Professional Master's Degree

Respiratory Physiotherapy in Rehabilitation Medicine

tech technological university

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Respiratory Physiotherapy in Rehabilitation Medicine

Course Modality: **Online**
Duration: **12 months**
Certificate: **TECH Technological University**
Official Nº of hours: **1,500 h.**
Website: **www.techtitute.com/in/medicine/professional-master-degree/master-respiratory-physiotherapy-rehabilitation-medicine**

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01

Introduction

Respiratory Physiotherapy is considered one of the therapeutic pillars in the management of patients with lung diseases, whether obstructive or restrictive, chronic or acute. For this reason, the specialization of rehabilitation physicians is particularly relevant in this field. If you want to expand your knowledge in this field to offer added professionalism in your consultations, do not hesitate and join our community of students.

Get to know the new tools in the field of Respiratory Physiotherapy and apply them to your daily practice with total security"

The increase in the incidence of respiratory pathologies, both in children and adults, has a considerable impact on the quality of life of the patients who suffer from them, as well as on the health system, with a high social and economic cost in terms of hospitalization days, sick leave and early death. Therefore, the specialization of medical professionals is essential in this field, since a deep knowledge of the new techniques in Respiratory Physiotherapy will allow an early and effective care, achieving faster recoveries.

It should be taken into account that this type of physiotherapeutic techniques, both medical and surgical, focus on the physiopathology of the respiratory system, requiring a demanding knowledge of the respiratory system and the existing techniques for treatment, healing and stabilization of the same.

The scientifically and technically based disciplinary consideration of Respiratory Physiotherapy became popular at the end of the 20th century, thanks to technological advances that allow the measurement of respiratory work and techniques. At present, these techniques are necessary and essential in different hospital units. Therefore, it is essential that the rehabilitation physician updates their knowledge in this field and acquires a superior knowledge of new techniques and tools to apply in their daily practice.

The Professional Master's Degree has specialised teaching staff in Respiratory Physiotherapy and, who contribute both their practical experience from their day-to-day work in practice, as well as their long experience in teaching at a national and international level. In addition, it has the advantage of being a 100% online program, 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 **Professional Master's Degree in Respiratory Physiotherapy on Rehabilitation Medicine** contains the most complete and up-to-date scientific program on the market. The most important features include:

- More than 75 clinical cases presented by experts in Respiratory Physiotherapy
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- The 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 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 Professional Master's Degree is the best option you can find to increase your knowledge about eye diseases and add to your professional career".

Keeping up to date is key to providing better care to our patients. That is why TECH designed this program to be at the level of the leading experts in Respiratory Physiotherapy"

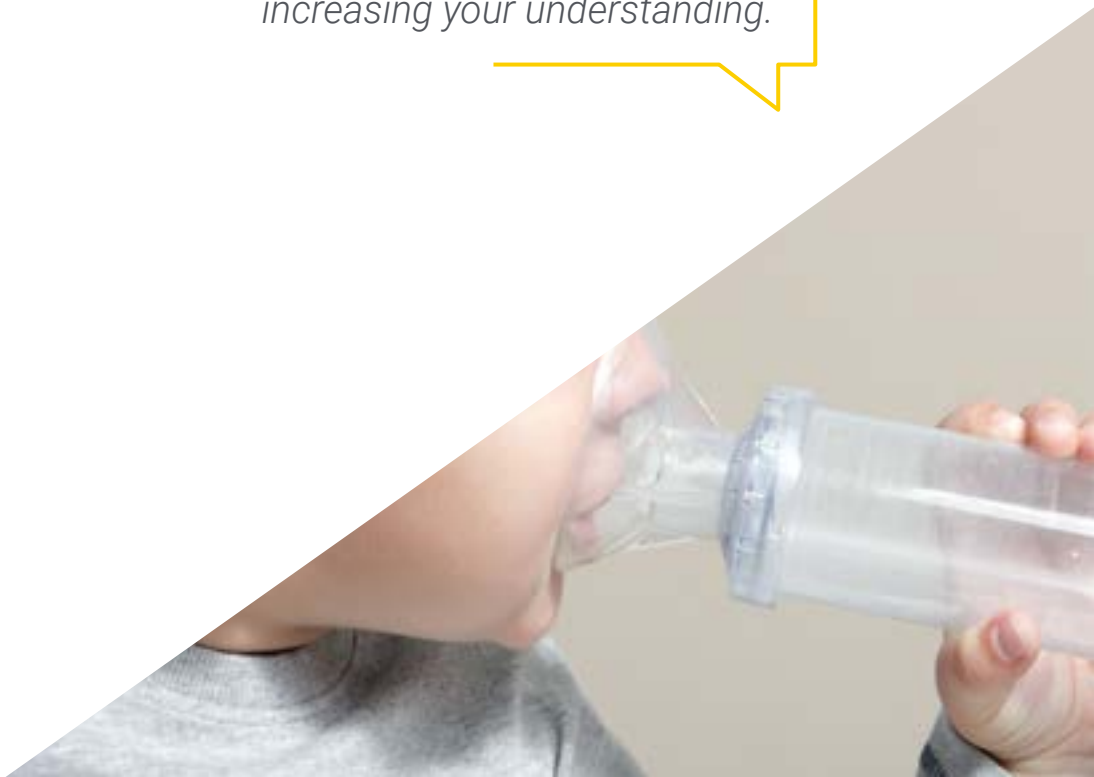
This 100% online Professional Master's Degree will allow you to study from anywhere in the world. All you need is a computer or mobile device with an internet connection.

