



Thoracic and Airway Surgery in Pediatrics

» Modality: online

» Duration: 6 weeks

» Certificate: TECH Global University

» Credits: 6 ECTS

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/medicine/postgraduate-certificate/thoracic-airway-surgery-pediatrics

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# tech 06 | Introduction

Thoracic Surgery in Pediatrics is a surgical specialty that focuses on the approach to pathologies of the thorax, lungs, mediastinum, pleura and airways in minor patients. In recent years, the techniques used to manage these diseases have undergone a high level of improvement, with the aim of maximizing the effectiveness of the intervention and optimizing the results obtained. This fact means that specialists in this medical field are obliged to identify these advances in order to avoid being left behind regarding the evolution of their sector.

That is why TECH Global University has created this Certificate, through which the student will obtain the most avant-garde knowledge in the field of Thoracic and Airway Surgery in Pediatrics and will position themself as a leading specialist in this field. Throughout this academic itinerary, he/she will identify the state-of-the-art techniques to manage mediastinal tumors and cysts or pulmonary malformations. Likewise, you will delve into the latest medical treatments for Chylothorax or metastatic lung disease.

All this, following a complete methodology 100% online, which will enable the student to achieve effective learning by managing their own study schedules. Additionally, you will have a complete didactic material at your disposal, available in formats such as video, readings or interactive summary. As a result, you will obtain an education fully adapted to your personal and academic needs.

This **Postgraduate Certificate in Thoracic and Airway Surgery in Pediatrics** contains the most complete and up-to-date scientific program on the market. The most important features include:

- The development of practical cases presented by experts in Pediatric Surgery
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- The practical exercises where the self-evaluation process can be carried out to improve learning
- Its special emphasis on innovative methodologies
- Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Content that is accessible from any fixed or portable device with an Internet connection



Through this very complete program, you will delve into the latest scientific evidence regarding the approach to pneumothorax"



Enjoy a complete 100% online methodology that will enable you to study without leaving your home.

Enjoy a pleasant and interactive study through didactic formats such as video

or self-assessment tests.

The program includes in its teaching staff professionals from the field who pour the experience of their work into this training, in addition to recognized specialists from reference societies and prestigious universities.

Its multimedia content, developed with the latest educational technology, will allow the professional a situated and contextual learning, that is, a simulated environment that will provide an immersive training programmed to train in real situations.

The design of this program focuses on Problem-Based Learning, in which the professional will have to try to solve the different professional practice situations that will arise throughout the academic course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.







# tech 10 | Objectives



# **General Objectives**

- Develop specialized knowledge and current treatments in pediatric surgery
- Compile the different diagnostic methods, as well as the different therapeutic options, both medical and surgical depending on the pathology
- Expose the possible associated complications and the prognosis of these diseases
- Establish the current treatment guidelines for each of the pathologies described



Incorporate in your daily practice the latest advances in Thoracic and Airway Surgery in Pediatrics by the best specialists in the field"



