

# Postgraduate Certificate

## Pediatric Spine Orthopedics





## Postgraduate Certificate

### Pediatric Spine Orthopedics

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

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

# Index

01

Introduction

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*p. 4*

02

Objectives

---

*p. 8*

03

Course Management

---

*p. 12*

04

Structure and Content

---

*p. 18*

05

Methodology

---

*p. 22*

06

Certificate

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*p. 30*

# 01 Introduction

Spinal pathology in children is one of the main causes of consultations, not only due to pain but also to other causes such as infectious diseases, deformity, etc. This is why studying it is essential. Knowledge of the pathology of the spine allows a correct management in consultation, emergency and hospitalization. Pediatricians and surgeons must study the pathology of the infant spine to perfect its diagnosis and correct treatment.





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*This Postgraduate Certificate is a high-level training that will allow you to achieve professional success”*

Adapting to our times, in Pediatric Orthopedics there is no high-level online training that makes it possible, in our language, to stay at the forefront of updates and access to the fundamental concepts of our speciality.

Although there are only a few one-off in-person courses, the possibility of having access to specialists from a top national and international hospital, with great experience in complex processes of Pediatric Orthopedics, is a unique opportunity today.

This course offers the physician up-to-date training on the diagnosis and treatment of different entities related to the spine in the pediatric patient, such as a common cervical pathology such as torticollis or others such as atlantoaxial instability; those related to the lumbar region, secondary to spondylolisthesis or disc herniations; deformities, such as adolescent idiopathic scoliosis which is one of the main causes of consultation in both primary and specialized care; tumors, malignant and benign; and finally fractures.

The syllabus covers the main topics of current Pediatric Orthopedics in such a way that whoever masters them will be prepared to work in this field in any hospital in the world. Therefore, it is not just another diploma in your backpack, but a real learning tool to approach the topics of the specialty in a modern, objective way and with the ability to make a judgment based on today's most cutting-edge literature.

This **Postgraduate Certificate in Pediatric Spine Orthopedics** is the most comprehensive and up-to-date educational program on the market. The most important features of the program include:

- ♦ Developing practical cases presented by experts in Pediatric Orthopedics
- ♦ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional development.
- ♦ The latest developments in Pediatric Orthopedics.
- ♦ Practical exercises where self-assessment can be used to improve learning.
- ♦ Special emphasis on innovative methodologies in Pediatric Orthopedics.
- ♦ 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



*If you want to improve your daily practice, don't hesitate to broaden your knowledge with this intensive training"*

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*This Postgraduate Certificate may be the best investment you can make when selecting a refresher program, for two reasons: in addition to updating your knowledge in pediatric orthopedics, you will obtain a Postgraduate Certificate from TECH Global University"*

The teaching staff includes professionals from the field of Pediatric Orthopedics, who bring their experience to this training, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the physician with situated and contextual learning, i.e., a simulated environment that will provide immersive training that is programmed to train students in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the program. For this purpose, the medical specialist in pediatric orthopedics will be assisted by an innovative interactive video system created by renowned and experienced experts in the field of Pediatric Orthopedics.

*You will be prepared by professionals with extensive experience in pediatric orthopedics, who will guide you throughout the educational process.*

*This 100% online Postgraduate Certificate will allow you to combine your studies with your professional work while increasing your knowledge in this field.*



# 02 Objectives

The **Postgraduate Certificate in Pediatric Spine Orthopedics** is aimed at facilitating the performance of top tier professionals with the latest advances and most innovative treatments in the sector.