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

The teaching staff includes a team of rehabilitation medicine professionals, who contribute the experience of their work to this 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 educational experience designed to study 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 throughout the program. 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.



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Objectives

The program in Respiratory Physiotherapy 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 program that will allow you to acquire the most up-to-date knowledge for the most advanced and competitive praxis in this field.

With a real practical objective, this Professional Master's Degree will allow you to achieve your goals by boosting your CV to excellence"

General Objectives

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

Highly specialized objectives in a program for the best professionals in Respiratory Physiotherapy"

Specific Objectives

- In-depth understanding of the respiratory physiology of children
- Manage the physiotherapeutic assessment in pediatric patients
- Apply the non-instrumental techniques of Respiratory Physiotherapy for Children
- Manage respiratory training activities at home
- Get up to date on different respiratory pathologies in children
- Deepen the knowledge of pediatric respiratory emergencies
- Apply the-instrumental techniques of Respiratory Physiotherapy for Children
- In-depth study in the treatment of physiotherapy in pediatric palliative care
- In-depth study of Ventilatory Biomechanics
- Apply different techniques for exploration
- Apply different complementary tests for a correct evaluation
- In-depth understanding of mechanical ventilation
- Apply complementary techniques in respiratory pathology
- Familiarization with the obstructive NIV patient
- Familiarization with the Restrictive NIV patient
- In-depth knowledge of obstructive respiratory pathology
- Develop the capacity for a correct diagnosis
- Manage respiratory techniques
- 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
- In-depth study of the causes of COPD
- Managing COPD pathology
- Use the different techniques for a correct assessment
- Manage the different respiratory trainings
- In-depth knowledge of the different rehabilitation programs for respiratory diseases
- In-depth knowledge of the physiological mechanisms of the respiratory system
- Know in depth the treatment techniques in Respiratory Physiotherapy
- Applying different techniques
- Handling of instrumental devices
- In-depth study of Respiratory Physiotherapy in the ICU
- Manage the different respiratory techniques in critically ill patients
- Apply pre/post-surgery exercise programs
- Manage COVID-19 Respiratory Physiotherapy treatment in critical care units
- Apply the correct treatment of Respiratory Physiotherapy in the ward
- Become familiar with new scenarios of physical therapy intervention in the post-COVID era

03

Skills

After passing the evaluations of the Professional Master's Degree in Respiratory Physiotherapy in Rehabilitation Medicine, the Respiratory Physiotherapy professional will have acquired the competencies necessary for quality and up-to-date nursing care based on the latest scientific evidence.

With this program you will be able to master new procedures in the application of Respiratory Physiotherapy to improve the health of your patients"

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

Seize the opportunity and take the step to get up to date on the latest developments in Respiratory Physiotherapy"

