





Hybrid Professional Master's Degree

Respiratory Physiotherapy

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months.

Certificate: TECH Technological University

Teaching Hours: 1,620 h.

Website: www.techtitute.com/in/physiotherapy/hybrid-professional-master-degree/hybrid-professional-master-degree-respiratory-physiotherapy

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tech 06 | Introduction

COVID-19 was a turning point for whole the world because of the devastating effects on the health of many people. Among them, there are patients who still suffer from respiratory sequels, which require specific treatments. They are joined by patients with other pathologies in which they were already working through physiotherapy to improve their recovery or their quality of life.

Faced with this reality, Respiratory Physiotherapy has experienced an important boom in a very short time and an evolution in the techniques that need the updating of professionals in this field. For this reason, TECH has launched this 12-month academic program that perfectly combines a theoretical framework in a 100% online mode, with a practical stay of 3 weeks in a first-class sanitary space.

This is a program that leads professionals to raise their skills through an advanced agenda, developed by experts in this area with a long history in distinguished hospital centers. In addition, the culmination of this pedagogical experience is the eminently practical phase, where the graduate will have a unique opportunity to apply all the concepts addressed in the theoretical framework, in a prominent health environment.

A process, where you will also be tutored by physiotherapists with a consolidated career, which will show you the most current techniques and procedures for the management of patients who present various respiratory pathologies.

Without a doubt, an ideal opportunity to make a complete update through a course that offers flexibility by providing a teaching material available 24 hours a day, from any electronic device with internet connection. In addition, to incorporate a stay in one of the best clinical spaces specialized in Respiratory Physiotherapy.

This **Hybrid Professional Master's Degree in Respiratory Physiotherapy** contains the most complete and up-to-date scientific program on the market. The most important features include:

- Development of more than 100 cases presented by physiotherapy professionals experts in the management of respiratory pathologies
- 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
- Patient assessment and integration of the latest recommendations to integrate Therapeutic Swimming Successfully
- Comprehensive systematized action plans for the main pathologies in the Intensive Care Medicine Unit
- Presentation of practical workshops on procedures, diagnosis, and treatment techniques in critical patients
- Algorithm-based interactive learning system for decision-making in the presented clinical situations
- Approach of the different lesions according to their own characteristics of the population
- With a special emphasis on evidence-based medicine and methodologies of research on the recovery of injured athletes
- All of this will be complemented by 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.
- Furthermore, you will be able to carry out a clinical internship in one of the best Clinical Analysis and rehabilitation centers



A program that will allow you to face with guarantees the current challenges of physiotherapy for patients who have suffered VOCID-19"

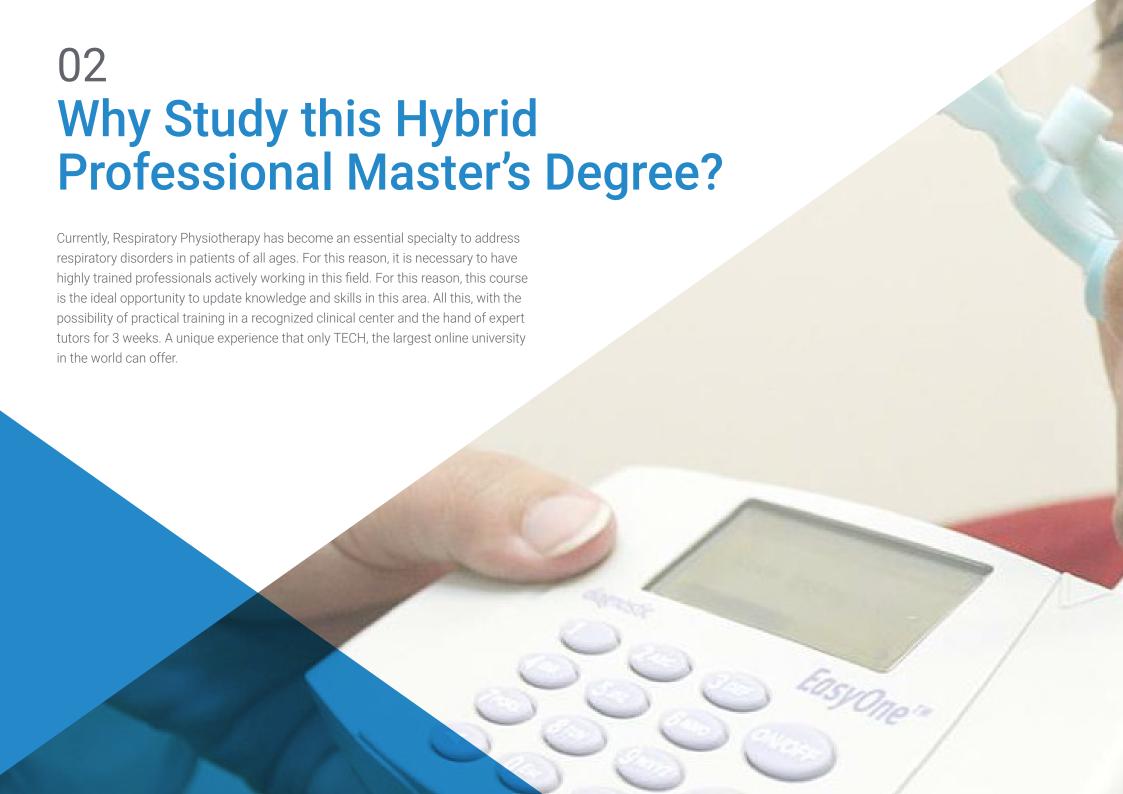
This Master's program, which has a professionalizing nature and a hybrid learning modality, is aimed at updating medical professionals who perform their functions in clinical centers and hospitals, and who require a high level of qualification. The contents are based on the latest scientific evidence, and oriented in an educational way to integrate theoretical knowledge into practice, and the theoretical-practical elements will facilitate knowledge update and decision-making in patient management.

Thanks to the multimedia content, developed with the latest educational technology, Physiotherapy professionals will benefit from contextual learning, i.e., a simulated environment that will provide immersive learning programmed to train in real 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 course. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

This Hybrid Professional Master's Degree will take you to delve into the scientific evidence around the critical patient approach using techniques of Respiratory Physiotherapy.

Get the update needed to evaluate and treat dyspnea, perform respiratory rehabilitation, and manage mechanical ventilation.







tech 10 | Why Study this Hybrid Professional Master's Degree?

1. Updating from the Latest Technology Available

Currently, the use of advanced technology in Respiratory Physiotherapy can be fundamental to improve the effectiveness of treatments and reduce patients' recovery times. Therefore, through this program the graduate will be able to keep up with the latest technological advances in this area, integrating the latest technical advances in Respiratory Physiotherapy, which will lead to more effective and advanced care for patients.

2. Gaining In-depth Knowledge from the Experience of Top Specialists

Students of this degree will have access to a team of highly trained specialists in both teaching and clinical practice. A faculty that will also be available to answer any questions about the program and, during the stay in a prominent clinical center, students will be guided by experts in Respiratory Physiotherapy. This will allow them to integrate the latest diagnostic and therapeutic methodologies and procedures, and improve their skills and experience in this field. In short, it is a unique opportunity for professional development in Respiratory Physiotherapy.

3. Entering First-Class Clinical Environments

TECH carefully selects all available centers for Internship Programs. In this way, the graduate will be guaranteed access to a first-level clinical space in the field of Aquatic Physiotherapy, where the most advanced therapeutic techniques are used. So, you will be able to check the most rigorous and exhaustive methodology, always applying the latest scientific evidence.





