

# Postgraduate Diploma

## Pediatric Lower Limb Orthopedics





## Postgraduate Diploma

### Pediatric Lower Limb Orthopedics

Course Modality: **Online**

Duration: **6 months.**

Certificate: **TECH Technological University**

Official N° of hours: **450 h.**

Website: [www.techtute.com/in/physiotherapy/postgraduate-diploma/postgraduate-diploma-pediatric-lower-limb-orthopedics](http://www.techtute.com/in/physiotherapy/postgraduate-diploma/postgraduate-diploma-pediatric-lower-limb-orthopedics)

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# 01

# Introduction

With this high-level education the student will be able to distinguish between a pathological development and a typical one, this will allow detecting when there is a problem and to set objectives following the typical development of children in each of the ages and evolutionary stages. Throughout this specialization, specific scales such as the GMFM, the MABC-2, the Bayley and Peabody motor development scales, and the ASEBA and Strengths and Difficulties Questionnaire will be broken down. In addition, the impact of a very widespread health problem worldwide and with increasing incidence in recent years will be discussed: childhood obesity. Finally, we will explain how to search the scientific literature to be able to base treatment on evidence.





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*With the expertise of industry professionals who will teach you based on the reality of the sector in a contextual and realistic learning"*

The field of Physiotherapy that seeks to promote the health and well-being of children, advising, treating and caring for those infants who present some general problem in their development or a movement disorder, which may be caused by a congenital or acquired disease. This field is also essential to prevent future ailments in infants who need a follow-up to ensure their proper development. Therefore, the Postgraduate Diploma focuses on building the skills needed by the professional to specialize in this field, learning to address some of the most common pathologies in childhood and the adaptability of different techniques and treatments.

Throughout this education, the student will study in depth the normal and pathological development in children, from intrauterine development, through psychomotor development from 0 to 3 years, the development of play, laterality, cognitive and verbal development. It will also address the main valuation methods.

The program will present different scales for the evaluation of gait, muscle tone, upper limb activity, musculoskeletal and hip assessment, fine and gross motor skills. It will also address more pioneering techniques that are emerging in early care such as animal therapy, the importance of pre- and post-natal stimulation, MHELPS, virtual reality.

The syllabus of this complete program covers the main topics of current Children's 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.

With this online program, students can organize their time and pace of learning, adapting it to their schedules, in addition to being able to access the contents from any computer or mobile device.

This **Postgraduate Diploma in Pediatric Lower Limb Orthopedics** contains the most complete and up-to-date scientific program on the market. The most important features 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



*This Postgraduate Certificate 100% online and will enable you to combine your studies while increasing your knowledge in this field"*

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*Physiotherapists at the highest level must update their knowledge with training courses such as this one, where they will find the main novelties in the field"*

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.

Its multimedia content, developed with the latest educational technology, will allow physiotherapists situated and contextual learning, i.e. a simulated environment that will provide immersive Postgraduate Diploma programmed to train for 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, the physical therapist specialized in Pediatric Orthopedics will have the help of an innovative interactive video system made by recognized experts in the field of Pediatric Orthopedics and with great experience.

*To become one of the best physiotherapists specialized in Pediatric Orthopedics, you cannot miss the opportunity to study this program with us.*

*You will specialize in the hands of professionals with extensive experience in Pediatric Orthopedics, who will guide you throughout the learning process.*

