

# Postgraduate Diploma

## Pediatric Respiratory Physiotherapy and its Evaluation in Rehabilitation Medicine





## Postgraduate Diploma Pediatric Respiratory Physiotherapy and its Evaluation in Rehabilitation Medicine

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtitute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-pediatric-respiratory-physiotherapy-evaluation-rehabilitation-medicine](http://www.techtitute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-pediatric-respiratory-physiotherapy-evaluation-rehabilitation-medicine)

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# 01

# Introduction

Respiratory physiotherapy techniques focus on the pathophysiology of the respiratory system, both medical and surgical, requiring a demanding knowledge of the respiratory system and the existing techniques for its treatment, healing and stabilization. With this program, here at TECH we have set out to improve the training of rehabilitation physicians with specialized training in pediatric respiratory physiotherapy.





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*Gain in-depth knowledge of the characteristics of pediatric respiratory disease and offer more personalized care to your patients”*

The specialization of rehabilitation physicians in respiratory physiotherapy is very necessary, especially in the field of pediatrics, since the presence of these professionals is increasingly demanded in different health areas. Therefore, with this Postgraduate Diploma, our students will deepen their knowledge of one of the pathologies with the highest incidence in hospitals, such as bronchiolitis.

Thanks to this training, professionals who wish to specialize in this field will also learn how to treat patients with brain damage, patients in emergency services and pediatric patients in palliative care. This program gathers the most complete information that those rehabilitation physicians who apply respiratory physiotherapy to their daily practice may need.

The Postgraduate Diploma has been designed teaching staff who specialize in Respiratory Physiotherapy, who contribute both their practical experience from their day-to-day work in practice, as well as their extensive experience in teaching at a national and international level. In addition, it has the advantage of being a 100% online training, so the student can decide from where to study and at what time. This way, you will be able to flexibly self-direct your study hours.

This **Postgraduate Diploma in Pediatric Respiratory Physiotherapy and its Evaluation in Rehabilitation Medicine** contains the most complete and up-to-date scientific program on the market. The most important features of the program include:

- ♦ Clinical cases presented by experts in Respiratory Physiotherapy.
- ♦ The graphic, schematic, and eminently practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional practice.
- ♦ The presentation of practical workshops on procedures and techniques.
- ♦ An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course.
- ♦ Action protocols and clinical practice guidelines, which cover the most important and latest developments in this specialist area.
- ♦ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments.
- ♦ Special emphasis on test-based medicine and research methodologies.
- ♦ Content that is accessible from any fixed or portable device with an Internet connection.



*This complete Postgraduate Diploma will allow you to learn all the information you need to work in the field of pediatric respiratory physiotherapy in a real and direct way”*

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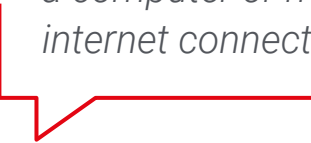
*This Postgraduate Diploma is the best option you can find to increase your knowledge on Respiratory Physiotherapy and add another dimension to your professional career”*

The teaching staff includes a team of prestigious urologists, who bring their experience to this training program, as well as renowned specialists from leading scientific societies.

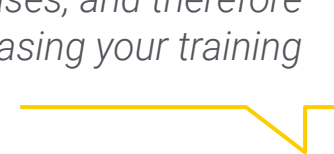
The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive training experience designed to train for real-life situations.

This program is designed around Problem Based Learning, whereby the physician must try to solve the different professional practice situations that arise during the academic year. For this reason, you will be assisted by an innovative, interactive video system created by renowned and experienced experts in the field of Respiratory Physiotherapy with extensive teaching experience.

*This 100% online Postgraduate Certificate will allow you to study from anywhere in the world. All you need is a computer or mobile device with an internet connection*



*Our innovative teaching methodology will allow you to study as if you were dealing with real cases, and therefore increasing your training*



# 02 Objectives

The **Postgraduate Diploma in Pediatric Respiratory Physiotherapy and its Evaluation in Rehabilitation Medicine** is aimed at facilitating the medical professional's performance with the latest advances and most innovative treatments in the sector. Its objective is to take you through a training that will allow you to acquire the most updated knowledge for the most advanced and competitive praxis in this field.





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*With a real practical objective, this course will allow you to achieve your training goals by boosting your CV to a higher level of excellence"*



## General Objectives

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- ♦ Promote specialization in respiratory physiotherapy.
- ♦ Update knowledge and manage physiotherapy in different patients with respiratory pathologies.
- ♦ Possess knowledge of the pathophysiology and advanced exploration of the respiratory system.
- ♦ Execute, direct and coordinate the respiratory physiotherapy intervention plan for each patient.