Why Study this Hybrid Professional Master's Degree? | 11 tech

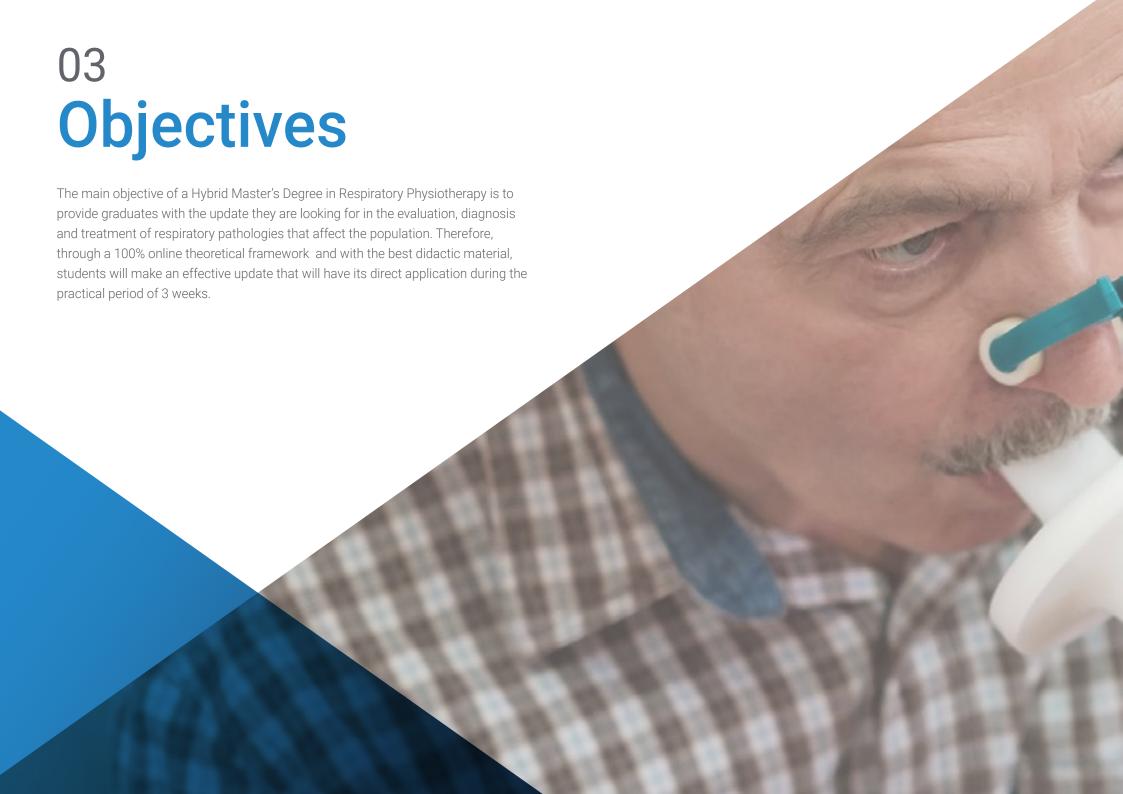
4. Combining the Best Theory with State-of-the-Art Practice

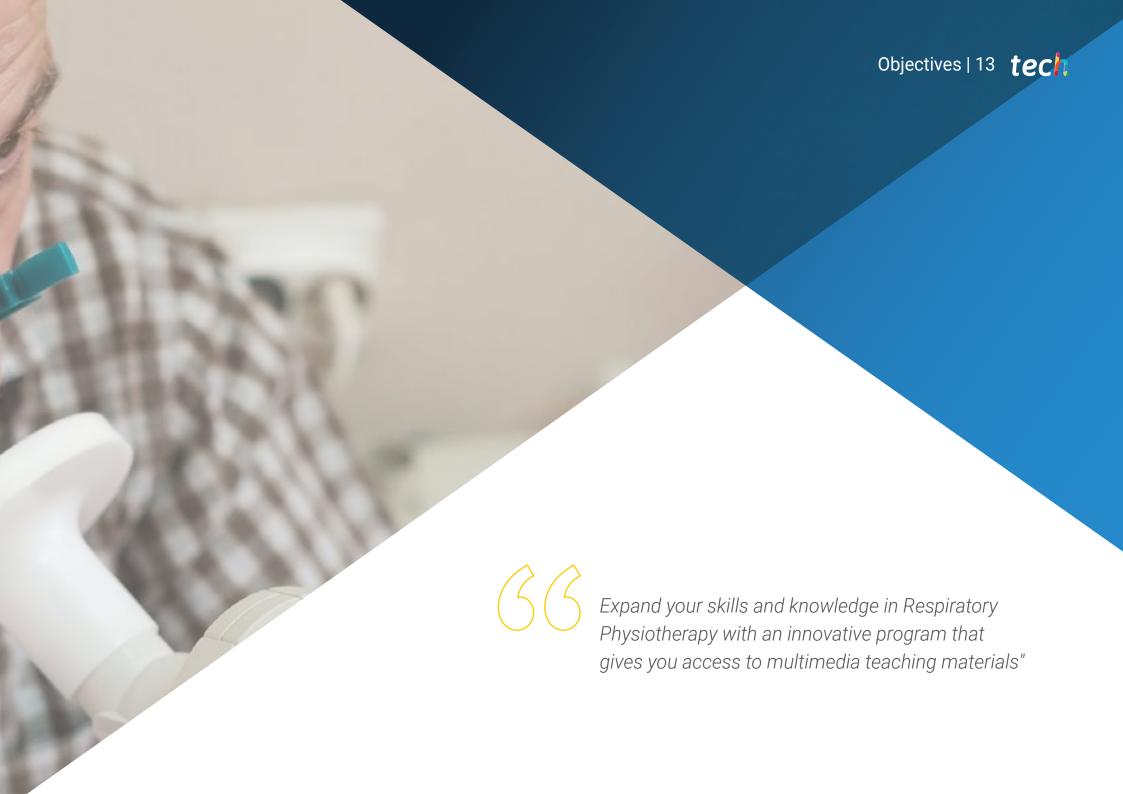
The Hybrid Professional Master's Degree in Respiratory Physiotherapy is a perfect combination of theory and practice in a prominent clinical setting, designed specifically for physiotherapists who want to update their skills. At the end of this program, graduates will be able to lead the planning of injury prevention programs in vulnerable groups, such as the elderly, pregnant and disabled. This flexible and practical curriculum is very useful for clinical practice, which makes it an outstanding option for those looking to improve their skills in Respiratory Physiotherapy.

5. Expanding the Boundaries of Knowledge

TECH is the largest digital university in the world that offers professionals a unique opportunity to broaden their knowledge by doing internships in clinics of national and international renown. That way, students can expand their frontiers of knowledge through a valuable and unique experience, surrounded by the best specialists.







tech 14 | Objectives

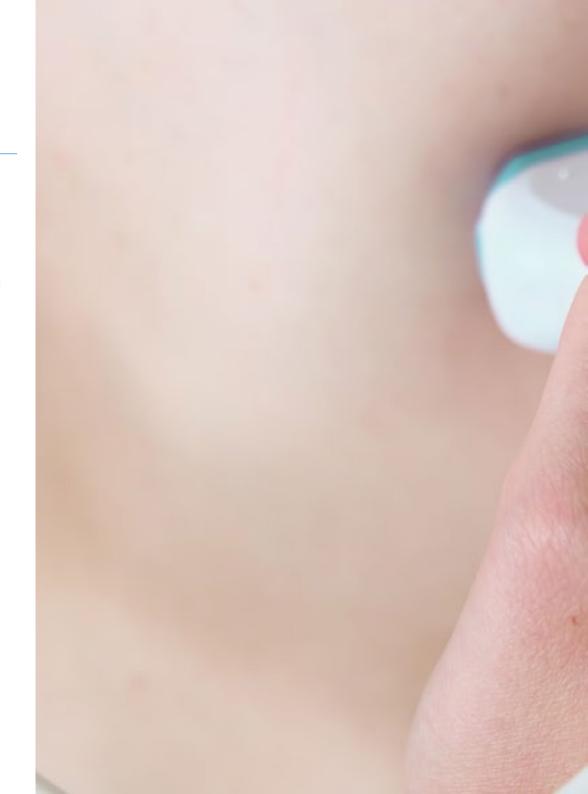


General Objective

 This program promotes specialization in Respiratory Physiotherapy, allowing the graduate to be aware of advances in the management of different respiratory pathologies. In addition, you will acquire the necessary skills to execute, direct and coordinate personalized respiratory physiotherapy intervention plans for each patient. Goals that will allow you to raise your skills to and distinguish yourself in a sector that increasingly demands experts in this field



