

Pathologies and Respiratory Rehabilitation





### Postgraduate Diploma

### Pathologies and Respiratory Rehabilitation

» Modality: online

» Duration: 6 months

» Certificate: TECH Technological University

» Dedication: 16h/week

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/physiotherapy/postgraduate-diploma/postgraduate-diploma-pathologies-respiratory-rehabilitation

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Certificate



### tech 06 | Introduction

Respiratory physiotherapy is part of physiotherapy, but focusing 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.

The disciplinary consideration of respiratory physiotherapy with a scientific-technical basis began in the late twentieth century, thanks to technological advances that allow measuring respiratory work and techniques, and is currently becoming necessary and essential in different hospital units. Therefore, it is essential that physical therapists update their knowledge in respiratory physiotherapy and acquire new techniques and tools to apply in their daily practice.

Physiotherapy is considered one of the therapeutic pillars in the management of patients with pulmonary diseases, whether obstructive or restrictive, chronic or acute.

The increase in the incidence of respiratory pathologies that we are going to see during this Postgraduate Diploma, both in children and adults, considerably affects the quality of life of the patients who suffer from them, as well as our health system, with a high social and economic cost due to hospitalization days, sick leave and early death.

The Postgraduate Diploma has a teaching staff specialized in respiratory physiotherapy, who contribute both their practical experience in their day-to-day work in private practice, as well as their lengthy experience in teaching at 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 to do it, in this way, they can flexibly self-direct their study hours.

This online Postgraduate Diploma offers you the benefits of a scientific, teaching and technological high-level course. These are some of its most notable features:

- Latest technology in online teaching software.
- Highly visual teaching system, supported by graphic and schematic contents that are easy to assimilate and understand.
- Practical cases presented by practising experts.
- State-of-the-art interactive video systems.
- Teaching supported by telepractice.
- Continuous updating and recycling systems.
- Self-regulating learning: full compatibility with other occupations.
- Practical exercises for self-evaluation and learning verification.
- Support groups and educational synergies: questions to the expert, debate and knowledge forums.
- Communication with the teacher and individual reflection work.
- Content that is accessible from any fixed or portable device with an Internet connection.
- Supplementary documentation databases are permanently available, even after the course.



Get up to date in all the latest developments in the field of physiotherapy by completing the most effective Postgraduate Diploma in this field available on the market"

### Introduction | 07 tech



An effective and reliable Postgraduate
Diploma that will take you through an
interesting and efficient learning process
so that you acquire all the knowledge of an
expert in the field"

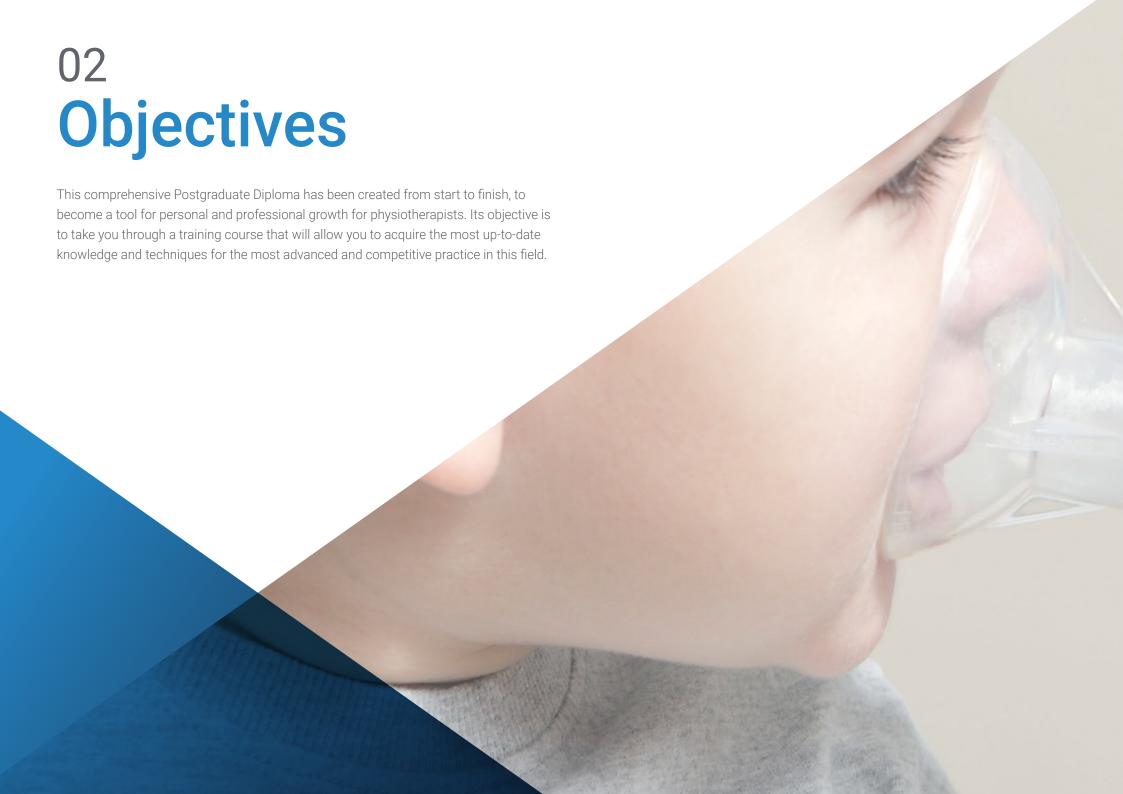
Our teaching staff is made up of working professionals. In this way, we ensure that we provide you with the training update we are aiming for. A multidisciplinary team of professionals training and experienced in different environments, who will cover the theoretical knowledge in an efficient way, but, above all, will put the practical knowledge derived from their own experience at the service of the course: one of the differential qualities of this course.

