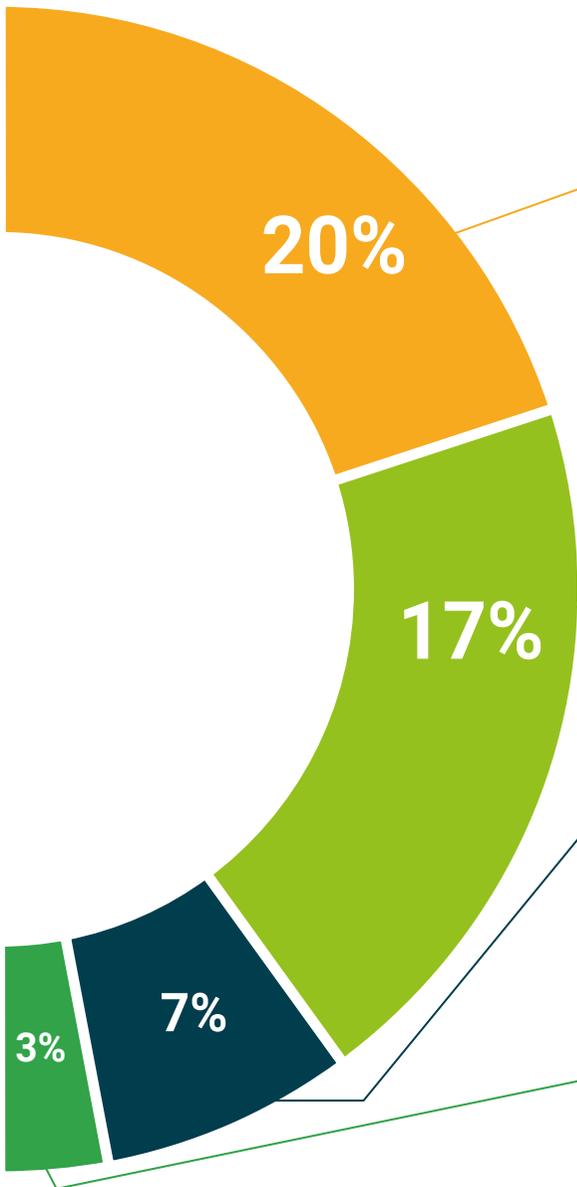
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge. This unique training system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



### 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**

Through the narratives of expert professionals, it is possible to acquire a high degree of understanding of the most frequent problematic situations. The professional's healthcare practice is not alien to the context in which it takes place. If we want to train ourselves to improve our professional practice, this training must be situated within the context in which it takes place.



**Testing & Re-Testing**

We periodically evaluate and re-evaluate your knowledge throughout this program through activities and evaluative exercises.



**Classes**

There is scientific evidence suggesting that observing third-party experts can be useful. Learning from an expert strengthens knowledge and recall, and generates confidence in our future difficult decisions



**Quick Action Guides**

One of the most important functions of our team is to select those contents considered essential and present them in the form of worksheets or quick action guides to facilitate their understanding.



# 06

# Certificate

The **Postgraduate Certificate in Pediatric Orthopedics** guarantees, in addition to the most rigorous and updated training, access to a Postgraduate Certificate issued by **TECH Technological University**.





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

This Postgraduate Certificate in Pediatric Orthopedics is the most comprehensive and up-to-date scientific program on the market.

After the student has passed the evaluations, they will receive by mail with acknowledgment of receipt their corresponding **Postgraduate Certificate** issued by TECH Technological University.

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

Title: Postgraduate Certificate in Pediatric Orthopedics

ECTS: 8

Nº Hours: 200

Scientifically Endorsed by the Spanish Association for Research in Orthopedic Surgery and Traumatology



\*Apostille Convention. In the event that the student wishes to have their paper diploma Apostilled, TECH EDUCATION will make the necessary arrangements to obtain it at an additional cost of €140 plus shipping costs of the Apostilled diploma.

health future  
confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present quality  
development languages  
virtual classroom



Postgraduate Certificate  
Pediatric Orthopedics

Course Modality: Online

Duration: 10 weeks

Endorsed by: TECH Technological University

8 ECTS Credits

Hours 200 hours.

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