An academic option that provides you with a100% online syllabus, available 24 hours a day, from any digital device with internet connection"







Specific Objectives

Module 1. Pediatric Respiratory Physiotherapy I

- In-depth understanding of the respiratory physiology of children
- Manage the physiotherapeutic assessment in pediatric patients
- Apply the non-instrumental techniques of infant respiratory physiotherapy
- Manage respiratory training activities at home

Module 2. Pediatric Respiratory Physiotherapy II

- Get updated on different respiratory pathologies in children
- Deepen the knowledge of pediatric respiratory emergencies
- Apply the instrumental techniques of infant respiratory physiotherapy
- In-depth study in the treatment of physiotherapy in pediatric palliative care

Module 3. Respiratory Physiotherapy Evaluation

- Delve into ventilatory biomechanics
- Apply different techniques for exploration
- Apply different complementary tests for a correct evaluation

Module 4. Mechanical Ventilation

- In-depth understanding of mechanical ventilation
- Apply complementary techniques in respiratory pathology
- Familiarization with the obstructive NIV patient
- Familiarization with the Restrictive NIV patient

Module 5. Obstructive Pathology

- In-depth knowledge of obstructive respiratory pathology
- Develop the capacity for a correct diagnosis
- Manage respiratory techniques

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Module 6. Restrictive Pathologies

- Know in depth the physiopathological characteristics for its correct exploration
- Apply the most effective treatment for restrictive pathologies
- Better understand the difference between all restrictive pathologies and their therapeutic approach

Module 7. Pathophysiological Consequences of COPD Pulmonary Restriction and Respiratory Rehabilitation

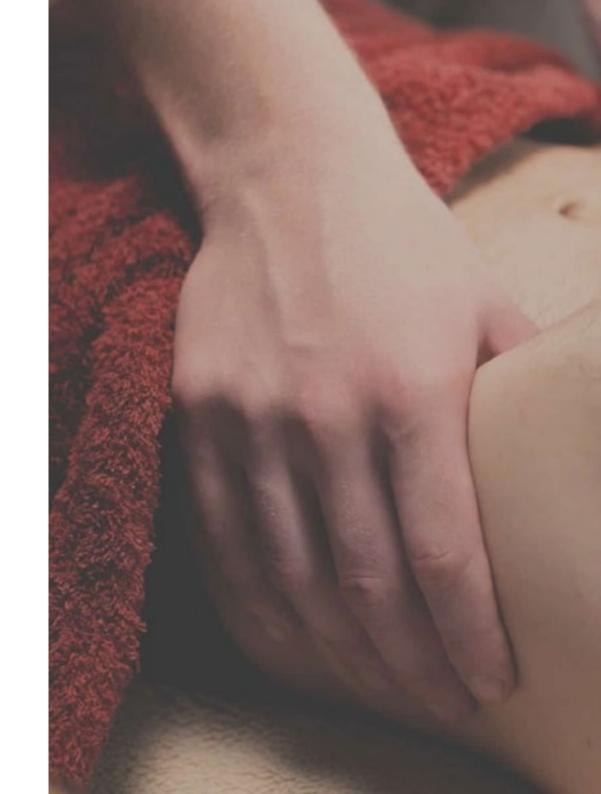
- In-depth study of the causes of COPD
- Managing COPD pathology
- Use the different techniques for a correct assessment
- Manage different respiratory training
- In-depth knowledge of the different rehabilitation programs for respiratory diseases

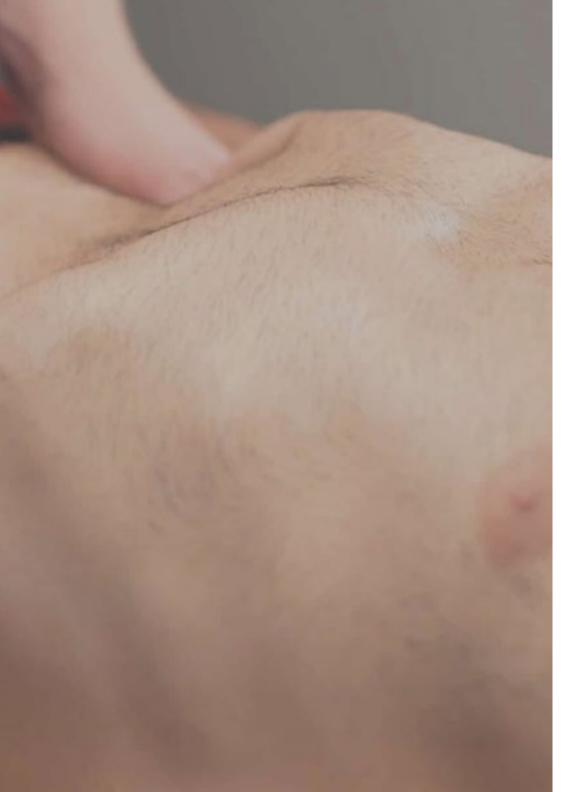
Module 8. Respiratory Techniques in Physiotherapy

- In-depth knowledge of the physiological mechanisms of the respiratory system
- Gain in-depth knowledge of the treatment techniques in respiratory physiotherapy
- Applying different techniques
- Handling of instrumental devices

Module 9. Respiratory Physiotherapy in Critical Patients

- Delve into respiratory physiotherapy in ICUs
- Manage the different respiratory techniques in critically ill patients
- Apply pre/post-surgery exercise programs





Objectives | 17 tech

Module 10. Respiratory Physiotherapy in COVID

- Manage COVID-19 Respiratory Physiotherapy treatment in critical care units
- Apply the correct respiratory physiotherapy treatment in the ward
- Become familiar with new scenarios of physical therapy intervention in the post-COVID era



Interactive teaching resources, such as explanatory videos and simulations of clinical cases, are designed to give you a much more effective update in Respiratory Physiotherapy"



tech 20 | Skills



General Skills

- Apply the knowledge acquired in this program in daily practice
- Use tools and techniques of Respiratory Physiotherapy
- Integrate therapeutic exercise in health promotion, both in healthy and sick populations
- Design and implement physiotherapy intervention programs to treat respiratory disorders
- Communicate and collaborate with other health professionals in the treatment and management of patients with respiratory disorders
- Include the application of more advanced tools for monitoring the patient's physical activity







Specific Skills

- Apply the non-instrumental techniques of infant respiratory physiotherapy
- In-depth study in the treatment of physiotherapy in pediatric palliative care
- Apply different techniques for exploration
- Apply complementary techniques in respiratory pathology
- Develop the capacity for a correct diagnosis
- Manage respiratory techniques
- Better understand the difference between all restrictive pathologies and their therapeutic approach
- In-depth knowledge of the physiological mechanisms of the respiratory system
- In-depth study of Respiratory Physiotherapy in the ICU
- Become Master psychosocial new scenarios of physical therapy intervention in the post-COVID era



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Management



Mr. García Coronado, Luis Pablo

- Supervisor at the Adult Emergency Department at La Paz University Hospital, Madrid
- Physiotherapist at La Paz University Hospital, Madrid
- Physiotherapist of Adidas Runners Madrid
- Owner and director of Fisioganas SL
- Owner of 3Metros
- Owner and Director of FisioEspaña CB
- Diploma in Physiotherapy from the European University
- MBA in Business Administration and Management by EAE Business School