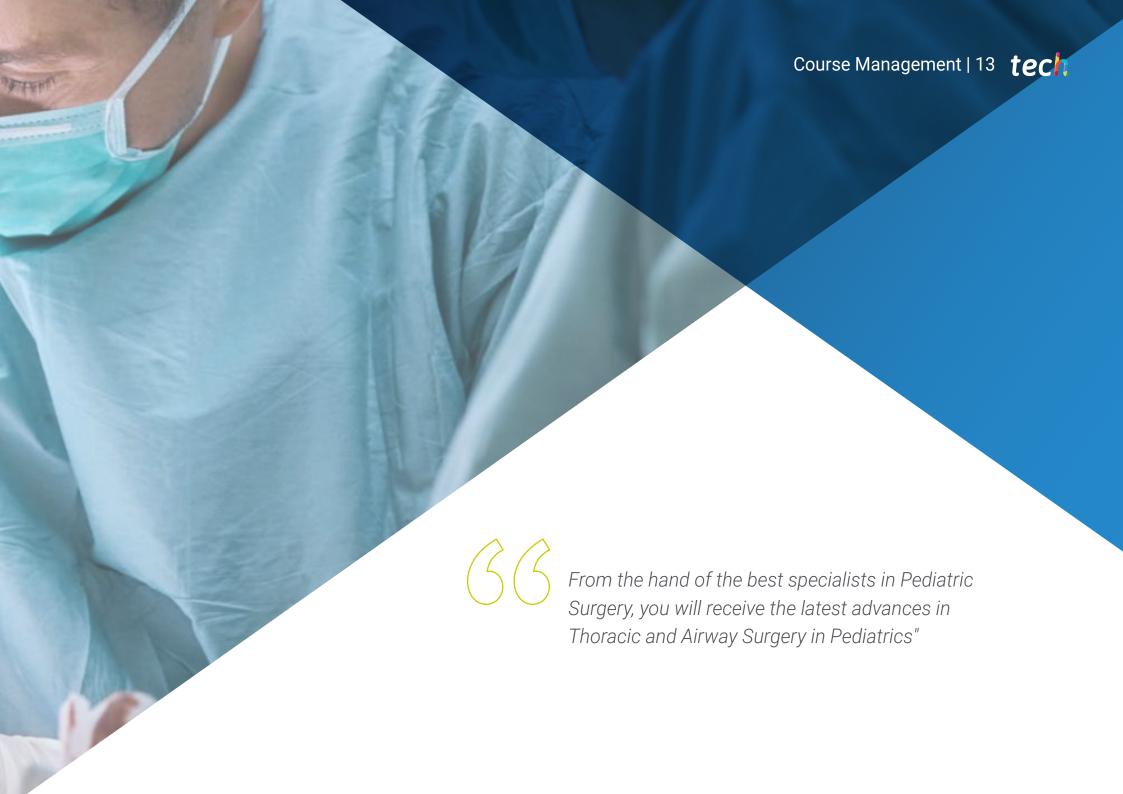


# **Specific Objectives**

- Determine the most frequent congenital and acquired pathologies and to know their differential diagnosis
- Establish the current therapeutic possibilities of chest wall malformations management
- Establish the current guidelines of airway pathology management in pediatric patients
- Acquire skills in congenital bronchopulmonary malformations management
- Address the appropriate therapeutic management of acquired pleuropulmonary pathology
- Examine the appropriate management of thoracic malformations within the wide range of surgical and conservative techniques currently available
- Evaluate the advances, experience, results and prognosis of the different treatments available in airway pathology
- Develop an adequate management in the prenatal and postnatal treatment of bronchopulmonary malformations with appropriate prenatal counseling
- Determine the thoracoscopic approach and the specific surgical techniques of each of the pediatric pathologies that benefit from this technique
- Generate skills in the use of endoscopic, bronchoscopic and laryngoscopic techniques which provide essential information for the diagnosis and treatment of respiratory in childhood







# tech 14 | Course Management

# Management



# Dr. Paredes Esteban, Rosa María

- Head of Service and Director of the Pediatric Surgery Clinical Management Unit of the Reina Sofia Hospital
- Head of Service and Director of the Pediatric Surgery Clinical Management Unit of the university Reina Sofia Hospital of Córdoba
- Specialist in Pediatric Surgery at Reina Sofia University Hospital of Cordoba
- Specialist in Pediatric Surgery at Jaén Medical-Surgical Hospital
- Responsible for Pediatric Surgery Training at the University Reina Sofia Hospital of Córdoba
- President of the Spanish Society of Pediatric Surgery
- Coordinator of the Bioethics Commission of the Spanish Society of Pediatric Surgery
- Vice-President of the Ethics Committee of the Province of Córdoba
- Coordinator of the Vascular Anomalies Committee of the Reina Sofia University Hospital of Córdoba
- Living Donor Transplant Bioethics Committee Coordinator
- Doctor of Medicine and Surgery from the University of Granada
- Graduate in Medicine and Surgery from the University of Granada
- Postgraduate Diploma in Communication with the Pediatric Patient
- Postgraduate Diploma in Clinical Management
- University Diploma of Specialization in Quality and Patient Safety in Healthcare Institutions
- Postgraduate Certificate in Bioethics
- Member of European Society of Pediatric Endoscopic Surgery, Spanish Society of Pediatric Surgery, Editorial Committee of the Spanish Society of Pediatric Surgery Journal, Scientific Evaluation Committee of the Spanish Society of Pediatric Surgery