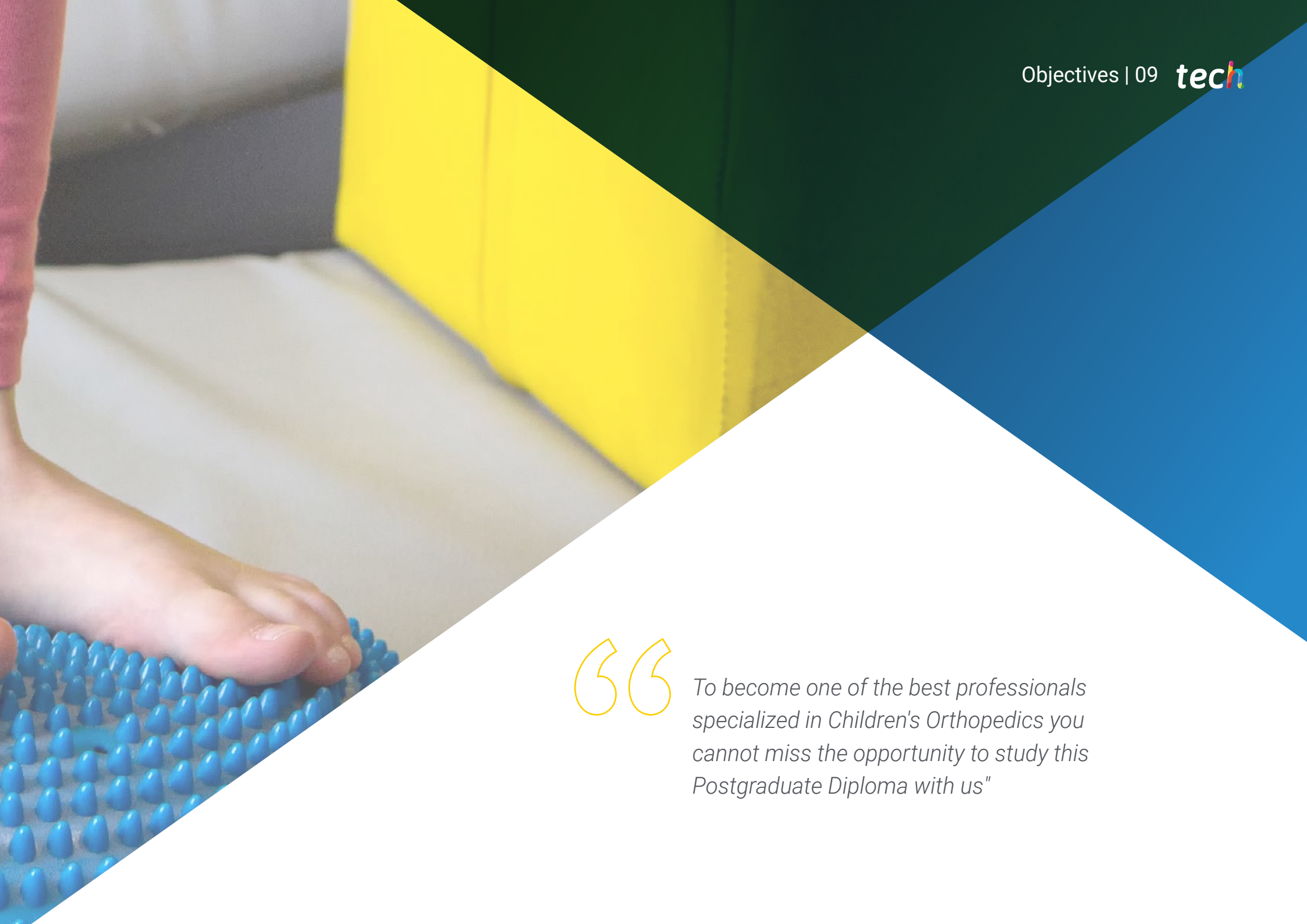


# 02 Objectives

The Pediatric Lower Limb Orthopedics program is designed to facilitate the professional's performance at the highest academic level, with this intensive education that includes the latest advances and most innovative treatments in the field. After passing the program evaluations, the physiotherapist will have acquired the professional competencies necessary for a quality and up-to-date practice based on the most innovative didactic methodology.







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*To become one of the best professionals specialized in Children's Orthopedics you cannot miss the opportunity to study this Postgraduate Diploma with us"*



## General Objectives

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- ♦ Recognize and manage the major diseases of the hip that affect children
- ♦ Manage the examination and diagnosis of hip pathology in children according to their age and the prevalence associated with it
- ♦ Review the most important pathologies that occur in pediatric orthopedics, as knowledge of them is the fundamental pillar of this speciality
- ♦ Learn about the latest advances in the treatment of these classic pediatric orthopedics diseases
- ♦ Specialize in the diagnosis, treatment and prognosis of orthopedic and traumatologic knee pathologies in children and their particular characteristics compared to adults
- ♦ Apply learning to explore and diagnose knee pathologies in children, losing the usual fear generated in many specialists due to lack of knowledge of the pathology
- ♦ Recognize the different pathologies of children's feet and be able to make an accurate diagnosis together with a suitable therapeutic approach





## Specific Objectives

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### Module 1. Hip

- ♦ Manage the diagnosis, examination and treatment of hip dysplasia, taking into account the different ages of children
- ♦ Delve into hip exploration, which is essential in neonatal screening
- ♦ Understand Perthes disease with clear management ideas, differentiating between outdated treatments and new perspectives on the disease
- ♦ Make an early diagnosis of adolescent hip pathology, which is crucial for the survival of the hip in adulthood, and learning how to manage it properly, including complex hip reduction surgeries
- ♦ Learn to recognize coxa vara and spring hip and assess their clinical implications for receiving proper treatment

### Module 2. knee

- ♦ Learn to distinguish the clinical-radiological characteristics of patients with discoid meniscus
- ♦ Differentiate the types of discoid meniscus
- ♦ Perform a differential diagnosis of popliteal cysts
- ♦ Recognize the clinical, radiological and epidemiological features of Osgood-Schlatter disease
- ♦ Identify possible warning signs of Osgood-Schlatter disease
- ♦ Perform an adequate diagnosis of patellofemoral instabilities
- ♦ Learn the osteochondral lesions of children
- ♦ Delve into the implications of cruciate ligament rupture in children
- ♦ Manage fractures around the knee
- ♦ Differentiate between stable and unstable fractures for correct treatment

### Module 3. Pathology of the Foot

- ♦ Gain in-depth knowledge of the etiopathogenesis of foot malformations and deformities
- ♦ Diagnose through anamnesis and physical examination.
- ♦ Apply the complementary tests required for diagnosis, and primarily be able to assess and describe the radiographic images in the different pathologies
- ♦ Interpret when different diagnostic tests are appropriate
- ♦ Gain in-depth knowledge on treating each pathology. Learn the common techniques of manipulation and casting in the pediatric age, as well as the different surgical techniques required to treat each pathology
- ♦ Learn the natural history and evolution of each process

03

# Course Management

The program includes in its teaching staff leading experts in Pediatric Orthopedics, who bring to this education the experience of their work. Additionally, other recognized experts participate in its design and preparation, completing the program in an interdisciplinary manner. A unique opportunity to specialize with the best professionals in the market.