## Specific Objectives

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### Module 1.

- ♦ Understand the respiratory physiology of the child in depth.
- ♦ Manage the physiotherapeutic assessment in the pediatric patient.
- ♦ Apply the non-instrumental techniques of infant respiratory physiotherapy.
- ♦ Manage respiratory training activities at home.

### Module 2

- ♦ Gain up-to-date knowledge of different respiratory pathologies in children.
- ♦ Gain a deeper knowledge of pediatric respiratory emergencies.
- ♦ Apply the instrumental techniques of infant respiratory physiotherapy.
- ♦ Delve into the treatment of physical therapy in pediatric palliative care.

### Module 3

- ♦ Delve into ventilatory biomechanics.
- ♦ Apply different techniques for exploration.
- ♦ Apply different complementary tests for a correct assessment.



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*Highly specialized objectives in a training course created to train the best professionals in Respiratory Physiotherapy”*

03

# Course Management

The materials in the course have been created by a team of leading professionals in Respiratory Physiotherapy, who work in the main reference hospitals, bringing to the program the experience they have gained in their jobs throughout their careers.



A photograph of a child's bed with a white sheet and a brown stuffed animal. The image is partially obscured by a dark blue diagonal overlay on the right side of the page.

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*The best professionals in this area have joined forces to offer you the most specialized and up-to-date knowledge in the field"*

Management



**García Coronado, Luis Pablo**

- Physiotherapist at La Paz University Hospital
- Supervisor of the Physiotherapy Department at La Paz University Hospital.
- Specialist in sports Physiotherapy, Re-training, electrotherapy, Pilates and Therapeutic exercise.
- Director at Fisioespaña C. B.
- Director at Fisioganas S.L.
- Director at Pilates Wellness & Beauty S.L.

## Teachers

### Dr. Macías Gaspar María José

- ♦ Physiotherapist at Beata Maria Ana Hospital since 2021.6. Physiotherapy in hospitalized patients, neurological patients and patients with surgeries and traumatic injuries. Internship tutor for students of the European University.
- ♦ Physiotherapist at La Paz University Hospital since 2018.
- ♦ Physiotherapy in Pediatrics: On the ward, in rooms, in neonates and ICU, Physiotherapy in patients hospitalized in ICU, AER, patients with surgeries and traumatic injuries, and patients with traumatologic injuries.
- ♦ Diploma in Physiotherapy with specialization in Pediatric Physical Therapy and Manual Therapy in Traumatology and Orthopedics.
- ♦ Master's Degree in Pediatric Physiotherapy at CEU San Pablo in Madrid
- ♦ Master's Degree in Osteopathy at the D. François Ricard School of Osteopathy in Madrid
- ♦ Teaching, assistance and management functions. Clinical reasoning adapted to each individual.
- ♦ Expert in Respiratory and Cardiac Physiotherapy.

### Simó Segovia Rocío

- ♦ Physiotherapist at the La Paz hospital, passing through all areas of specialization (trauma and neurology, hydrotherapy, electrotherapy) and during the last 5 years preferential dedication to pediatrics in all fields.
- ♦ Treatment of patients at home and in private clinics.
- ♦ Diploma in Physiotherapy from the Alfonso X El Sabio University (1998-2001)
- ♦ Course on shoulder dystocia and neonatal brachial palsy.
- ♦ Course on respiratory physiotherapy with mechanically ventilated patients.

04

# Structure and Content

The structure of the syllabus has been designed by a team of professionals who understand the implications of medical training in the approach to patient care, who are aware of the relevance of current training and are committed to quality teaching through new educational technologies.





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*A very complete syllabus that will take you gradually through each and every one of the lessons that the Respiratory Physiotherapy professional needs. With an added bonus: the commitment to excellence that characterizes us"*