Professors

Ms. Pérez-Esteban Luis-Yagüe, Teresa

- Physiotherapist Specialist in Respiratory Rehabilitation and Locomotive Apparatus
- Physiotherapist at Gregorio Marañón General University Hospital, Madrid
- Physiotherapist in the Critical Care Department of the Gregorio Marañón General University Hospital, Madrid.
- Physiotherapist at Gregorio Marañón MaternalChild Hospital, Madrid
- Physiotherapist at the "José Villarreal" Day Care Center, Madrid.
- Physiotherapist at La Paz University Hospital, Madrid
- Physiotherapist at the Provincial Rehabilitation Institute
- Physiotherapist at Collado Villalba General University Hospital, Madrid
- Fisioterapeuta at the Sanitas Welcome y Sanitas Welfare Center of Chamartín, Madrid
- Physiotherapist At Milenio-Fuencarral Clinic, Madrid

- Physiotherapist At Tres Olivos Clinic, Madrid
- Grade in Physiotherapy from the Faculty of Nursing and Physiotherapy Salus Infirmorum, Pontifical University of Salamanca.
- Specialist in Respiratory Physiotherapy, Castilla La Mancha-Toledo University
- Professional Master's Degree in Manual Physiotherapy of the Locomotor System, Universidad de Alcalá- Madrid
- Basic Radiology for Physical Therapists online course
- Therapeutic exercise update program by the Spanish General Council of Physiotherapists' Associations
- Volunteer member of the Nour Association of Cerebral Palsy, Northern Morocco

Ms. Macías Gaspar, María José

- Physiotherapist Postgraduate Diploma in Respiratory Physiotherapy
- Physiotherapist at La Paz University Hospital, Madrid
- Physiotherapist at the Foundation General Hospital of the Santísima Trinidad, Salamanca
- Physiotherapist at Beata María Ana Hospital-Hermanas Hospitalarias
- Degree in Physiotherapy from the University of Salamanca
- Master's Degree in Pediatric Physiotherapy from CEU San Pablo University, Madrid.
- Expert in Physiotherapy and Sports Rehabilitation at the International University Isabel I de Castilla
- Manual Therapy Course in Traumatology and Orthopedics for Physiotherapy

Ms. Peroy Badal, Renata

- Physiotherapist Specialist in Respiratory and Cardiac Therapy
- Physiotherapist in charge of Respiratory Rehabilitation for COPD patients, Virgen de la Torre Hospital, Madrid
- Physiotherapist in Respiratory Rehabilitation in COPD Patients, Regional Centre for the Fight against Cancer, Marseille
- Primary Care Physiotherapist, Hospital del Mar, Barcelona
- Teaching in public health institutions for university students
- Author of the book entitled Valuation tools applied in physiotherapy- Part II
- Diploma in Physiotherapy 1996-1999, Gimbernat University School of Nursing and Physiotherapy, Autonomous University of Barcelona
- Graduate in Physiotherapy: 2013-2014, by the 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 by the Claude Bernard-Lyon University
- Postgraduate Certificate in Structural Osteopathy from the Autonomous University of Barcelona.

- Postgraduate Certificate in Pediatric Physiotherapy from the International University of Catalonia, Spain
- Postgraduate Certificate in Introduction to the Physical Education and Sports from the University of Barcelona.
- Member of: Illustrious Professional College of Physiotherapists of the CAM, Working Committee of Cardio-respiratory Physiotherapy, Spanish Society of Pulmonology and Thoracic Surgery (SEPAR), Emerging Group of the Area of Respiratory Physiotherapy (GEFiR) and Scientific Committee of the Professional Association of Physiotherapists of the Community of Madrid

Ms. Simó Segovia, Rocío

- Physiotherapist at La Paz University Hospital, Madrid
- Physiotherapist at home and in private clinics
- Occupational Risk Prevention Trainer
- Health Personnel Trainer in Postural Criteria and Ergonomics
- Postgraduate Certificate in Physiotherapy from the Universidad Alfonso X el Sabio
- Speciality in Physiotherapy Children Neurological Pathology in the Rey Juan Carlos University
- Specialty in Infantile Cerebral Palsy by the Children's University Hospital Niño Jesús, Madrid.

Ms. Álvarez Gonzalo. Verónica

- Expert Physiotherapist in Pediatric Rehabilitation and Neurorehabilitation at the Hospital Universitario La Paz. Madrid.
- Physiotherapist in the field of Pediatric Rehabilitation at the Maternity and Children's Hospital of La Paz, Madrid.
- Guadarrama Hospital, Madrid
- Neurorehabilitation from medium-stay patients.
- Sports Physiotherapy in El Vellón Balompié Football Club
- Physiotherapy and Rehabilitation in FISIONORTE
- Diploma in Physiotherapy from the Pontifical University Comillas





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Module 1. Pediatric Respiratory Physiotherapy I

- 1.1. Introduction in Respiratory Physiotherapy in Pediatrics
 - 1.1.1. Anatomy and Development of the Infant Respiratory Tract
 - 1.1.2. Respiratory Physiology in Children: Specific Features
 - 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 in Pediatric Patients (I)
 - 1.3.1. Medical History
 - 1.3.2. Visual Exploration
 - 1.3.3. Auscultation: Normal and Pathological Sounds
- 1.4. Assessment in Respiratory Physiotherapy in Pediatric Patients (II)
 - 1.4.1. Clinical Scales
 - 1.4.2. Oxygen Saturation and Alarm Signals
- 1.5. Non-instrumental Techniques in Respiratory Physiotherapy for Children (I)
 - 1.5.1. Nasal Wash
 - 1.5.2. ELPR
 - 1.5.3. ELTGOL
- 1.6. Non-instrumental Techniques in Respiratory Physiotherapy for Children (II)
 - 1.6.1. Provoked Cough
 - 1.6.2. TEF
 - 1.6.3. DRR
- 1.7. Aerosol Therapy in Pediatrics
 - 1.7.1. Inhalation Systems
 - 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. Protocol in Treatment Sessions
- 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 to Do 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 Symptoms
 - 2.1.3. Medical Treatment
- 2.2. Pneumonia in Pediatric Patients
 - 2.2.1. Etiology
 - 2.2.2. Clinical Symptoms
 - 2.2.3. Medical Treatment
- 2.3. Assessment in Respiratory Physiotherapy in Pediatric Patients (III)
 - 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. Evaluation of the Respiratory System
 - 2.4.2. Evaluation of Other Systems That Could Influence the Respiratory System
- 2.5. Non-instrumental Techniques in Respiratory Physiotherapy for Children (III)
 - 2.5.1. EDIC
 - 2.5.2. Autogenous Drainage
 - 2.5.3. Cough Assistance
- 2.6. Non-instrumental Techniques in Pediatric Respiratory Physiotherapy: Adaptation in Brain-Damaged Patients
 - 2.6.1. ELPR
 - 2.6.2. Nasal Wash
 - 2.6.3. Provoked Cough
- 2.7. Instrumental Techniques in Respiratory Physiotherapy for Children (I)
 - 2.7.1. Cought Assist
 - 2.7.2. High-Frequency Oscillation Vest®

- 2.8. Instrumental Techniques in Respiratory Physiotherapy for Children (II)
 - 2.8.1. Ambú
 - 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. Pediatric Reanimation

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. Exploration
 - 3.4.1. 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
- 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 4. Mechanical Ventilation