### **Professors**

### Dr. Díaz Moreno, Eloísa

- Specialist in Pediatric Surgery at the Jaén Medical Center
- Specialist in Pediatric Surgery at the Torrecárdenas University Hospital
- Specialist in Pediatric Surgery at the Virgen De las Nieves University Hospital
- Doctor of Medicine and Surgery from the University of Granada
- Graduate in Medicine and Surgery from the University of Granada
- Specialist in Pediatric Surgery at the Virgen De las Nieves University Hospital
- Master's Degree in Tissue Engineering from the University of Granada

### Dr. Palomares Garzón, Cristina

- Specialist in Pediatric Surgery at the Virgen De las Nieves University Hospital
- Specialist in Pediatric Surgery at the Puerta del Mar University Hospital
- Graduate in Medicine from the University of Granada
- Specialty in Pediatric Surgery at the Regional University Hospital of Malaga
- Master's in Minimally Invasive Surgery in Pediatrics at CEU Cardenal Herrera University
- Master's in Pediatric Urology from the International University of Andalusia

# Dr. Fanjul, María

- Specialist in Pediatric Surgery at the Gregorio Marañon University Hospital
- Specialist in Pediatric Surgery at Parc Tauli Health Corporation
- Pediatric Surgery Resident Tutor at the Gregorio Marañón University Hospital
- Graduate in Medicine from the University of Oviedo
- Specialty in Pediatric Surgery at the Gregorio Marañón University Hospital
- Master's Degree in Pediatric Urology from the International University of Andalusia
- Postgraduate Certificate in Pediatric Surgery from the Valencia Catholic University
- Postgraduate Course in Physiotherapy from the University of Oviedo

# Dr. Pérez Egido, Laura

- Specialist in Pediatric Surgery at the Hospital of Quirónsalud Toledo
- Specialist in Pediatric Surgery at the Gregorio Marañon Children's Hospital
- Specialist in Pediatric Surgery at San Rafael Hospital
- Degree in Medicine from the Complutense University of Madrid
- Master's Degree in Pediatric Urology from the International University of Andalusia
- Member of: Spanish Society of Pediatric Surgery

### Dr. García-Casillas Sánchez, María Antonia

- Specialist in Pediatric Surgery at the Gregorio Marañón Hospital
- Pediatric Surgery Resident Tutor at the Gregorio Marañón Hospital
- Initial Pediatric Trauma Care Course Instructor
- Graduate in Medicine and Surgery from the Autonomous University of Madrid

### Dr. Cadaval Gallardo, Carlos

- Specialist in the Pediatric Digestive Surgery Unit at the Virgen del Rocío University Hospital
- Specialist in the Oncological, Neonatal and Liver Surgery Unit of the Vall d'Hebron University Hospital
- Specialist in Pediatric Surgery at the Universitari Dexeus Hospital
- Specialist in Pediatric Surgery at Teknon Medical Center
- Specialist in Pediatric Surgery at the Hospital of Quirónsalud Barcelona
- Specialist in Pediatric Surgery at the Maternal-Child Hospital of Badajoz
- Graduate in Medicine at the University of Extremadura
- Master's in Education and Audiovisual Communication from the International University of Andalusia
- Master's in Minimally Invasive Surgery in Pediatrics at CEU Cardenal Herrera University

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# Dr. López de Sagredo Pareded, Rosa María