This mastery of the subject is complemented by the effectiveness of the methodological design of thisPostgraduate Diploma. Developed by a multidisciplinary team of e-learning experts, it integrates the latest advances in educational technology. This way, you will be able to study with a range of comfortable and versatile multimedia tools that will give you the operability you need in your training.

The design of this program is based on Problem-Based Learning: an approach that conceives learning as a highly practical process. To achieve this remotely, we will use telepractice: with the help of an innovative interactive video system, and learning from an expert, you will be able to acquire the knowledge as if you were actually dealing with the scenario you are learning about. A concept that will allow you to integrate and fix learning in a more realistic and permanent way.

Our innovative telepractice concept will give you the opportunity to learn through an immersive experience, which will provide you with a faster integration and a much more realistic view of the contents: "learning from an expert"

With a methodological design based on proven teaching techniques, this Postgraduate Diploma will take you through different teaching approaches to allow you to learn in a dynamic and effective way





### tech 10 | Objectives



### **General Objective**

- 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**

#### Module 1.

- Gain in-depth knowledge of obstructive respiratory pathology.
- Develop the capacity for a correct diagnosis.
- Master respiratory techniques.

#### Module 2.

- Gain in-depth knowledge of the pathophysiological characteristics for its correct exploration.
- Apply the most effective treatment for restrictive pathologies.
- Gain a deeper understanding of the difference between all restrictive pathologies and their therapeutic approach.

#### Module 3.

- Delve into the causes of COPD.
- Manage the pathology of COPD.
- Use the different techniques for a correct assessment.
- Manage the different respiratory trainings.
- Delve into the different rehabilitation programs for respiratory diseases.



Highly specialized objectives in a training created to train the best professionals in Respiratory Physiotherapy"







### tech 14 | Course Management

### Management



### Dr. García Coronado, Luis Pablo

- Physiotherapist at La Paz University Hospita
- · 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.

#### **Professors**

#### Dr. Macías Gaspar María José

- Physiotherapist at Beata Maria Ana Hospital since 20216. 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.

#### Dr. Peroy Badal, Renata

- Physiotherapist in charge of Respiratory Rehabilitation for COPD patients. Virgen de la Torre hospital.
- Respiratory physiotherapy in critical patients admitted to the ICU and in pre- and postoperative patients undergoing abdominal surgery discharged from the inpatient unit.