## Module 1. Pediatric Respiratory Physiotherapy

- 1.1. Introduction to Respiratory Physiotherapy in Pediatrics
  - 1.1.1. Anatomy and Development of the Infant Respiratory System.
  - 1.1.2. Respiratory Physiology in the Child: Specific Characteristics.
  - 1.1.3. Objectives, Indications and Contraindications in Respiratory Physiotherapy.
- 1.2. Bronchiolitis
  - 1.2.1. Etiology and Risk Factors.
  - 1.2.2. Pathophysiology.
  - 1.2.3. Medical Treatment.
- 1.3. Assessment in Respiratory Physiotherapy of the Pediatric Patient (1)
  - 1.3.1. Anamnesis
  - 1.3.2. Visual Examination.
  - 1.3.3. Auscultation: Normal and Pathological Sounds.
- 1.4. Assessment in Respiratory Physiotherapy of the Pediatric Patient (2)
  - 1.4.2. Clinical Scales.
  - 1.4.3. Oxygen Saturation and Alarm Signs.
- 1.5. Non-Instrumental Techniques in Children's Respiratory Physiotherapy (1)
  - 1.5.1. Nasal Wash.
  - 1.5.2. ELPR
  - 1.5.3. ELTGOL
- 1.6. Non-Instrumental Techniques in Children's Respiratory Physiotherapy (2)
  - 1.6.1. Provoked Cough
  - 1.6.2. TEF
  - 1.6.3. DRR
- 1.7. Aerosol Therapy in Pediatrics
  - 1.7.1. SISS Inhalation
  - 1.7.2. Main Drugs Used
- 1.8. Respiratory Physiotherapy in Bronchiolitis
  - 1.8.1. Indication of Treatment and Scheduling of Sessions.
  - 1.8.2. Treatment Session Protocol.

- 1.9. Hygiene Recommendations for Parents
  - 1.9.1. Nasal Washes.
  - 1.9.2. Humidifiers and Other Devices.
  - 1.9.3. General Recommendations.
- 1.10. Breathing Training Activities at Home
  - 1.10.1. Materials for the Exercises.
  - 1.10.2. Respiratory Exercises.
  - 1.10.3. Physical Activity Recommendations.

## Module 2. Pediatric Respiratory Physiotherapy II

- 2.1. Bronchitis in Pediatric Patients
  - 2.1.1. Etiology
  - 2.1.2. Clinical Presentation
  - 2.1.3. Medical Treatment
- 2.2. Pneumonia in Pediatric Patients
  - 2.2.1. Etiology
  - 2.2.2. Clinical Presentation
  - 2.2.3. Medical Treatment
- 2.3. Assessment in Respiratory Physiotherapy of the Pediatric Patient (3)
  - 2.3.1. Spirometry
  - 2.3.2. Stress Tests
  - 2.3.3. Peak Flow
- 2.4. Assessment in Respiratory Physiotherapy in Pediatric Patients with Brain Damage
  - 2.4.1. Assessment of the Respiratory System
  - 2.4.2. Evaluation of Other Systems That Could Influence the Respiratory System
- 2.5. Non-Instrumental Techniques in Children's Respiratory Physiotherapy (3)
  - 2.5.1. EDIC
  - 2.5.2. Autogenous Drainage
  - 2.5.3. Cough Assistance

- 2.6. Non-Instrumental Techniques in Children's Respiratory Physiotherapy: Adaptation in Patients with Brain Damage
  - 2.6.1. ELPR
  - 2.6.2. Nasal Wash
  - 2.6.3. Provoked Cough
- 2.7. Instrumental Techniques in Children's Respiratory Physiotherapy (1)
  - 2.7.1. Cough Assist
  - 2.7.2. High-Frequency Oscillation Vest®
- 2.8. Instrumental Techniques in Children's Respiratory Physiotherapy (2)
  - 2.8.1. Ambu
  - 2.8.2. Secretion Aspirator
- 2.9. Respiratory Physiotherapy in Pediatric Palliative Care
  - 2.9.1. What Is Palliative Care?
  - 2.9.2. Typical Respiratory Pathologies of These Patients
  - 2.9.3. Physiotherapy Treatment in Pediatric Palliative Care
- 2.10. Respiratory Emergencies in Pediatrics
  - 2.10.1. Resuscitation in Pediatrics
- 3.7. Auscultation
  - 3.7.1. Normal Noises
  - 3.7.2. Abnormal and Adventitious Noises
  - 3.7.3. Percussion and Palpation
- 3.8. Pain, Coughing and Expectoration
- 3.9. Radiology
- 3.10. Complementary Tests
  - 3.10.1. Walking Tests
  - 3.10.2. Strength Tests
  - 3.10.3. Pulse Oximetry
  - 3.10.4. Body Plethysmography
  - 3.10.5. Arterial Blood Gases
  - 3.10.6. Spirometry

### Module 3. Respiratory Physiotherapy Evaluation

- 3.1. Anatomy Recap
  - 3.1.1. At Bone Level
  - 3.1.2. At Muscle Level
  - 3.1.3. Ventilatory System
- 3.2. Ventilation-Perfusion Ratio
- 3.3. Ventilatory Biomechanics
  - 3.3.1. Ventilatory Mechanics in Inspiration
  - 3.3.2. Ventilatory Mechanics in Exhalation
- 3.4. Medical History
  - 3.4.2. Physical Inspection: Static and Dynamic Exam
- 3.5. Respiratory Frequency
  - 3.5.1. Types of Respiratory Frequency
  - 3.5.2. One-dimensional Scales
- 3.6. Respiratory Rhythms



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

05

# Methodology

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

This teaching system is used in the most prestigious medical schools in the world, and major publications such as the ***New England Journal of Medicine*** have considered it to be one of the most effective.