- 4.1. Introduction and General Aspects of Mechanical Ventilation
 - 4.1.1. Non-Invasive Mechanical Ventilation
 - 4.1.2. Invasive Mechanical Ventilation
- 4.2. Systems of Administrating Oxygen
 - 4.2.1. Closed Circuit Systems
 - 4.2.2. Open Circuit Systems
- 4.3. Non-Mechanical Ventilators
 - 4.3.1. CPAP Systems in Adults
 - 4.3.2. BIPAP Systems in Adults
- 4.4. Ventilatory Modes
 - 4.4.1. Programming in CPAP Mode
 - 4.4.2. Programming in Bipap Mode
- 4.5. Parameters and Monitoring
- 4.6. Contraindications and Complications
- 4.7. Home Mechanical Ventilation
 - 4.7.1. Epidemiology, Rationale and Physiological Basis
 - 4.7.2. Application Criteria
 - 4.7.3. Ventilatory Modes
 - 4.7.4 Parameters and Variables
- 4.8. Complementary Techniques
 - 4.8.1. Aerosol Therapy
 - 4.8.2. Drug Administration
- 4.9. NIV in the Obstructive Patients
- 4.10. NIV in Restrictive Patients

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Module 5. Obstructive Pathology

- 5.1. Introduction to Obstructive Respiratory Pathology
 - 5.1.1. Theoretical Framework
 - 5.1.2. Clinical Characteristics
- 5.2. Chronic Bronchitis
 - 5.2.1. Concept. Phenotype Pathophysiological Manifestations
 - 5.2.2. Exploration
 - 5.2.3. Treatment
- 5.3. Emphysema
 - 5.3.1. Concept. Phenotype Pathophysiological Characteristics
 - 5.3.2. Exploration
 - 5.3.3. Treatment
- 5.4. Atelectasis
 - 5.4.1. Pathophysiological Characteristics
 - 5.4.2. Exploration
 - 5.4.3. Treatment
- 5.5. Bronchiectasis
 - 5.5.1. Pathophysiological Manifestations
 - 5.5.2. Exploration
 - 5.5.3. Treatment
- 5.6. Bronquial Asthma.
 - 5.6.1. Pathophysiological Characteristics
 - 5.6.2. Differential Diagnosis
 - 5.6.3. Asthmatic Crisis and Self-Management
 - 5.6.4. Exploration and Treatment
- 5.7. Cystic fibrosis
 - 5.7.1. Clinical Characteristics
 - 5.7.2. Exploration
 - 5.7.3. Treatment
- 5.8. Aging of the Respiratory System Biological Changes in Aging and Their Consequences
- 5.9. Treatment of Chronic Patients and Flare-ups



Module 6. Restrictive Pathologies

- 6.1. Introduction to Restrictive Pathology
 - 6.1.1. Theoretical Framework
 - 6.1.2. Clinical Characteristics
- 6.2. Alterations of the Thoracic Cage
 - 6.2.1. Chest Morphology
 - 6.2.2. Respiratory Pattern and thoracoabdominal Movement
 - 6.2.3. Types of Alterations
- 6.3. Diaphragm and Respiratory Muscles Diseases
 - 6.3.1. Pathophysiological Characteristics
 - 6.3.2. Exploration
 - 6.3.3. Treatment
- 6.4. Pleural Effusion
 - 6.4.1. Pathophysiological Manifestations
 - 6.4.2. Exploration
 - 6.4.3. Treatment
- 6.5. Pneumothorax
 - 6.5.1. Clinical Characteristics
 - 6.5.2. Exploration
 - 6.5.3. Treatment
- 6.6. Diffuse Infectious Diseases (Tuberculosis, Abscess, Pneumonia)
 - 6.6.1. Clinical Characteristics
 - 6.6.2. Exploration
 - 6.6.3. Treatment
- 6.7. Idiopathic Pulmonary Fibrosis
 - 6.7.1. Pathophysiological Characteristics
 - 6.7.2. Exploration
 - 6.7.3. Treatment
- 6.8. Sarcoidosis and Pneumoconiosis
 - 6.8.1. Pathophysiological Manifestations
 - 6.8.2. Exploration
 - 6.8.3. Treatment
- 6.9. Neuromuscular Diseases
 - 6.9.1. Clinical Characteristics
 - 6.9.2. Exploration
 - 6.9.3. Treatment

Module 7. Pathophysiological Consequences of COPD Pulmonary Restriction and Respiratory Rehabilitation

- 7.1. Prevalence of COPD and Chronic Respiratory Diseases
 - 7.1.1. Prevalence of COPD in Spain
 - 7.1.2. Prevalence of COPD Globally
- 7.2. COPD
 - 7.2.1. COPD Definition
 - 7.2.2. COPD Treatment
- 7.3. Respiratory Rehabilitation
 - 7.3.1. Definition of Respiratory Rehabilitation
 - 7.3.2. Components of Respiratory Rehabilitation
- 7.4. Assessment of the Respiratory Patient Before, During and After Respiratory Rehabilitation
 - 7.4.1. Dyspnea Evaluation
 - 7.4.2. Assessment of Exercise Tolerance
 - 7.4.3. Assessment of Respiratory Muscle Strength
- 7.5. Exercise Training
 - 7.5.1. Overload
 - 7.5.2. Specificity
 - 7.5.3. Adaptation
- 7.6. Aerobic Training
 - 7.6.1. Parts of the Aerobic Training Session
 - 7.6.2. FIIT Principle
 - 7.6.3. How Should a Training Session Be Carried Out?
- 7.7. Muscle Strengthening
 - 7.7.1. Assessment of Peripheral Musculature
 - 7.7.2. How Should a Training Session Be Carried Out?
- 7.8. Respiratory Muscle Training
 - 7.8.1. Devices for Strengthening the Respiratory Musculature
 - 7.8.2. How Should a Training Session Be Carried Out?
- 7.9. Physical Activity
 - 7.9.1. Physical Exercise Evaluation
 - 7.9.2. Physical Activity Adherence
- 7.10. Respiratory Rehabilitation Programs in Respiratory Diseases other than COPD
 - 7.10.1. Programs in Pulmonary Fibrosis
 - 7.10.2. Bronchiectasis Programs

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Module 8. Respiratory Techniques in Physiotherapy

- 8.1. Historical Evolution of Respiratory Physiotherapy
 - 8.1.1. Different Schools of Respiratory Physiotherapy
 - 8.1.2. Different Classifications of Respiratory Physiotherapy
- 8.2. Respiratory Physiotherapy Objectives
 - 8.2.1. General Objectives
 - 8.2.2. Specific Objectives
- 8.3. Physiological Mechanisms to Understand the Techniques of Respiratory Physiotherapy
 - 8.3.1. Rocher Equation
 - 8.3.2. Poiseuille Law
 - 8.3.3. Collateral Ventilation
- 8.4. Treatment Techniques in Respiratory Physiotherapy
 - 8.4.1. Forced Inspiratory Techniques
 - 8.4.2. Slow Expiratory Techniques
 - 8.4.3. Forced Expiratory Techniques
 - 8.4.4. Slow Inspiratory Techniques
- 8.5. Secretions Drainage Techniques
 - 8.5.1. Techniques Based on Gravity
 - 8.5.2. Techniques Based on Shock Waves
 - 8.5.3. Techniques Based on Air Flow
- 8.6. Lung Expansion Techniques
 - 8.6.1. EDIC
 - 8.6.2. Incentive Spirometry
 - 8.6.3. Air Staking
- 8.7. Ventilatory Techniques
 - 8.7.1. Directed Costal Ventilation Technique
 - 8.7.2. Targeted Abdomino-Diaphragmatic Ventilation Technique
- 8.8. Instrumental Devices
 - 8.8.1. Cough Assist ®
 - 8.8.2. Vibration Vests
 - 8.8.3. Percussionaire ®
 - 8.8.4. PEP Devices