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*Acquire the skills of an expert physical therapist in Pediatric Lower Limb Orthopedics with the experience of a program where knowledge will be converted into practice in a highly interactive specialization”*

## 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 Pediatric Orthopedics Service at the Niño Jesús University Hospital
- ♦ Medical specialist in Orthopedic Surgery and Traumatology with wide and recognized professional experience in the field of O.S.T. for children and adults
- ♦ Doctoral course in Pediatrics with the following Doctoral Thesis project: "Long-term follow-up of surgically repaired hip dysplasias in infancy"
- ♦ 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. Abril Martín, Juan Carlos

- ♦ Graduate in Medicine and Surgery from the University of Valladolid
- ♦ Specialist in Traumatology and Orthopedic Surgery. Jiménez Díaz Foundation Madrid
- ♦ Faculty Area Specialist of O.S.T. at Insalud hospitals

### 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 Alves, Cristina

- ♦ Orthopedic Physician in the Pediatric Orthopedics Service. Pediatric Hospital - CHUC, EPE



**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. Abad Lara, José Antonio**

- ♦ Degree in Medicine and Surgery from the University of Córdoba
- ♦ Specialist in Pediatric Orthopedic Surgery and Traumatology, with exclusive dedication to the management of pediatric orthopedic conditions in the Pediatric Orthopedics Unit of the Hospital Universitario Reina Sofia
- ♦ Coordinator of the Children's Orthopedics Unit of the Hospital Universitario Reina Sofia until 2018

**Dr. Alonso Hernández, Javier**

- ♦ Medical specialist in Traumatology and Orthopedic Surgery
- ♦ Assistant to the Pediatric Orthopedics Service of the Niño Jesús Hospital in Madrid
- ♦ Head of the Pediatric Traumatology and Orthopedics Unit at the CEMTRO Clinic in Madrid
- ♦ Specialized in Pediatric Traumatology and Orthopedics and in Pediatric Sports Traumatology

**Dr Del Cura Varas, Marisol**

- ♦ Attending Physician of the Orthopedic Surgery and Traumatology Department of Hospital Ramón y Cajal (Madrid)
- ♦ Degree in Medicine at the U.A.M. (Universidad Autónoma de Madrid)

**Dr. Álvaro Alonso, Alberto**

- ♦ Degree in Medicine from the Complutense University of Madrid.
- ♦ Medical specialist in Traumatology and Orthopedic Surgery. Gregorio Marañón General University Hospital. Madrid
- ♦ Neurosurgery coordinator at the Gregorio Marañón General University Hospital. Madrid

**Dr. Budke Neukamp, Marcelo**

- ♦ Degree in Medicine and Surgery from the Faculty of Medicine of the Federal De Pelotas University in Rio Grande do Sul (Brazil)
- ♦ PhD in Surgery. Autonomous University of Madrid
- ♦ Neurosurgery Attending Physician. Niño Jesús Pediatric University Hospital

**Dr. Cabello Blanco, Juan**

- ♦ Specialist in Orthopedic Surgery and Traumatology. Residency at the La Paz University Hospital of Madrid
- ♦ Degree in Medicine from the Complutense University of Madrid.
- ♦ Private practice in Pediatric Traumatology and Orthopedics Internacional Ruber Clinic

**Dr. Chorbadjian Alonso, Gonzalo Andrés**

- ♦ Surgeon at the Universidad de Santiago de Chile
- ♦ Specialist in Orthopedics and Traumatology at the Universidad de Chile
- ♦ Sub-speciality fellow in Neuro-Orthopedics. Hospital Infantil Universitario Niño Jesús, Universidad Autónoma de Madrid

**Dr. Castañeda, Pablo G**

- ♦ Professor of Orthopedic Surgery - New York University
- ♦ Head of the unit of pediatric orthopedic surgery. New York University. Hassenfeld Children's Hospital
- ♦ Medical Surgeon graduated from the Universidad Nacional Autonoma de Mexico through the Universidad Anahuac
- ♦ Specialized in Orthopedics and Traumatology from the National Autonomous University of Mexico
- ♦ Sub-specialized in hip and knee reconstructive surgery by the University of Oxford, Nuffield Orthopaedic Centre, Oxford, England
- ♦ Sub-specialized in Pediatric Orthopedics by the Baylor University, Houston, Texas, USA.

**Dr. Clemente Garulo, Daniel**

- ♦ Attending physician at the Pediatric Rheumatology Unit of the Hospital Infantil Universitario Niño Jesús
- ♦ PhD in Health Sciences from the Universidad Camilo José Cela
- ♦ Degree in Medicine and Surgery from the Faculty of Medicine of the Universidad de Alcalá.
- ♦ Active member of the Spanish Society of Rheumatology (SER) and the Spanish Society of Pediatric Rheumatology (SERPE)

**Dr. De Pablos Fernández, Julio**

- ♦ Fellow in Pediatric Orthopedic Surgery at the Alfred I DuPont Institute, Wilmington, Delaware, USA.
- ♦ Associate Professor of Orthopedic Surgery and Traumatology at the Universidad de Navarra
- ♦ PhD in Medicine and Surgery from the Universidad de Navarra

- ♦ Author of the following books: "Growth cartilage lesions", "Bone elongation methods and their uses" and "Angular deformities in children and teenagers"