- Specialist in Pneumology at Reina Sofia University Hospital
- Graduate in Medicine from the University of Medicine and Nursing of Cordoba
- Specialist in Pneumology
- II Heart Failure Training Congress
- Immediate Life Support Postgraduate Certificate

# Dr. López Díaz, María

- Specialist in Pediatric Surgery at the 12 de Octubre Hospital
- Resident Tutor
- Graduate in Medicine from the University of Oviedo
- Specialty in Pediatric Surgery at the 12 de Octubre University Hospital
- Practical stay in the Pediatric Visceral Surgery Service at the Hospital Lapeyronie in Montpellier
- Practical Stay in the Pediatric Urology Service at Miami Children's Hospital
- Master's Degree in Minimally Invasive Surgery in Pediatrics at CEU Cardenal Herrera University

# Dr. De la Torre, Estrella

- Specialist in the of Thorax and Airway Management Surgery Unit at the Virgen del Rocío University Hospital
- Graduate in Medicine from the University of Malaga
- Specialist in Pediatric Surgery at the Virgen del Rocío's Hospital
- Master's in Minimally Invasive Surgery in Pediatrics at CEU Cardenal Herrera University





# Course Management | 17 tech

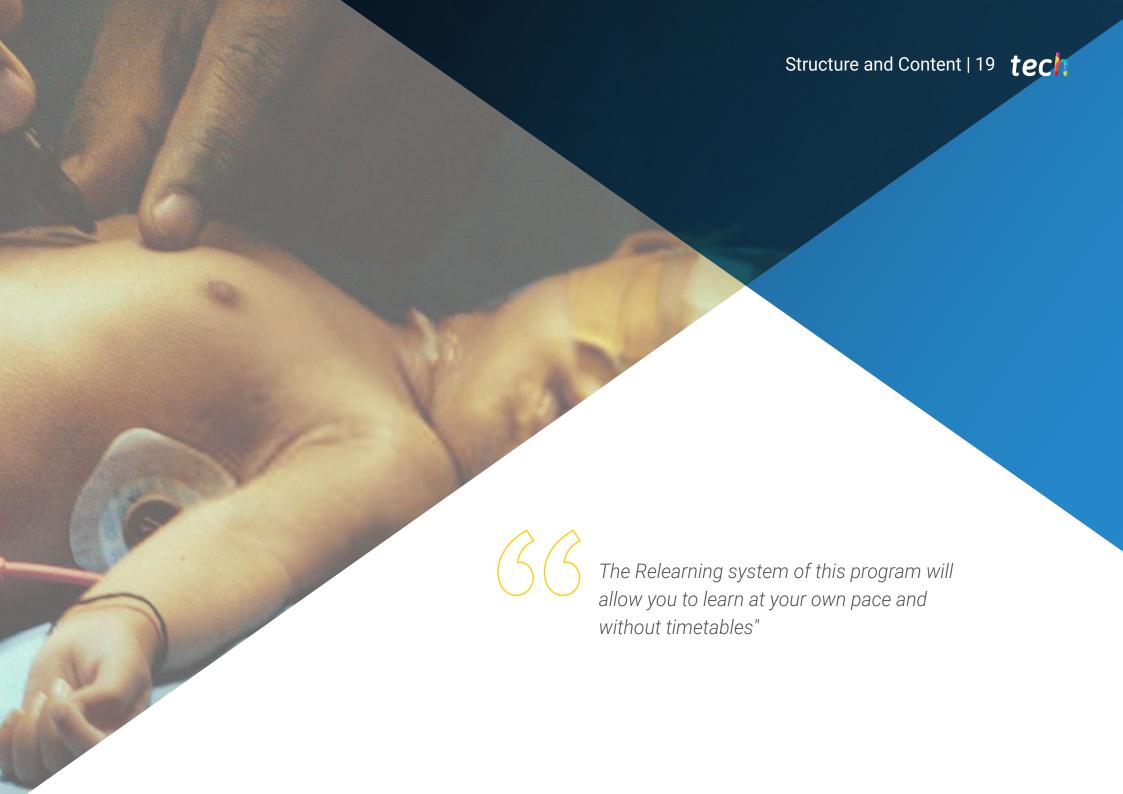
# Dr. Fernández Hurtado, Miguel Ángel

- Head of the Pediatric Surgery Service at Quirón Sagrado Corazón and Mother-Child Quirón Sevilla Hospitals
- Head of the Pediatric Surgery Service at Hospital Viamed Santa Ángela de la Cruz
- Specialist in Pediatric Surgery at Torrecárdenas Medical Center and Virgen de las Nieves Hospital
- Specialist in the Pediatric Urology section of the Virgen del Rocío University Hospital
- Specialist in the Thoracic and Airway Surgery Unit of the Virgen del Rocío University Hospital
- Graduate in Medicine and Surgery from the University of Seville Doctor of Medicine and Surgery from the University of Extremadura
- Specialty in Pediatric Surgery at the Virgen del Rocío Hospital Complex



A unique, key, and decisive educational experience to boost your professional development"





# tech 20 | Structure and Content

# Module 1. Pediatric Surgery Airway and Thorax

- 1.1. Malformations and Deformities of the Thoracic Wall I. Pectus Carinatum. Poland Syndrome and Others
  - 1.1.1. Embryology and Thoracic Wall Anatomy