- Respiratory physiotherapy in adult and pediatric patients with spinal cord injuries and different neuromuscular pathologies associated with respiratory disorders
- Degree in Physiotherapy: 1996-1999 Gimbernat University School of Nursing and Physiotherapy (Autonomous University of Barcelona)
- Graduate in Physiotherapy: 2013-2014 Complutense University of Madrid with the dissertation "Health Education in Respiratory Rehabilitation in COPD in primary care".
- Official Master's Degree in Respiratory and Cardiac Physiotherapy: 2015-2016.
   ONCE University School of Physiotherapy (Complutense University of Madrid)
- D.U in respiratory and cardiovascular kinesitherapy 2007-2008. Université Claude Bernard-lyon with the article "Education before upper abdominal surgery: patient-physiotherapist co-construction of a therapy booklet".

#### Dr. Álvarez Gonzalo, Verónica

- Physiotherapist at La Paz University Hospital. Children's Hospital. In the field of Pediatric Rehabilitation.
- \* Diploma in Physiotherapy. Pontific University Comillas, Madrid.
- Guadarrama Hospital (Health of the Community of Madrid). Neurorehabilitation in medium-stay patients.
- El Vellón Balompié Football Club. Sports physiotherapy.
- Physiotherapy and Rehabilitation (FISIONORTE)





### tech 18 | Structure and Content

#### Module 1. Obstructive Pathologies

- 1.1. Introduction in Obstructive Respiratory Pathology
  - 1.1.1. Theoretical Framework
  - 1.1.2. Clinical Characteristics
- 1.2. Chronic Bronchitis
  - 1.2.1. Concept. Phenotype Pathophysiological Manifestations
  - 1.2.2. Exploration
  - 1.2.3. Pediatric Dentistry
- 1.3. Emphysema
  - 1.3.1. Concept. Phenotype Pathophysiological Characteristics
  - 1.3.2. Exploration
  - 1.3.3. Pediatric Dentistry
- 1.4. Atelectasis
  - 1.4.1. Pathophysiological Characteristics
  - 1.4.2. Exploration
  - 1.4.3. Pediatric Dentistry
- 1.5. Bronchiectasis
  - 1.5.1. Pathophysiological Manifestations
  - 1.5.2. Exploration
  - 1.5.3. Pediatric Dentistry
- 1.6. Bronquial Asthma.
  - 1.6.1. Pathophysiological Characteristics
  - 1.6.2. Differential Diagnosis
  - 1.6.3. Asthmatic Crisis and Self-Management
  - 1.6.4. Exploration and Treatment
- 1.7. Cystic Fibrosis
  - 1.7.1. Clinical Characteristics
  - 1.7.2. Exploration
  - 1.7.3. Pediatric Dentistry
- 1.8. Aging of the Respiratory System Biological Changes in Aging and Their Consequences
- 1.9. Treatment of Chronic Patients and Flare-ups

#### Module 2. Restrictive Pathologies

- 2.1. Introduction to Restrictive Pathology
  - 2.1.1. Theoretical Framework
  - 2.1.2. Clinical Characteristics
- 2.2. Alterations of the Thoracic Cage
  - 2.2.1. Chest Morphology
  - 2.2.2. Respiratory Pattern and Thoracic-Abdominal Movement
  - 2.2.3. Types of Alterations
- 2.3. Diaphragm and Respiratory Muscles Diseases
  - 2.3.1. Pathophysiological Characteristics
  - 2.3.2. Exploration
  - 2.3.2. Pediatric Dentistry
- 2.4. Pleural Effusion
  - 2.4.1. Pathophysiological Manifestations
  - 2.4.2. Exploration
  - 2.4.3. Pediatric Dentistry
- 2.5. Pneumothorax
  - 2.5.1. Clinical Characteristics
  - 2.5.2. Exploration
  - 2.5.3. Pediatric Dentistry
- 2.6. Diffuse Infectious Diseases (Tuberculosis, Abscess, Pneumonia)
  - 2.6.1. Clinical Characteristics
  - 2.6.2. Exploration
  - 2.6.3. Pediatric Dentistry
- 2.7. Idiopathic Pulmonary Fibrosis
  - 2.7.1. Pathophysiological Characteristics
  - 2.7.2. Exploration
  - 2.7.3. Pediatric Dentistry
- 2.8. Sarcoidosis and Pneumoconiosis
  - 2.8.1. Pathophysiological Manifestations
  - 2.8.2. Exploration
  - 2.8.3. Pediatric Dentistry