**Dr. Downey Carmona, Francisco Javier**

- ♦ Specialist in Orthopedic Surgery and Traumatology at the Hospital Universitario de Valme
- ♦ Graduate in Medicine and Surgery from the University of Seville
- ♦ Research proficiency obtained after completing the doctoral program

**Dr. Duart Clemente, Julio**

- ♦ Orthopedic Surgery and Traumatology assistant at the Complejo Hospitalario de Navarra
- ♦ PhD in Medicine and Surgery from the Universidad de Navarra
- ♦ Graduate in Medicine and Surgery from the Universidad de Navarra
- ♦ Resident Intern at the Universidad de Navarra clinic
- ♦ Associate Professor of Orthopedic Surgery and Traumatology. Navarra University

**Dr Espinazo Arce, Olga**

- ♦ Head of the Pediatric Orthopedics unit of the O.S.T. Service of Basurto Hospital
- ♦ Degree from the Faculty of Medicine at the Basque Country University
- ♦ Orthopedic Surgery and Traumatology service of Basurto Hospital

**Dr. Farrington Rueda, David M**

- ♦ Degree in Medicine and Surgery. University of Seville
- ♦ Faculty specialist at the Department of Pediatric Orthopedic Surgery and Traumatology. Valme University Hospital
- ♦ Head of the Department of Orthopedic Surgery and Traumatology. Hospital San Juan de Dios del Aljarafe
- ♦ Head of the Pediatric Orthopedic Surgery and Traumatology Department. Virgen del Rocío University Hospital

**Dr. Fernádes de Carvalho, Marcos António**

- ◆ Degree in Medicine from the Faculty of Medicine at the University of Cantabria.
- ◆ Specific training in Orthopedics and Traumatology at the Hospital and University Center of Coimbra
- ◆ Specialized in Pediatric Orthopedics at the Pediatric Hospital CHUC, EP

**Dr. Fernández Pineda, Israel**

- ◆ Faculty area specialist in Pediatric Surgery at the Department of Pediatric Surgery of the Virgen del Rocío Pediatric University Hospital
- ◆ Fellowship in Pediatric Oncological Surgery at St. Jude Children's Research Hospital
- ◆ Degree in Medicine from the Complutense University of Madrid

**Dr. Fraga Collarte, Manuel**

- ◆ Attending Physician at the Department of Orthopedic Surgery and Traumatology
- ◆ Degree in Medicine from the University of Santiago de Compostela

**Dr Galán Olleros, María**

- ◆ Resident in Orthopedics and Traumatology. San Carlos Clinical Hospital, Madrid, Spain
- ◆ SECOT Foundation award winner for Clinical Research in 2020
- ◆ Best paper published in the Spanish Journal of Orthopedic Surgery and Traumatology in 2019
- ◆ SECOT Foundation award winner for Clinical Research in 2018

**Dr García Carrión, Alicia**

- ◆ Degree in Medicine and Surgery. University of Castilla-La Mancha
- ◆ Specialist in Orthopedic Surgery and Traumatology. San Carlos Clinical Hospital
- ◆ Medical specialist in Traumatology and Pediatric Orthopedic Surgery at the CEMTRO Clinic

**Dr. García Fontecha, César Galo**

- ♦ Sant Joan de Déu hospital. Orthopedics / COTOrthopedics

**Dr. Garríguez Pérez, Daniel**

- ♦ Resident physician in Orthopedic Surgery and Traumatology at the San Carlos Clinical Hospital in Madrid
- ♦ Degree and Master's Degree in Medicine from the Autonomous University of Madrid

**Dr. González Díaz, Rafael**

- ♦ PhD in Medicine and Surgery from the University of Salamanca
- ♦ Specialist in Orthopedic Surgery and Traumatology at the Department of Traumatology and Orthopedic Surgery of the La Paz Hospital in Madrid
- ♦ Coordinator at the Rachis Unit of the Niño Jesús Pediatric University Hospital

**Dr. González Morán, Gaspar**

- ♦ Head of the Pediatric Orthopedics Unit. Service of Traumatology and Orthopedic Surgery. La Paz University Hospital, Madrid
- ♦ Degree in Medicine and Surgery. Navarra University
- ♦ Specialist in Traumatology and Orthopedic Surgery. La Princesa Hospital, Madrid.

**Dr. González-Herranz, Pedro**

- ♦ Head of the Pediatric Orthopedics Unit - CSUR of the CHUAC
- ♦ Degree in Medicine and Surgery from the University of Navarra
- ♦ Specialist in Orthopedic and Trauma Surgery
- ♦ Trauma and Orthopedics professor at the University School of Physiotherapy of the ONCE"

**Dr. Granado Llamas, Alberto**

- ♦ Orthopedic Surgery and Traumatology resident at the Gómez Ulla Central Defense Hospital
- ♦ Medical Captain of the Military Health Corps on the Ordinary Officer Level
- ♦ Office of the Medical Lieutenant of the Military Health Corps on the Ordinary Officer Level, Specialist in Orthopedic Surgery and Traumatology

**Dr Manzarbeitia Arroba, Paloma**

- ♦ Specialist Physician at the Niño Jesus Hospital in Madrid
- ♦ MIR in Orthopedic Surgery and Traumatology: Toledo University Hospital Complex
- ♦ External Rotation Hand and Upper Limb Surgery Unit - Traumatology and Orthopedic Surgery Service of the HM Montepríncipe Hospital