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*To become one of the best professionals specialized in pediatric orthopedics you can't miss the opportunity to study this Postgraduate Certificate with us"*



## General Objectives

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- Describe the main aspects of spinal pathology in pediatric patients
- Review advances and update knowledge on the management of spinal pathologies in pediatric patients
- Develop the necessary skills to appropriately diagnose and treat pediatric patients with spinal diseases





## Specific Objectives

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- ◆ Learn the characteristics of the different pathologies around the spine in pediatric patients
- ◆ Learn the most frequent causes of spine deformity
- ◆ Manage the urgency of pediatric patients with spinal pathology, torticollis, atlantoaxial instability
- ◆ Long-term management of patients diagnosed with spinal deformity during infancy
- ◆ Carry out long-term management of patients diagnosed with tumors / fractures during infancy
- ◆ Suspect and learn the management of tumors such as osteoid osteoma, aneurysmal bone cyst, etc.
- ◆ Develop a correct strategy in the differential diagnosis of pathologies that cause spinal pain in pediatric patients
- ◆ Perform the necessary tests to diagnose the different entities

# 03 Course Management

The program includes in its teaching staff renowned experts in Pediatric Orthopedics who contribute their work experience to this training. Additionally, other recognized experts participate in its design and preparation, completing the program in an interdisciplinary manner.



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*Leading professionals in the field have come together to teach you the latest advances in Pediatric Orthopedics”*

## International Guest Director

Mininder Kocher is an internationally prominent pediatric orthopedic surgeon. His professional merits and results have been recognized with numerous awards, including the Kappa Delta award, considered the “Nobel Prize” in this surgical field. In addition, he practices as a specialist at Harvard Medical School.

The scientist also holds the program of Chief of the Division of Sports Medicine at Boston Children’s Hospital. From that entity, he deals with different complex pathologies such as joint injuries, Osteomyelitis, Hip Labral Rupture, Osteochondritis Dissecans or Pigmented Villonodular Synovitis, among others. His innovations in these areas of Orthopedic Medicine are reflected in more than 150 academic articles published in first impact indexed journals. He is also the author of more than 100 chapters in books and is the sole author of 4 books. His texts have become an indispensable reference for the medical community, highlighting his undeniable contributions to the field.

Dr. Mininder Kocher’s impact extends beyond the borders of the United States, as he serves as a consultant and advisor to hospitals and universities in more than 20 countries. Moreover, he has been listed as one of the top surgeons in the world on platforms such as US News & World Report, Castle Connelly, Top Doctors and Boston Magazine. Likewise, his skills and experiences have been the subject of attention in reference media such as the New York Times, Wall Street Journal, USA Today, Boston Globe, Chicago Tribune, Scientific American, among others.

Especially committed to the rehabilitation of children and adolescent athletes, his exhaustive work in this area has been decorated with awards as prominent as the Von Meyer, Richard Kilfoyle, Angela Kuo or Arthur Heune awards.



## Dr. Kocher, Mininder

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- Orthopaedic Surgery Specialist at Harvard Medical School
- M.D. from Harvard University
- Board Certified in General Practice by the American Board of Orthopaedic Surgery
- Board Certified in Sports Medicine by the American Board of Orthopedic Surgery
- Member of: Board of Directors of the American Academy of Orthopaedic Surgeons, American Orthopaedic Society for Sports Medicine, Pediatric Orthopaedic Society of North America, Herodicus Society, International Pediatric Orthopaedic Think Tank

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

## Management



### Dr. Palazón Quevedo, Ángel

- Head of the Neurology Service
- Medical specialist in Orthopedic Surgery and Traumatology with wide and recognized professional experience in the field of O.S.T. for children and adults.
- Degree in Medicine and Surgery from the Complutense University of Madrid and Medical Specialist in O.S.T. via MIR at the San Juan Clinical University Hospital (Alicante-Valencian Community)
- Permanent member of the SECOT since 1999.
- Member of the SEOP since 2014.
- Collaborator with the SECOT board of directors since 2004-06 for the interactive dissemination of the speciality.