- 8.9. Aerosol Therapy
 - 8.9.1. Type of Nebulizers
 - 8.9.2. Type of Inhalers
 - 8.9.3. Inhalation Technique
- 8.10. Health Education and Relaxation
 - 8.10.1. Importance of Health Education in Chronic Pathologies
 - 8.10.2. Importance of Relaxation in Chronic Pathologies

Module 9. Respiratory Physiotherapy in Critical Patients

- 9.1. Critical Patients
 - 9.1.1. Definition
 - 9.1.2. Different Work Teams With Critical Patients
 - 9.1.3. Multidisciplinary Work Team
- 9.2. Critical Unit
 - 9.2.1. Basic knowledge of Monitoring Patients
 - 9.2.2. Different Oxygen Support Devices
 - 9.2.3. Health Protection
- 9.3. Physiotherapy in the ICU
 - 9.3.1. Intensive Care Unit
 - 9.3.2. The Role of Physiotherapy in this Ward
 - 9.3.3. Systems of Mechanical Ventilation Monitoring of Mechanical Ventilation
- 9.4. Thoracic Area Physiotherapy
 - 9.4.1. Thoracic Resuscitation Unit
 - 9.4.2. Pleur-Evac and Pulmonary Drainage Devices
 - 9.4.3. Basic Notions in Thoracic Radiography
- 9.5. Physiotherapy in the Coronary Unit
 - 9.5.1. Cardiac Pathology Sternotomies
 - 9.5.2. Main Cardiac Surgeries and Treatments
 - 9.5.3. Breathing Exercise Programs Pre/Post Surgery
 - 9.5.4. Complications and Contraindications
- 9.6. Physiotherapy in Neuromuscular Patients
 - 9.6.1. Concept of Neuromuscular Disease (ENM) and Main Characteristics
 - 9.6.2. Respiratory Alterations in (ENM) and Complications with Hospital Admission
 - 9.6.3. Main Respiratory Physiotherapy Techniques Applied to NME (Hyperinflation and Assisted Cough Techniques)
 - 9.6.4. Phonatory Valve and Suction Techniques

- 9.7. URPA
 - 9.7.1. Post-anaesthetic resuscitation unit
 - 9.7.2. Sedation. Basic Concepts from Pharmacology
 - 9.7.3. Importance of Early Mobilization of Patients and Seated Sitting
- 9.8. Physiotherapy in Neonatal ICU and Pediatrics
 - 9.8.1. Embryonic Factors: Antenatal and Postnatal Factors that Determine Lung Development
 - 9.8.2. Common Respiratory Pathologies in Neonatology and Pediatrics
 - 9.8.3. Treatment Techniques
- 9.9. Approach to Bioethics
 - 9.9.1. The Code of Conduct
 - 9.9.2. Ethical Questions in Critical Care Units
- 9.10. Importance of Family and the Environment During the Process of Recovery
 - 9.10.1. Emotional Factors
 - 9.10.2. Guidelines for Accompaniment

Module 10. Respiratory Physiotherapy in COVID

- 10.1. Introduction
 - 10.1.1. COVID-19. Origin
 - 10.1.2. Evolution of the Coronavirus Epidemic
 - 10.1.3. Confinement and Ouarantine
- 10.2. Vision Development
 - 10.2.1. Clinical Picture
 - 10.2.2. Methods and Detection Tests and Analysis
 - 10.2.3. Epidemiological Curve
- 10.3. Isolation and Protection
 - 10.3.1. P.P.E. Personal Protective Equipment
 - 10.3.2. Types of Masks and Respiratory Protection
 - 10.3.3. Hand Washing and Personal Hygiene
- 10.4. Pathophysiology in COVID-19
 - 10.4.1. Desaturation and Worsening From the Point Of View of Physiotherapy
 - 10.4.2. Complementary Tests

- 10.5. Patient Admitted to Hospital Pre- UCI/Post- UCI
 - 10.5.1. Risk Factors and Aggravating Factors
 - 10.5.2. Criteria for Admission to a Inpatient Unit
 - 10.5.3. Admission to Critical Care Unit
- 10.6. Critical Patients with COVID-19
 - 10.6.1. Characteristics of Critical Patients Average Length of Stay
 - 10.6.2. Monitoring of Mechanical Ventilation VMI/VMNI
 - 10.6.3. Methods of Weaning Upon Improvement of the Clinical Picture
- 10.7. After-effects of Critical Patients
 - 10.7.1. Barthel Scale
 - 10.7.2. DAUCI Post-ICU Acquired Weakness
 - 10.7.3. Swallowing Disturbance
 - 10.7.4. Basal Hypoxemia
- 10.8. SEPAR Guide
 - 10.8.1. Research on the COVID-19
 - 10.8.2. Scientific Articles and Literature Reviews
- 10.9. Respiratory Physiotherapy Treatment
 - 10.9.1. Manage COVID-19 Respiratory Physiotherapy Treatment in Critical Care Units
 - 10.9.2. Respiratory Physiotherapy Treatment in the Ward
 - 10.9.3. Discharge Recommendations
- 10.10. Post COVID-19 Era
 - 10.10.1. New Scenarios in Physiotherapy Intervention
 - 10.10.2. Preventative Actions



Update your knowledge on advanced breathing techniques in obstructive pathology"





During the Internship Program phase of the Respiratory Physiotherapy program, professionals will have the opportunity to make a 3-week practical clinical stay in a first-level health center. A process, where they will work from Monday to Friday, and will have the opportunity to learn from the hand of a specialist in practical training days of 8 consecutive hours. An experience that allows them to deal with real patients and learn from a team of leading professionals in the area. In addition, they can apply the most innovative diagnostic procedures and use state-of-the-art therapies for each pathology.

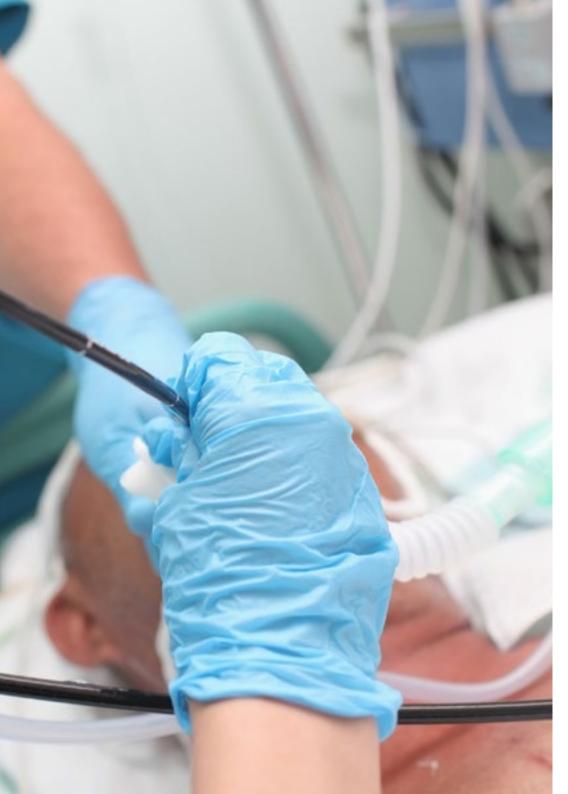
The main objective of this internship proposal is the development and improvement of the skills necessary for the exercise of activity in the field of respiratory physiotherapy. Practical activities are aimed at updating the technical skills and abilities to treat patients who are injured or who are looking for an adequate recovery after surgery. A period of 3 weeks that will take students to work together with a team of reference professionals in the area of physiotherapy, which will allow them to be up-to-date with best practices in the field.

The evolution and development of Respiratory Physiotherapy makes imperative the need for updating in this field, but TECH has made a proposal that leads the graduate to raise their skills in a specialized and avant-garde healthcare scenario. In this way, it turns a center into an ideal environment for the development of the skills and abilities that they will require both in the present and in the future.