**Dr. Martí Ciruelos, Rafael**

- ♦ Head of the Pediatric Orthopedics Department at the 12 Octubre Hospital
- ♦ Head of the Orthopedics and Pediatric Traumatology Unit at the Sanitas la Moraleja Hospital
- ♦ Degree in Medicine and Surgery from the Complutense University of Madrid
- ♦ Teacher of residents thanks to a MIR in Traumatology at teh 12 Octubre Hospital in Madrid

**Dr. Martínez Caballero, Ignacio**

- ♦ Head of a department within the Neuro-orthopedics Unit, Orthopedics and Traumatology Service, Niño Jesús Pediatric University Hospital
- ♦ PhD in Medicine and Surgery from the Autonomous University of Madrid.
- ♦ Medical Coordinator of the Movement Analysis Laboratory of the Niño Jesús University Pediatric Hospital in Madrid since 2007

**Dr Martínez González, Carmen**

- ♦ Degree in Medicine and Surgery. Autonomous University of Madrid
- ♦ Spine Unit. Pediatric Spine Deformation

**Dr. Nieves Riveiro, David**

- ♦ General and Digestive System Surgery Resident Intern. A Coruña University Hospital Complex
- ♦ Degree in Medicine from the University of Cantabria

**Dr. Villa García, Ángel José**

- ♦ Degree in Medicine and Surgery from the University of Salamanca.
- ♦ Medical specialist in Traumatology and Orthopedic Surgery. Gregorio Marañón General University Hospital. Madrid
- ♦ Head of the Department of Traumatology and Pediatric Orthopedics at the Gregorio Marañón General University Hospital. Madrid
- ♦ Coordinator of the Pediatric Hip and Pediatric Musculoskeletal Oncology Department of the Gregorio Marañón General University Hospital. Madrid

**Dr Mediavilla Santos, Lydia**

- ♦ Degree in Medicine and Surgery from the Complutense University of Madrid
- ♦ Medical specialist in Traumatology and Orthopedic Surgery. Gregorio Marañón General University Hospital. Madrid
- ♦ Musculoskeletal Oncology Faculty Specialist at the Gregorio Marañón General University Hospital. Madrid
- ♦ Pediatric Oncologic Musculoskeletal Faculty specialist at the Gregorio Marañón General University Hospital. Madrid

**Dr. Miranda Gorozarri, Carlos**

- ♦ Degree in Medicine and Surgery from the University of Alcalá, Madrid
- ♦ Specialist in Traumatology and Orthopedic Surgery. Asepeyo Monographic Hospital of Traumatology and Orthopedic Surgery (Madrid)
- ♦ Faculty Specialist for the pediatric traumatology and orthopedics service of the Niño Jesús Pediatric University Hospital

**Dr. Muñoz Niharra, Borja**

- ♦ Degree in Medicine from the Autonomous University Madrid.
- ♦ Infanta Elena Hospital. Pediatric Orthopedics and Hip-Knee Unit
- ♦ CEMTRO Clinic. Pediatric Orthopedics Unit

**Dr. Ortega García, Francisco Javier**

- ♦ Degree in Medicine and Surgery. Autonomous University of Madrid
- ♦ Orthopedic Surgery and Traumatology specialist at the Doce de Octubre Hospital in Madrid, Traumatology II Service
- ♦ Attending Orthopedic Surgery and Traumatology physician at the Doce de Octubre Hospital

**Dr. Patiño Contreras, José Luis**

- ♦ Degree and Master's Degree in Medicine from the Complutense University of Madrid
- ♦ Master's Degree in clinical Reasoning and clinical skills, Alcalá University, Madrid
- ♦ Resident in orthopedic surgery and traumatology at the Fundación Alcorcón University Hospital - OST service

**Dr Penelas Abelleira, Natalia**

- ♦ Attending physician of the children's traumatology service at the Teresa Herrera Materno Infantil Hospital in A Coruña
- ♦ Degree in Medicine from the University of Santiago de Compostela
- ♦ Resident Intern Physician in Orthopedic Surgery and Traumatology at the University Hospital Complex in A Coruña

**Dr Pérez-López, Laura M**

- ♦ Functional Unit of the Upper Extremity and Congenital Pathologies. Traumatology Unit. Department of Pediatric Orthopedic Surgery and Traumatology, Sant Joan de Déu Materno-Infantil Hospital, Barcelona, University of Barcelona
- ♦ Referent in Pediatric Orthopedic Surgery and Traumatology at Clínica Diagonal, MediFIATC

**Dr. Prato de Lima, Carlos Humberto**

- ◆ Surgeon at the University of the Andes
- ◆ Traumatology and Orthopedics. Miguel Pérez Carreño Hospital in Caracas, Venezuela
- ◆ Pediatric Orthopedics, Children's Orthopedics Hospital, Caracas, Venezuela

**Dr Quesada García, Belén**

- ◆ Resident in Orthopedics Surgery and Traumatology at the Nuestra Señora del Prado Hospital in Talavera de la Reina
- ◆ Degree in Medicine from the Autonomous University Madrid.
- ◆ Basic Course on Traumatic Hand and Elbow Pathologies
- ◆ OST Speciality Initiation Course (SECOT)