## Professors

### Dr. Egea Gámez, Rosa María

- ♦ Attending Physician of the Orthopedics and Traumatology Department of the Niño Jesús Pediatric University Hospital
- ♦ Specialist in Orthopedic and Trauma Surgery
- ♦ Degree in Medicine and Surgery from the Complutense University of Madrid

### Dr. Martínez Álvarez, Sergio

- ♦ Attending Physician of the Orthopedics and Traumatology Department of the Niño Jesús Pediatric University Hospital
- ♦ Head of the Upper Limb and Pediatric Hand Unit
- ♦ Specialist in Pediatric Orthopedic Surgery and Traumatology. La Princesa University Hospital

### Dr. Ramírez Barragán, Ana

- ♦ Attending physician at the Traumatology and Orthopedic Surgery Service of the Niño Jesús Hospital
- ♦ PhD in Medicine from the University of Salamanca
- ♦ Degree in Medicine and Surgery from the Complutense University of Madrid
- ♦ Specialist in Traumatology and Orthopedic Surgery
- ♦ Member of the Spanish Society of Pediatric Orthopedics (SEOP).
- ♦ Member of the Spanish Society of Orthopedic Surgery and Traumatology (SECOT).



**Dr. José A. Morcuende**

- ◆ Board Re-Certification, American Board of Orthopaedic Surgery
- ◆ MD - Autonomous University, Madrid, Spain
- ◆ Degree in Medicine and Surgery from the Complutense University of Madrid
- ◆ Fellow (Pediatric/Orthopaedics) - Jiménez Díaz Foundation, Madrid, Spain
- ◆ Resident (Orthopaedics) - Department of Orthopaedic Surgery, University of Iowa Hospitals and Clinics, Iowa City, Iowa



*This will provide key training to advance your career."*

# 04

# Structure and Content

The structure of the content has been designed by the best professionals in the Pediatric Orthopedics sector, with extensive experience and recognized prestige in the profession, backed by the volume of cases reviewed, studied, and diagnosed, and with extensive knowledge of new technologies applied to orthopedics.





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

## Module 1. Spine

- 1.1. Surgical Anatomy and Approaches to the Spine
- 1.2. Cervical Spine Pathology
  - 1.2.1. Congenital Torticollis
    - 1.2.1.1. Muscular Congenital Torticollis
    - 1.2.1.2. Klippel-Feil Syndrome
  - 1.2.2. Acquired Torticollis
    - 1.2.2.1. Atlantoaxial Dislocation
    - 1.2.2.2. Other Causes: Inflammatory, Infectious, Sandifer's Syndrome
  - 1.2.3. Cervical Instability: Os Odontoideo
- 1.3. Spine Pathology
  - 1.3.1. Spondylolisthesis
  - 1.3.2. Juvenile Herniated Disc
  - 1.3.3. Scoliosis
  - 1.3.4. Early Onset
  - 1.3.5. Teenage Idiopathic Scoliosis
  - 1.3.6. Congenital Scoliosis
  - 1.3.7. Neuromuscular Scoliosis
  - 1.3.8. Early Onset Scoliosis
  - 1.3.9. Congenital Scoliosis
  - 1.3.10. Neuromuscular Scoliosis
  - 1.3.11. Spine Deformity in Other Syndromes





- 1.4. Spondylolisthesis
- 1.5. Alterations in the Sagittal Plane: Hyperkyphosis, Hyperlordosis
- 1.6. Back Pain in the Pediatric Age
- 1.7. Spinal Tumors
- 1.8. The Main Spine Fractures in Children

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 Harvard 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.*