- 2.9. Neuromuscular Diseases
  - 2.9.1. Clinical Characteristics
  - 2.9.2. Exploration
  - 2.9.3. Pediatric Dentistry

## **Module 3.** Pathophysiological Consequences of COPD Pulmonary Restriction and Respiratory Rehabilitation

- 3.1. Prevalence of COPD and Chronic Respiratory Diseases
  - 3.1.1. Prevalence of COPD in Spain
  - 3.1.2. Prevalence of COPD Globally
- 3.2. COPD
  - 3.2.1. COPD Definition
  - 3.2.2. COPD Treatment
- 3.3. Respiratory Rehabilitation
  - 3.3.1. Definition of Respiratory Rehabilitation
  - 3.3.2. Components of Respiratory Rehabilitation
- 3.4. Assessment of the Respiratory Patient Before, During and After Respiratory Rehabilitation
  - 3.4.1. Dyspnea Evaluation
  - 3.4.2. Assessment of Exercise Tolerance
  - 3.4.3. Assessment of Respiratory Muscle Strength
- 3.5. Exercise Training
  - 3.5.1. Overload
  - 3.5.2. Specificity
  - 3.5.3. Adaptation
- 3.6. Aerobic Training
  - 3.6.1. Parts of the Aerobic Training Session
  - 3.6.2. FIIT Principle
  - 3.6.3. How Training Should be Conducted
- 3.7. Muscle Strengthening
  - 3.7.1. Assessment of Peripheral Musculature
  - 3.7.2. How Training Should be Conducted

- 3.8. Respiratory Muscle Training
  - 3.8.1. Devices for Strengthening the Respiratory Musculature
  - 3.8.2. How Training Should be Conducted
- 3.9. Physical Activity
  - 3.9.1. Physical Exercise Evaluation
  - 3.9.2. Physical Activity Adherence
- 3.10. Respiratory Rehabilitation Programs in Respiratory Diseases other than COPD
  - 3.10.1. Programs in Pulmonary Fibrosis
  - 3.10.2. Bronchiectasis Programs