**Dr Rodríguez del Real, María Teresa**

- ◆ Degree in Medicine from the Autonomous University Madrid
- ◆ Resident in Orthopedic Surgery and Traumatology at the Severo Ochoa University Hospital (Leganés)

**Dr Rojas Díaz, Libardo Enrique**

- ◆ Physician and Surgeon at the University of Santander
- ◆ Internal Medicine Physician. University Hospital of Santander

**Dr Rojo Santamaría, Rita**

- ◆ Degree in Medicine and Surgery. Complutense University of Madrid
- ◆ Specialist in Orthopedic Surgery and Traumatology

**Dr Ron Marqués, Alejandra**

- ◆ Graduate in Medicine and Surgery. Complutense University of Madrid
- ◆ Specialist in Orthopedic Surgery and Traumatology
- ◆ Faculty area specialist of the Pediatric Orthopedics and Traumatology Unit at the University Hospital of Getafe



**Dr Salcedo Montejo, María**

- ♦ Medical Specialist in Orthopedic Surgery and Traumatology
- ♦ Member of the Multidisciplinary Unit of skeletal dysplasias at the La Paz Hospital
- ♦ Orthopedic Surgery and Traumatology service of the Pediatric Orthopedics Unit. La Paz University Hospital (Madrid)

**Dr Salom Taverner, Marta**

- ♦ Degree in Medicine and Surgery from the University of Valencia
- ♦ Specialist in Orthopedic Surgery and Traumatology. La Fe University Hospital of Valencia
- ♦ Attending physician at the La Fe University Hospital as a specialist practitioner

**Dr. Sanpera Trigueros, Ignacio**

- ♦ Head of the Orthopedic Surgery and Pediatric Traumatology Service at the Son Espases University Hospital
- ♦ Professor and Head of the Department of Medical-Surgical Pathology-Locomotor System. Associate Professor of Human Anatomy. Faculty of Medicine. University of the Balearic Islands
- ♦ Doctor of Medicine
- ♦ Degree in Medicine from the Autonomous University of Barcelona
- ♦ Vice-President of the European Society of Pediatric Orthopedics (EPOS)

**Dr. Soldado Carrera, Francisco**

- ♦ Head of the Department of Orthopedic Surgery and Pediatric Traumatology. Barcelona Childrens University Hospital HM nens
- ♦ Director of the Hand, Plexus and Pediatric Microsurgery Unit. Vall Hebron Barcelona Hospital Campus
- ♦ Department of Orthopedic Surgery and Pediatric Traumatology. Vall Hebron Barcelona Hospital Campus

**Dr. Sosa González, Guillermo**

- ♦ Degree in Medicine from the Autonomous University Madrid.
- ♦ Medical specialist in Traumatology and Orthopedic Surgery. Gregorio Marañón General University Hospital. Madrid
- ♦ Faculty Specialist at the Department of Traumatology and Pediatric Orthopedics at the Gregorio Marañón General University Hospital. Madrid
- ♦ Pediatric Oncologic Musculoskeletal Faculty specialist at the Gregorio Marañón General University Hospital. Madrid

**Dr Vara Patudo, Isabel**

- ♦ Degree in Medicine from the University of Alcalá
- ♦ Specialist in Orthopedic Surgery and Traumatology at the Príncipe de Asturias University Hospital, Alcalá de Henares, Madrid
- ♦ Attending Physician of the Orthopedic Surgery and Traumatology Department of the Niño Jesús Pediatric Hospital

**Dr Vilalta Vidal, Imma**

- ♦ Assistant at the Orthopedic Surgery and Traumatology Department of the Sant Joan de Déu hospital. Esplugues de Llobregat. Barcelona
- ♦ Attending Physician at the Orthopedic Surgery and Traumatology Department of the Sant Joan de Déu Hospital in Barcelona
- ♦ Degree in Medicine and Surgery from the Autonomous University of Barcelona (UAB)
- ♦ Specialist in Orthopedic Surgery and Traumatology

**Dr Hernández, Marta**

- ♦ Degree in Medicine and Surgery from the Autonomous University of Madrid
- ♦ MIR in Orthopedic Surgery and Traumatology in Majadahonda (Madrid)

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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*With this program, you will have the opportunity to master new techniques and advances in Pediatric Orthopedics”*

## Module 1. Hip

- 1.1. Embryology, Anatomy and Biomechanics of the Hip
- 1.2. Transient Synovitis of the Hip
  - 1.2.1. Etiopathogenesis.
  - 1.2.2. Differential Diagnosis
  - 1.2.3. Orthopedic Management
- 1.3. Developmental Dysplasia of the Hip in Children under 18 Months of Age
  - 1.3.1. Concept. Historical Recollection
  - 1.3.2. Dysplasia in Children Under 6 Months of Age
    - 1.3.2.1. Diagnostic Examination
    - 1.3.2.2. Hip Ultrasound. Methods and Interpretation
    - 1.3.2.3. Therapeutic Orientation
  - 1.3.3. Dysplasia in Children aged 6-12 Months
    - 1.3.3.1. Clinical and Radiological Diagnosis
    - 1.3.3.2. Treatment
  - 1.3.4. Dysplasia in the Ambulatory Child Older than 12 Months
    - 1.3.4.1. Late Diagnosis Errors
    - 1.3.4.2. Treatment Management
- 1.4. Developmental Dysplasia of the Hip in Children over 18 Months Old
  - 1.4.1. Definition and Natural History
  - 1.4.2. Etiology and Clinical Manifestations
  - 1.4.3. Clinical and Radiological Classification. Hip Risk Factors
  - 1.4.4. Differential Diagnosis
  - 1.4.5. Treatment
- 1.5. Hip Dysplasia in Older Children and Teenagers
  - 1.5.1. Causes and Types
  - 1.5.2. Diagnostic Guidance
    - 1.5.2.1. Teenage Hip Dysplasia Radiology.
    - 1.5.2.2. Complementary Studies of Dysplasia: MRI MRI Arthrography, CT Scan