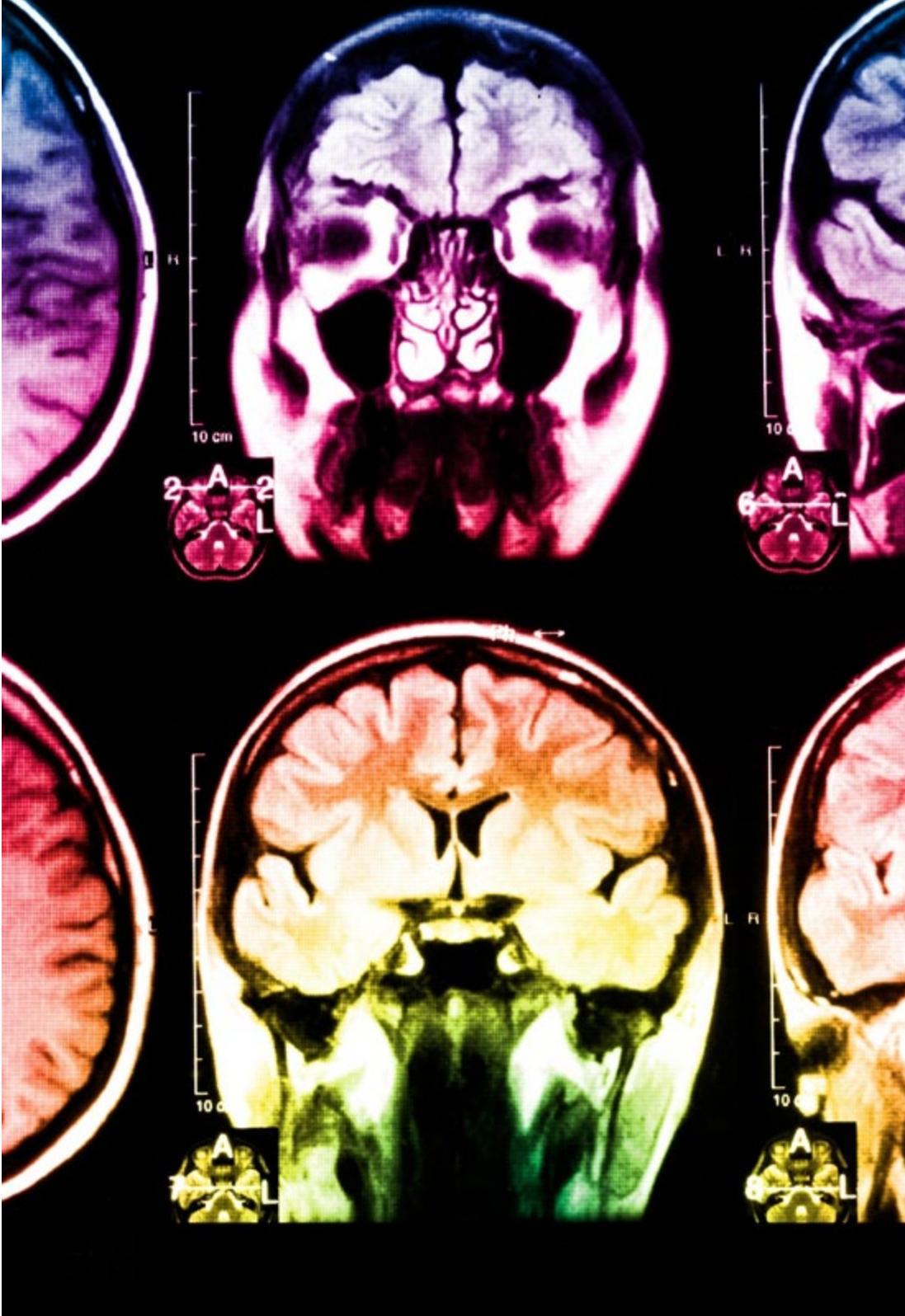
At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

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 adapted in 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