  - 1.1.2. Classification
  - 1.1.3. Complement Testing
  - 1.1.4. Pectus Carinatum. Orthopedic Treatment
  - 1.1.5. Poland Syndrome
- 1.2. Thoracic Wall Malformations and Deformities II. Pectus Excavatum
  - 1.2.1. Pectus Excavatum
  - 1.2.2. Surgical Management
    - 1.2.2.1. Open Surgery Techniques
    - 1.2.2.2. Minimally Invasive Surgery Techniques
    - 1.2.2.3. Other Surgical Alternatives
  - 1.2.3. Non-surgical Alternatives, Complications and Follow-up
- 1.3. Mediastinal Tumors and Cysts
  - 1.3.1. Embryology
  - 1.3.2. Diagnosis
  - 1.3.3. Classification
  - 1.3.4. General Management
  - 1.3.5. Specific Characteristics and Management
- 1.4. Bronchopulmonary Malformations. Congenital Lobar Emphysema. Bronchogenic Cysts. Pulmonary Sequestration Cystic Adenomatoid Malformation
  - 1.4.1. Embryology
  - 1.4.2. Prenatal Diagnosis and Classification of Congenital Bronchopulmonary Malformations
  - 1.4.3. Postnatal Management of Congenital Bronchopulmonary Malformations
  - 1.4.4. Surgical Management of Congenital Bronchopulmonary Malformations
  - 1.4.5. Conservative Treatment of Congenital Bronchopulmonary Malformations





# Structure and Content | 21 tech

- 1.5. Pleuropulmonary Pathology. Surgical Treatment of Complicated Pneumonia. Metastatic Lung Disease
  - 1.5.1. Objectives
  - 1.5.2. Pleuropulmonary Pathology. Pneumothorax
    - 1.5.2.1. Introduction
    - 1.5.2.2. Classification
    - 1.5.2.3. Diagnosis
    - 1.5.2.4. Treatment
    - 1.5.2.5. Techniques in Recurrent Pneumothorax or Presence of Bullae
    - 1.5.2.6. News and Current Interest
  - 1.5.3. Complicated Pneumonia
    - 1.5.3.1. Introduction
    - 1.5.3.2. Diagnosis
    - 1.5.3.3. Surgical Indications
    - 1.5.3.4. Endothoracic Drainage Placement +/- Fibrinolysis
    - 1.5.3.5. Thoracoscopy
  - 1.5.4. Chylothorax
    - 1.5.4.1. Introduction
    - 1.5.4.2. Medical Treatment
    - 1.5.4.3. Drainage Indications
    - 1.5.4.4. Pleurodesis Types
    - 1.5.4.5. News and Current Interest
  - 1.5.5. Metastatic Pulmonary Disease
    - 1.5.5.1. Introduction
    - 1.5.5.2. Indications
    - 1.5.5.3. Thoracotomy
    - 1.5.5.4. Thoracoscopy
    - 1.5.5.5. Mapping Methods. Nuclear Medicine. Indocyanine Green
    - 1.5.5.6. News and Current Interest