- 1.5.3. Treatment
  - 1.5.3.1. Arthroscopic Treatment
  - 1.5.3.2. Open Surgery
    - 1.5.3.2.1. Pelvic Osteotomies. Techniques and Guidelines
    - 1.5.3.2.2. Femoral Osteotomies. Techniques and Guidelines
- 1.6. Legg-Calvé-Perthes Disease
  - 1.6.1. Perthes After-Effects
  - 1.6.2. Syndromic Hip
  - 1.6.3. Chondrolysis
  - 1.6.4. Arthritis After-Effects (Sepsis, Rheumatic Diseases...)
- 1.7. Epiphyseolysis of the Femoral Head
  - 1.7.1. Diagnosis. The way they are formed
  - 1.7.2. Aetiopathogenesis.
  - 1.7.3. Types of Epiphyseolysis. Pathophysiological Mechanism
  - 1.7.4. Surgical Management
    - 1.7.4.1. In Situ Reduction
    - 1.7.4.2. Modified Dunn Procedure
    - 1.7.4.3. Late Treatment
- 1.8. Coxa Vara
  - 1.8.1. Aetiopathogenesis.
  - 1.8.2. Differential Diagnosis
  - 1.8.3. Treatment
- 1.9. Musculoskeletal Pain Around the Hips in Children
  - 1.9.1. Snapping Hip Syndrome
    - 1.9.1.1. Types of Snapping (Internal, External)
    - 1.9.1.2. Treatment
  - 1.9.2. Enteritis Around the Hips in Children
    - 1.9.2.1. Enthesitis of the Spines (AIIIS, ASIS...), Differential Diagnosis and Treatment
    - 1.9.2.2. Ischiatic and Iliac Crest Enteritis Diagnosis and Treatment

- 1.10. Hip Fractures in Children
  - 1.10.1. Biomechanical Implications of the Hip Fractures in Children
  - 1.10.2. Types of Fractures. Classification
  - 1.10.3. Diagnosis and Treatment. Treatment Management
    - 1.10.3.1. Children With Open Physes
    - 1.10.3.2. Children With Skeletal Maturity

## Module 2. knee

- 2.1. Congenital Dislocation of the Knee
  - 2.1.1. Diagnosis and Classification
  - 2.1.2. Etiology
  - 2.1.3. Clinical - Radiological Findings
  - 2.1.4. Differential Diagnosis
  - 2.1.5. Clinical Findings and Associated Lesions
  - 2.1.6. Treatment
- 2.2. Patellofemoral Instability
  - 2.2.1. Prevalence and Etiology
  - 2.2.2. Types: Recurrent Dislocation, Recurrent Subluxation, Habitual Dislocation and Chronic Dislocation
  - 2.2.3. Associated Conditions
  - 2.2.4. Clinical Findings
  - 2.2.5. Radiological Findings
  - 2.2.6. Treatment
- 2.3. Osteochondritis Dissecans
  - 2.3.1. Definition and Etiology
  - 2.3.2. Pathology
  - 2.3.3. Clinical Radiological Findings
  - 2.3.4. Treatment
- 2.4. Discoid Meniscus
  - 2.4.1. Pathogenesis.
  - 2.4.2. Clinical - Radiological Findings
  - 2.4.3. Treatment

- 2.5. Popliteal Cyst
  - 2.5.1. Definition and Clinical Findings
  - 2.5.2. Differential Diagnosis
  - 2.5.3. Pathology
  - 2.5.4. Diagnostic Tests
  - 2.5.5. Treatment
- 2.6. Apophysitis: Osgood-Schlatter Disease, Sinding-Larsen-Johanson Disease
  - 2.6.1. Definition and Epidemiology
  - 2.6.2. Clinical and Radiological Findings
  - 2.6.3. Treatment
  - 2.6.4. Complications
- 2.7. Ligament Lesions of the Knee: Anterior Cruciate Ligament
  - 2.7.1. Prevalence and Etiology
  - 2.7.2. Diagnosis
  - 2.7.3. Treatment in Patients with Growth Cartilage
- 2.8. Epiphysiolysis of the Distal Femur and Fractures of the Proximal Tibia
  - 2.8.1. Anatomic Considerations. Pathophysiology
  - 2.8.2. Diagnosis
  - 2.8.3. Treatment
- 2.9. Fractures of the Tibial Spines
  - 2.9.1. Pathophysiology
  - 2.9.2. Anatomic Considerations
  - 2.9.3. Diagnosis
  - 2.9.4. Treatment
- 2.10. Anterior Avulsion Fracture
  - 2.10.1. Pathophysiology
  - 2.10.2. Anatomic Considerations
  - 2.10.3. Diagnosis
  - 2.10.4. Treatment
- 2.11. Periosteal Tear of the Patella
  - 2.11.1. Pathophysiology
  - 2.11.2. Anatomic Considerations
  - 2.11.3. Diagnosis
  - 2.11.4. Treatment