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*Discover Re-learning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH we use the Case Method

In a given situation, what would you do? Throughout the program you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is abundant scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

*With TECH you can experience a way of learning that is shaking the foundations of traditional universities around the world*



According to Dr. Gervas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching potential or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in 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 grasp concepts, but also develop their mental capacity by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



## Re-Learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

Our University is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, which represent a real revolution with respect to simply studying and analyzing cases.



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



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

With this methodology we have trained more than 250,000 physicians with unprecedented success, in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

*Re-learning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success*

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

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



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



### Study Material

All the teaching materials are specifically created for the course, by specialists who teach on the course, so that the teaching content is highly specific and precise.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



### Latest Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



### Interactive Summaries

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

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



### Additional Reading

Recent articles, consensus documents, international guides. in our virtual library you will have access to everything you need to complete your training.





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

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### Testing & Re-Testing

We periodically evaluate and re-evaluate your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your goals.



#### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

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



#### Quick Action Guides

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.



06

# Certificate

The Postgraduate Diploma in Pediatric Respiratory Physiotherapy and its Evaluation in Rehabilitation Medicine guarantees you, in addition to the most rigorous and updated training, access to a Postgraduate Diploma issued by TECH Global University.





*Successfully complete this training and receive your university qualification without travel or laborious paperwork"*

This program will allow you to obtain your **Postgraduate Diploma in Pediatric Respiratory Physiotherapy and its Evaluation in Rehabilitation Medicine** 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.

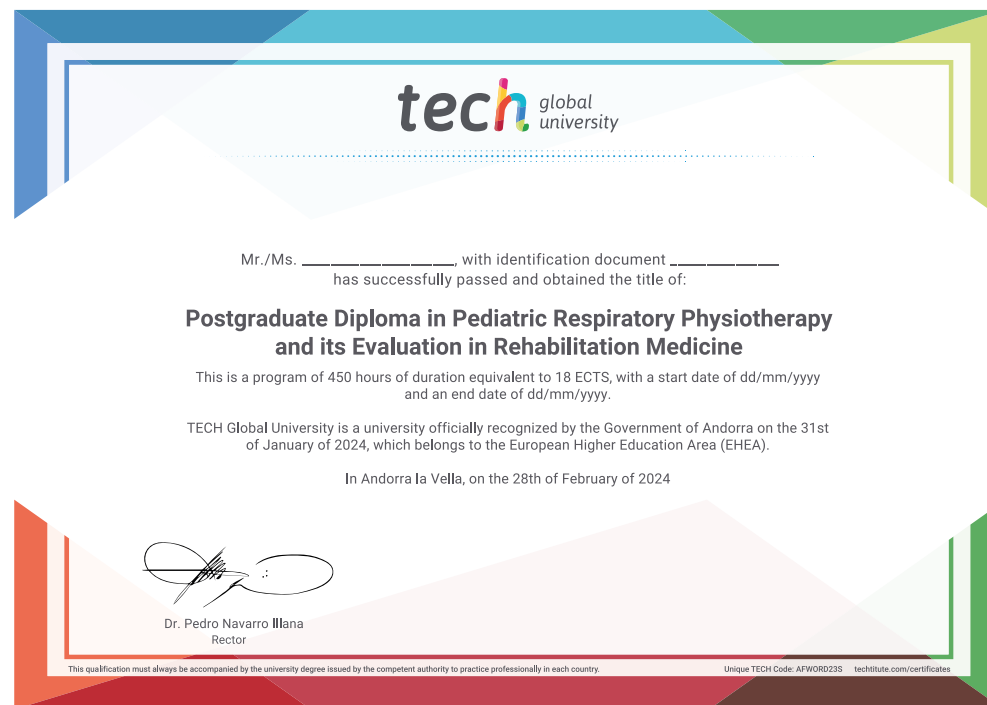
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Pediatric Respiratory Physiotherapy and its Evaluation in Rehabilitation Medicine**

Modality: **online**

Duration: **6 months**

Accreditation: **18 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 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 Respiratory  
Physiotherapy  
and its Evaluation in  
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- » Modality: **online**
- » Duration: **6 months**
- » Certificate: **TECH Global University**
- » Credits: **18 ECTS**
- » Schedule: **at your own pace**
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## Pediatric Respiratory Physiotherapy and its Evaluation in Rehabilitation Medicine