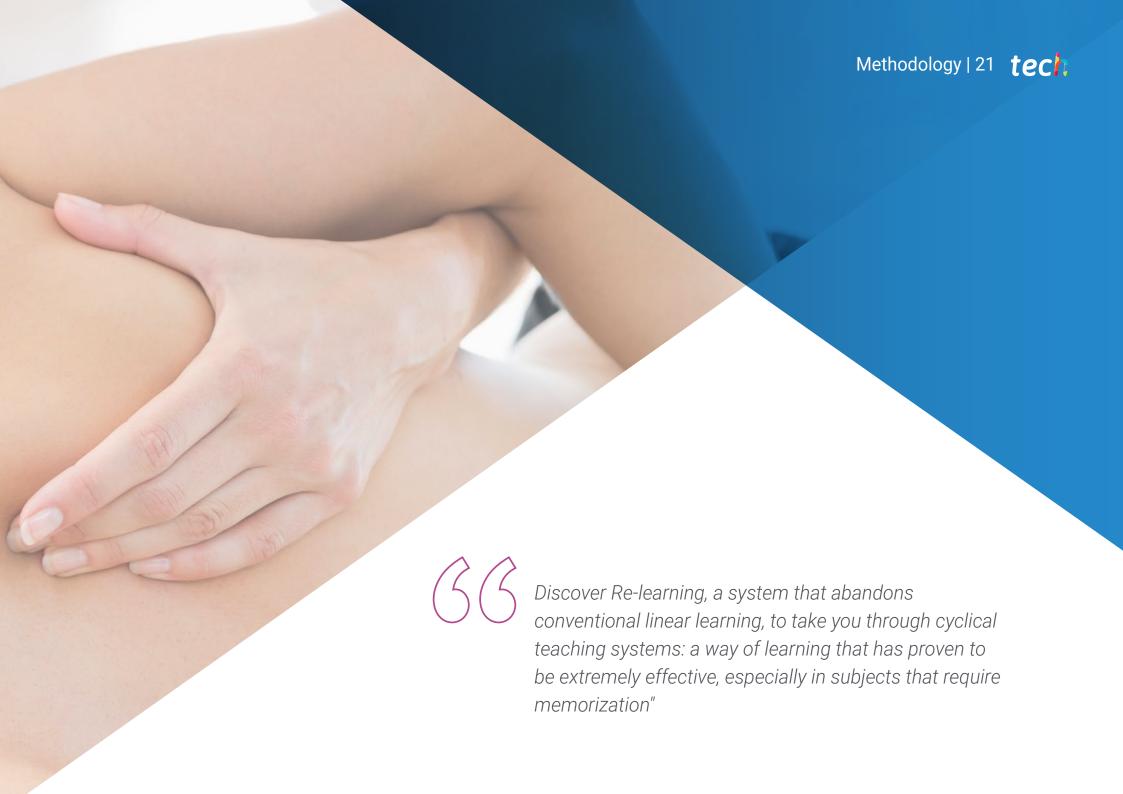


A comprehensive teaching program, structured in well-developed teaching units, oriented toward a high impact learning and training"



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.

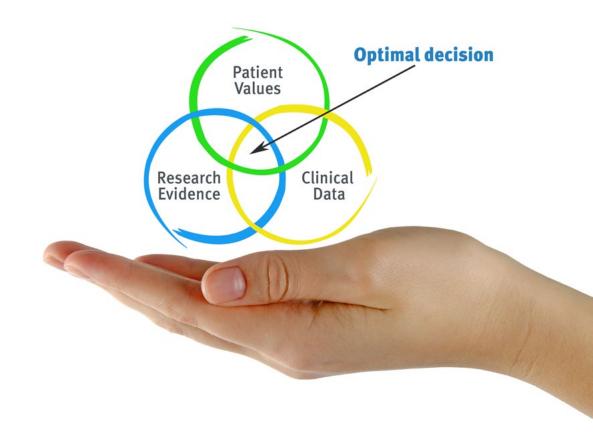


### tech 22 | Methodology

#### At TECH we use the Case Method

In a given clinical 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. Physiotherapists/kinesiologists 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. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching potential or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions of professional physiotherapy 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:

- 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.





### **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 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



### Methodology | 25 tech

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 trained more than 65,000 physiotherapists/kinesiologists with unprecedented success, in all clinical specialties regardless of the workload. All this in a highly demanding environment, where the students have a strong socioeconomic 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 Postgraduate Diploma you will have access to the best educational material, prepared with you in mind:



#### **Study Material**

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



#### Surgical techniques and clinical procedures on video

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



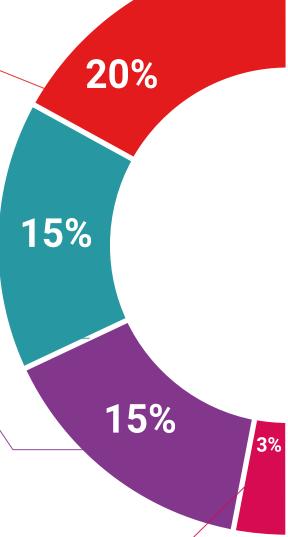
#### **Interactive Summaries**

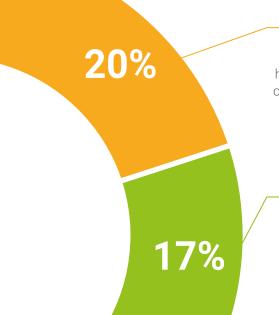
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge. This unique training system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### **Additional Reading**

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





7%

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

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



#### **Testing & Re-testing**

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



#### Classes

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



#### **Quick Action Guides**

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







### tech 30 | Certificate

This **Postgraduate Diploma in Pathologies and Respiratory Rehabilitation** 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.

This diploma contributes to the academic development of the professional and adds a high university curricular value to their training. It is 100% valid in all competitive examinations, labour exchanges and professional career evaluation committees.

Title: Postgraduate Diploma in Pathologies and Respiratory Rehabilitation

**ECTS: 18** 

Official Number of Hours: 450



<sup>\*</sup>Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

technological university

### Postgraduate Diploma

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