### Module 3. Pathology of the Foot

- 3.1. Embryology, Malformations and Deformities of the Foot in Newborns
  - 3.1.1. Polydactyly
  - 3.1.2. Syndactyly
  - 3.1.3. Ectrodactyly
  - 3.1.4. Macroductyly
  - 3.1.5. Calcaneal Valgus or Talus Foot
- 3.2. Congenital Vertical Astragalus
- 3.3. Flexible Valgus Flatfoot
- 3.4. Serpentine Foot
- 3.5. Tarsal Coalition
- 3.6. Metatarsus Adductus and Metatarsus Varus
- 3.7. Congenital Clubfoot
- 3.8. Pes Cavus
- 3.9. Hallux valgus
- 3.10. Toe Pathology
  - 3.10.1. Hallux Varus
  - 3.10.2. Quintus Varus
  - 3.10.3. Quintus Supraductus
  - 3.10.4. Deformities of Small Toes: Mallet Toe, Hammer Toe, Claw Toe, Clinodactyly
  - 3.10.5. Brachymetatarsia
  - 3.10.6. Constriction Band Syndrome
  - 3.10.7. Agenesis and Hypoplasia of the Toes
- 3.11. Miscellaneous
  - 3.11.1. Osteochondrosis: Köning's Disease, Freiberg's Disease
  - 3.11.2. Apophysitis: Sever's Disease, Iselin's Disease
  - 3.11.3. Os Trigonum Syndrome
  - 3.11.4. Accessory Scaphoid
  - 3.11.5. Osteochondritis Dissecans of the Talus

# 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. Physiotherapists/kinesiologists 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 of professional physiotherapy 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. Physiotherapists/kinesiologists 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 physiotherapist/kinesiologist 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.



*The physiotherapist/kinesiologist 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 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 we trained more than 65,000 physiotherapists/kinesiologists with unprecedented success in all clinical specialties, regardless of the workload. 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 training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for 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 our 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 really 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.



#### Physiotherapy Techniques and Procedures on Video

TECH brings students closer to the latest techniques, the latest educational advances and to the forefront of current Physiotherapy techniques and procedures. 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 them as many times as you want.



#### 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.

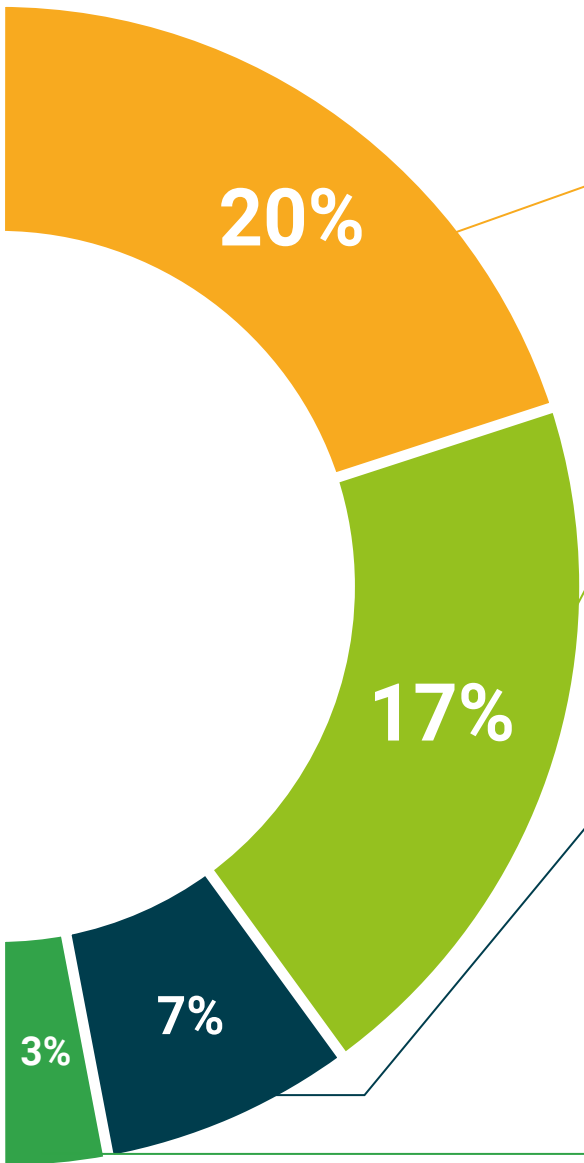
This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".



#### 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 Diploma in Pediatric Lower Limb Orthopedics guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Technological University.



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

This **Postgraduate Diploma in Pediatric Lower Limb Orthopedics** 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 Pediatric Lower Limb Orthopedics**

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.



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



## Postgraduate Diploma

Pediatric Lower Limb  
Orthopedics

Course Modality: Online

Duration: 6 months.

Certificate: TECH Technological University

Official N° of hours: 450 h.

# Postgraduate Diploma

## Pediatric Lower Limb Orthopedics