The practical teaching will be carried out with the active participation of the student, performing the activities and procedures of each area of competence (learning to learn and learning to do), with the accompaniment and guidance of teachers and other training partners to facilitate teamwork and multidisciplinary integration as transversal competencies for FISIOTERAPIA science praxis (learning to be and learning to relate).



Enjoy an exceptional practical experience in one of the centers more prestigious and surrounded by the best professionals in the process of updating your skills and knowledge"



Clinical Internship | 37 tech

The procedures described below will form the basis of the practical part of the internship, and their implementation is subject to both the suitability of the patients and the availability of the center and its workload, with the proposed activities being as follows:

Module	Practical Activity
Respiratory Techniques in Physiotherapy	Teach a patient to perform diaphragmatic breathing exercises
	Demonstrate how to use assisted cough technique to help expel lung secretions
	Practice breathing technique in sitting position with a patient
	Guide a patient in the technique of synchronized breathing with movement
Assessment Techniques in Respiratory Physiotherapy	Perform a lung auscultation to evaluate the presence of abnormal noises when breathing
	Perform a forced vital capacity (FVC) assessment to determine a patient's lung function
	Assess a patient's resting and physical activity breathing rate
	Evaluate a patient's oxygen saturation using a pulse oximeter
Respiratory Physiotherapy Technique in COVID patients	Teach a patient deep breathing exercises to improve lung ventilation
	Practice the lung expansion technique with a patient who has suffered a decrease in lung capacity due to COVID-19
	Teach a patient to use a continuous positive airway pressure (CPAP) device to help improve lung function
	Monitor patient progress during COVID-19 recovery
Mechanical Ventilation Methods	Practice non-invasive mechanical ventilation (NIV) with a patient suffering from respiratory failure
	Demonstrate how to perform a tracheotomy and connect the mechanical ventilation pipe
	Teach a patient how to use a portable mechanical fan at home
	Evaluate a patient's vital signs while being mechanically ventilated
Respiratory Physiotherapy in Critical Patients	Practice thoracic vibration technique to help expel lung secretions in a critical patient
	Teach a patient how to use a respiratory stimulant to improve lung function
	Demonstrate how to perform a hyperinflation maneuver to help improve lung ventilation in a critical patient
	Assess a patient's tolerance to respiratory physiotherapy in an intensive care unit

Civil Liability Insurance

This institution's main concern is to guarantee the safety of the trainees and other collaborating agents involved in the internship process at the company. Among the measures dedicated to achieve this is the response to any incident that may occur during the entire teaching-learning process.

To this end, this entity commits to purchasing a civil liability insurance policy to cover any eventuality that may arise during the course of the internship at the center.

This liability policy for interns will have broad coverage and will be taken out prior to the start of the practical training period. That way, professionals will not have to worry in case of having to face an unexpected situation and will be covered until the end of the internship program at the center.



General Conditions of the Internship Program

The general terms and conditions of the internship program agreement shall be as follows:

- 1. TUTOR: During the Hybrid Professional Master's Degree, students will be assigned two tutors who will accompany them throughout the process, answering any doubts and questions that may arise. On the one hand, there will be a professional tutor belonging to the internship center who will have the purpose of guiding and supporting the student at all times. On the other hand, they will also be assigned an academic tutor whose mission will be to coordinate and help the students during the whole process, solving doubts and facilitating everything they may need. In this way, the student will be accompanied and will be able to discuss any doubts that may arise, both clinical and academic.
- 2. DURATION: The internship program will have a duration of three continuous weeks, in 8-hour days, 5 days a week. The days of attendance and the schedule will be the responsibility of the center and the professional will be informed well in advance so that they can make the appropriate arrangements.
- 3. ABSENCE: If the students does not show up on the start date of the Hybrid Professional Master's Degree, they will lose the right to it, without the possibility of reimbursement or change of dates. Absence for more than two days from the internship, without justification or a medical reason, will result in the professional's withdrawal from the internship, therefore, automatic termination of the internship. Any problems that may arise during the course of the internship must be urgently reported to the academic tutor.

- **4. CERTIFICATION**: Professionals who pass the Hybrid Professional Master's Degree will receive a certificate accrediting their stay at the center.
- **5. EMPLOYMENT RELATIONSHIP:** the Hybrid Professional Master's Degree shall not constitute an employment relationship of any kind.
- **6. PRIOR EDUCATION:** Some centers may require a certificate of prior education for the Hybrid Professional Master's Degree. In these cases, it will be necessary to submit it to the TECH internship department so that the assignment of the chosen center can be confirmed
- 7. DOES NOT INCLUDE: The Hybrid Professional Master's Degree will not include any element not described in the present conditions. Therefore, it does not include accommodation, transportation to the city where the internship takes place, visas or any other items not listed

However, students may consult with their academic tutor for any questions or recommendations in this regard. The academic tutor will provide the student with all the necessary information to facilitate the procedures in any case.





tech 42 | Where Can I Do the Clinical Internship?

The student will be able to complete the practical part of this Hybrid Professional Master's Degree at the following centers:



Hospital HM Modelo

Country City
Spain La Coruña

Address: Rúa Virrey Osorio, 30, 15011, A Coruña

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:

- Anaesthesiology and Resuscitation - Palliative Care



Hospital HM San Francisco

Country City
Spain León

Address: C. Marqueses de San Isidro, 11, 24004, León

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:

- Update in Anesthesiology and Resuscitation - Nursing in the Traumatology Department



Hospital HM Regla

Country City
Spain León

Address: Calle Cardenal Landázuri, 2, 24003, León

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:

- Update on Psychiatric Treatment in Minor Patients



Hospital HM Nou Delfos

Country City
Spain Barcelona

Address: Avinguda de Vallcarca, 151, 08023 Barcelona

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:

- Aesthetic Medicine - Clinical Nutrition in Medicine



Hospital HM Madrid

Country City Spain Madrid

Address: Pl. del Conde del Valle de Súchil, 16, 28015, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:

- Palliative Care

- Anaesthesiology and Resuscitation



Hospital HM Torrelodones

Country City
Spain Madrid

Address: Av. Castillo Olivares, s/n, 28250, Torrelodones, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:

- Anaesthesiology and Resuscitation - Palliative Care



Hospital HM Sanchinarro

Country City
Spain Madrid

Address: Calle de Oña, 10, 28050, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:

- Anaesthesiology and Resuscitation - Palliative Care



Hospital HM Puerta del Sur

Country City
Spain Madrid

Address: Av. Carlos V, 70, 28938, Móstoles. Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:

- Palliative Care

- Clinical Ophthalmology



Where Can I Do the Clinical Internship? | 43 tech



Policlínico HM Las Tablas

Country City
Spain Madrid

Address: C. de la Sierra de Atapuerca, 5, 28050, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:

- Nursing in the Traumatology Department
- Diagnosis in Physiotherapy



Policlínico HM Moraleja

Country City
Spain Madrid

Address: P.º de Alcobendas, 10, 28109, Alcobendas, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:

- Rehabilitation Medicine in Acquired Brain Injury Management



Policlínico HM Virgen del Val

Country City
Spain Madrid

Address: Calle de Zaragoza, 6, 28804, Alcalá de Henares, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:

- Diagnosis in Physiotherapy
- Physiotherapy in Early Care



Policlínico HM Imi Toledo

Country City
Spain Toledo

Address: Av. de Irlanda, 21, 45005, Toledo

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

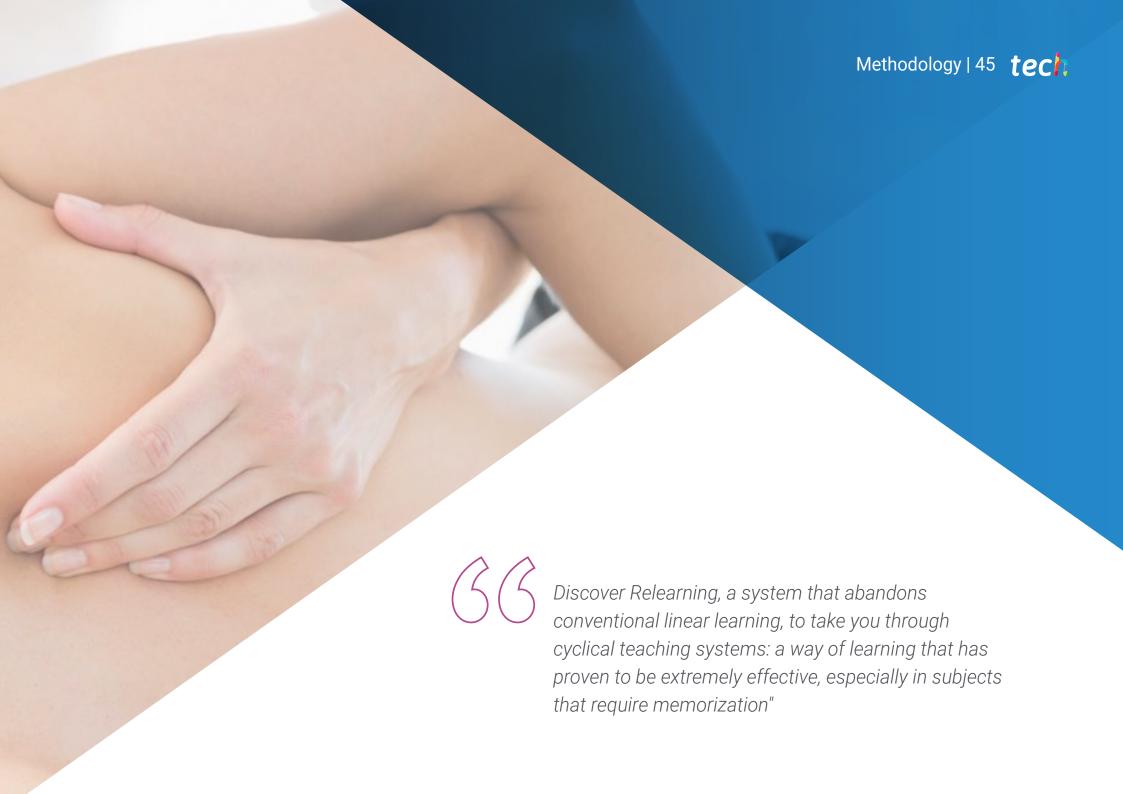
Related internship programs:

- Electrotherapy in Rehabilitation Medicine - Hair Transplantation



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.

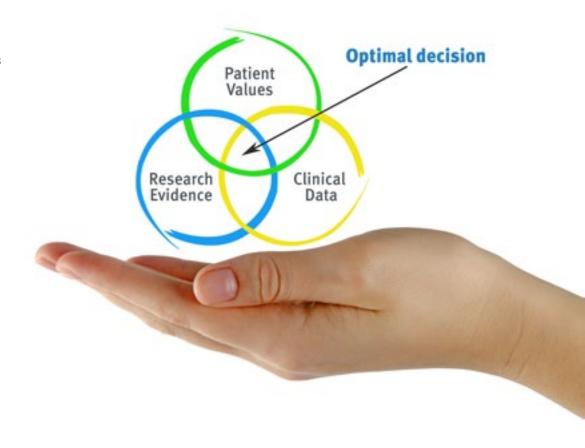


tech 46 | Methodology

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. 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.



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.





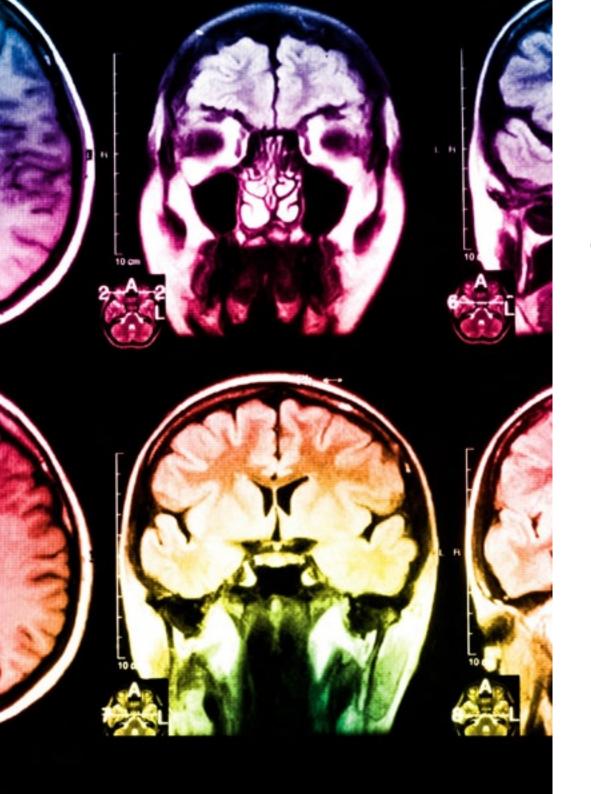
Relearning Methodology

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.





Methodology | 49 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 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.

tech 50 | Methodology

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

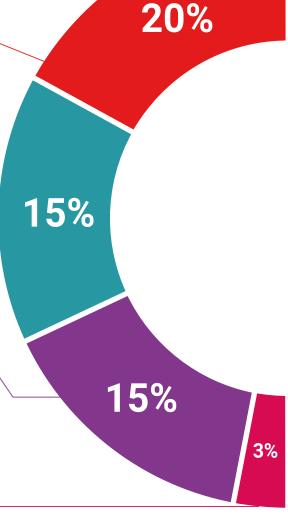
TECH brings students closer to the latest techniques, the latest educational advances and to the forefront of current Physiotherapy techniques and procedures. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can 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.

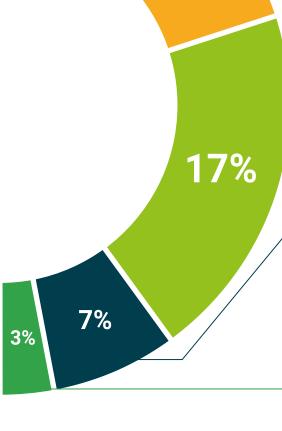
The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



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.





20%





tech 54 | Certificate

This **Hybrid Professional Master's Degree in Respiratory Physiotherapy** contains the most complete and up-to-date program on the professional and academic field.

After the student has passed the assessments, they will receive their corresponding Hybrid Professional Master's Degree certificate issued by TECH Technological University via tracked delivery*.

In addition to the certificate, students will be able to obtain an academic transcript, as well as a certificate outlining the contents of the program. In order to do so, students should contact their academic advisor, who will provide them with all the necessary information.

Title: Hybrid Professional Master's Degree in Respiratory Physiotherapy

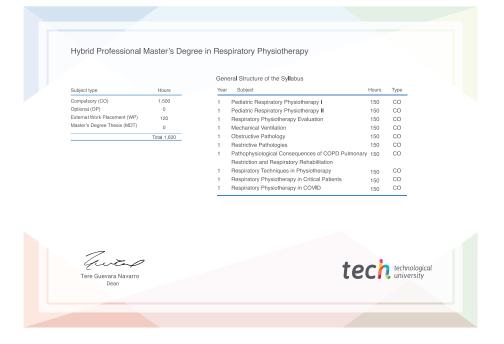
Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months.

Certificate: **TECH Technological University**

Teaching Hours: 1,620 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.

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Hybrid Professional Master's Degree

Respiratory Physiotherapy

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months.

Certificate: TECH Technological University

Teaching Hours: 1,620 h.