# tech 22 | Structure and Content

- 1.6. Bronchoscopy in Pediatric Surgery
  - 1.6.1. Fibrobronchoscopy
    - 1.6.1.1. Technique
    - 1.6.1.2. Indications
    - 1.6.1.3. Diagnostic and Follow-Up Procedures in Pediatric
  - 1.6.2. Rigid Bronchoscopy
    - 1.6.2.1. Technique
    - 1.6.2.2. Indications
    - 1.6.2.3. Diagnostic and Follow-Up Procedures in Pediatric
- 1.7. Indications and Techniques to Perform: Open and Closed Surgical Approaches to the Thorax. Pediatric Thoracoscopy
  - 1.7.1. Open Surgical Approaches
    - 1.7.1.1. Types
    - 1.7.1.2. Techniques
    - 1.7.1.3. Indications
  - 1.7.2. Pleural Drain
    - 1.7.2.1. Indications
    - 1.7.2.2. Techniques
    - 1.7.2.3. Chest Tube Management
  - 1.7.3. Pediatric Thoracoscopy
    - 1.7.3.1. History
    - 1.7.3.2. Instruments
    - 1.7.3.3. Patient Positioning and Techniques
    - 1.7.3.4. Advances
- 1.8. Airway Assessment
  - 1.8.1. Anatomy and Physiology
  - 1.8.2. Semiology
  - 1.8.2. Diagnostic Techniques. Endoscopy CT: 3D Reconstruction
  - 1.8.4. Endoscopic Treatments. Laser





# Structure and Content | 23 tech

- 1.9. Pediatric Laryngeal Pathology
  - 1.9.1. Laryngomalacia
  - 1.9.2. Subglottic Stenosis
  - 1.9.3. Laryngeal Web
  - 1.9.4. Vocal Cord Paralysis
  - 1.9.5. Subglottic Hemangioma
  - 1.9.6. Slit Lamp
- 1.10. Pediatric Tracheal Pathology
  - 1.10.1. Tracheomalacia
  - 1.10.2. Tracheal Stenosis
  - 1.10.3. Vascular Rings
  - 1.10.4. Airway Tumors



Obtain the most advanced didactic content of the pedagogical panorama in Thoracic and Airway Surgery in Pediatrics through this program"





# tech 26 | Methodology

### 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.



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:

- Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
- 2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
- 3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
- 4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.





# Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

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



# Methodology | 29 tech

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

With this methodology, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by TECH's learning system is 8.01, according to the highest international standards.

This program offers the best educational material, prepared with professionals in mind:



### **Study Material**

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



## **Surgical Techniques and Procedures on Video**

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



### **Interactive Summaries**

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

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





### **Additional Reading**

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.

# **Expert-Led Case Studies and Case Analysis**

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



# **Testing & Retesting**

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



### Classes

There is scientific evidence on the usefulness of learning by observing experts.

The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



### **Quick Action Guides**

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.









# tech 34 | Certificate

This program will allow you to obtain your **Postgraduate Certificate in Thoracic and Airway Surgery in Pediatrics** 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 Thoracic and Airway Surgery in Pediatrics

Modality: online

Duration: 6 weeks

Accreditation: 6 ECTS



Mr./Ms. \_\_\_\_\_, with identification document \_\_\_\_\_ has successfully passed and obtained the title of:

### Postgraduate Certificate in Thoracic and Airway Surgery in Pediatrics

This is a program of 180 hours of duration equivalent to 6 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024



health confidence people
health information tutors
education information teaching
guarantee accreditation teaching
institutions technology learning



# Postgraduate Certificate Thoracic and Airway Surgery in Pediatrics

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