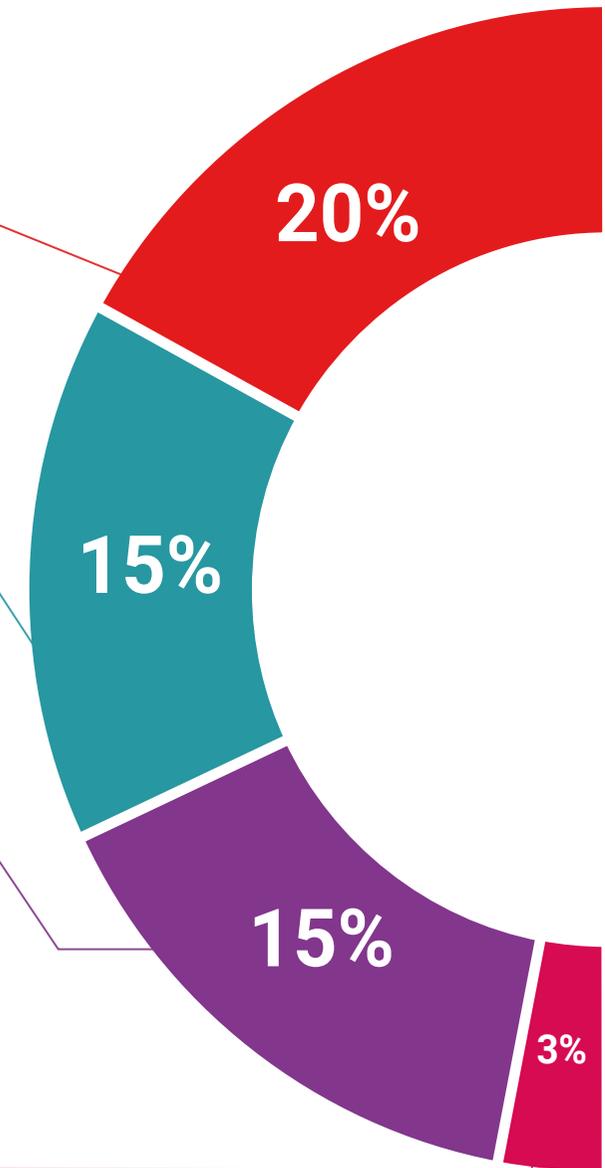
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

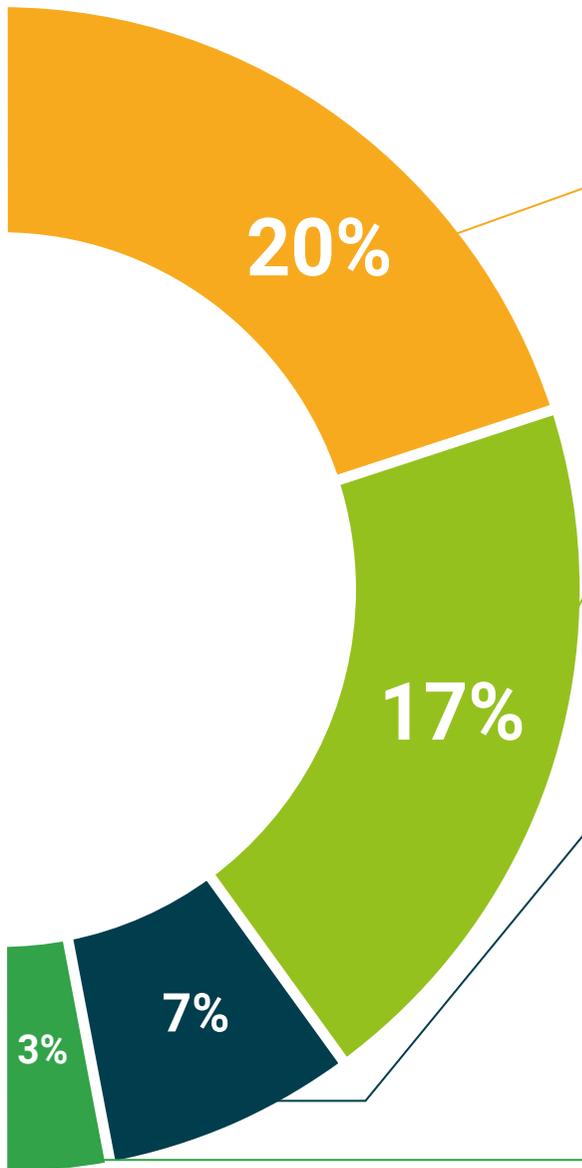
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### 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 Pediatric Spine Orthopedics** guarantees you, in addition to the most accurate and up-to-date training, access to a Postgraduate Certificate issued by **TECH Global University**.



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*Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork”*

This program will allow you to obtain your **Postgraduate Certificate in Pediatric Spine Orthopedics** 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 Pediatric Spine Orthopedics**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 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..

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



## Postgraduate Certificate

Pediatric Spine

Orthopedics

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- » Schedule: at your own pace
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## Pediatric Spine Orthopedics