Specific Skills

- Apply the non-instrumental techniques of Respiratory Physiotherapy for Children
- 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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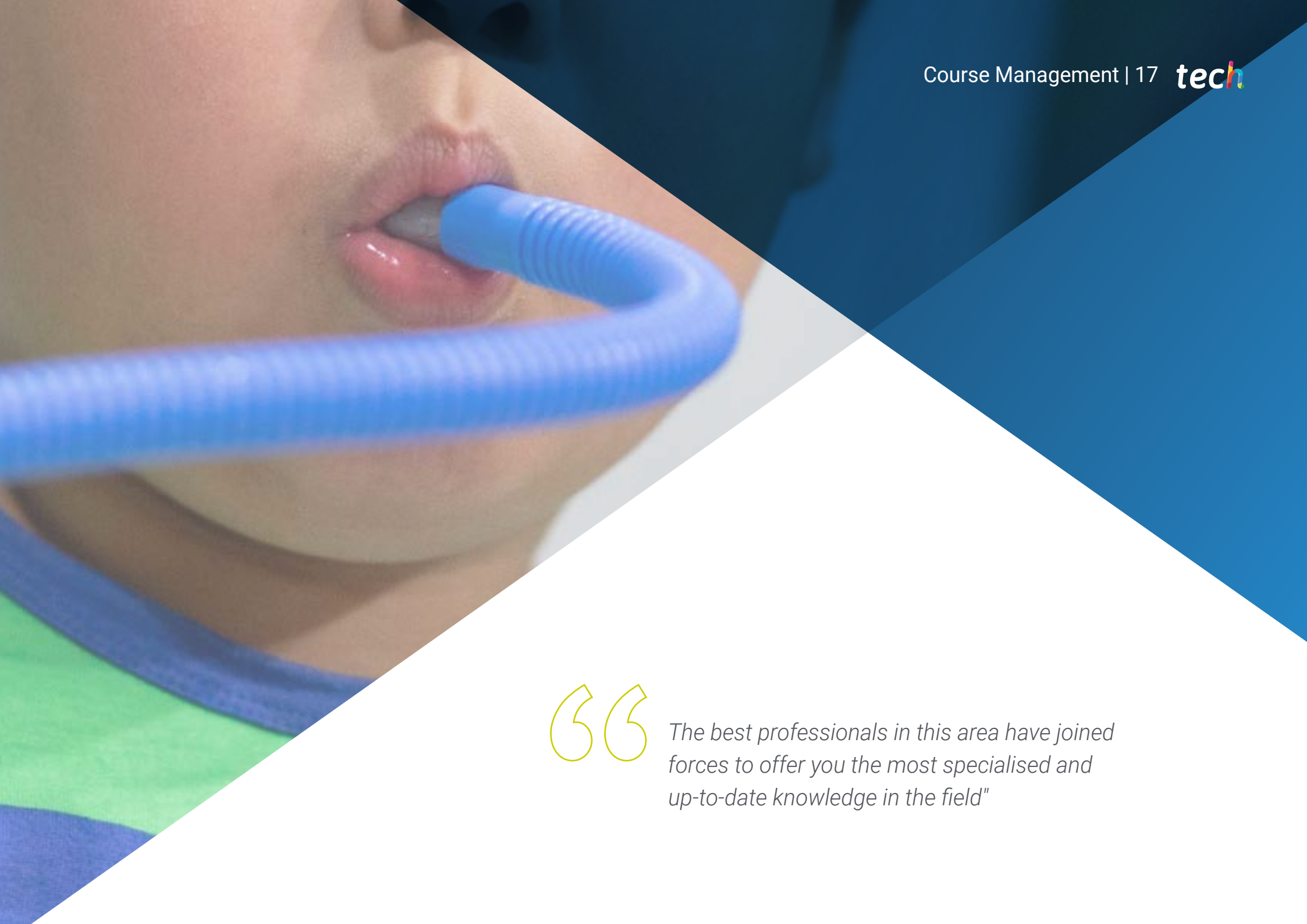
Course Management

The creation of these materials has been carried out by a team of leading professionals in Respiratory Physiotherapy, who work in the main reference hospitals, transferring to the programme the experience they have gained in their jobs throughout their careers.



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

Management

García Coronado, Luis Pablo

- Physiotherapist, 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.

Professors

Ms. Álvarez Gonzalo, Verónica

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

Ms. Pérez-Esteban Luis-Yagüe, Teresa

- Physiotherapist, Gregorio Marañón General University Hospital. November 2019- 20 septiembre 2020
- Specialist in Respiratory Physiotherapy, Castilla La Mancha-Toledo University
- Professional Master's Degree in Manual Physiotherapy of the Locomotor System, Universidad de Alcalá, Madrid
- Degree in Physiotherapy,Pontificia de Salamanca University, Salus Infirmorum, Madrid
- Basic Radiology for Physical Therapists online course
- Therapeutic exercise update program by the Consejo Gral, Colegios de Fisioterapeutas de España (Spanish General Council of Physiotherapists' Associations)

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 at the European University
- Physiotherapist at La Paz University Hospital Since 2018
- Pediatric Physiotherapy On the ward in neonates and ICU, Physiotherapy in patients hospitalized in wards, ICU, AER, patients with surgeries and traumatic injuries, and patients with traumatological injuries
- Diploma in Physiotherapy with specialization in Pediatric Physiotherapy and Manual Therapy in Traumatology and Orthopedics
- Master's Degree in Pediatric Physiotherapy at CEU San Pablo, Madrid
- Master in Osteopathy, D. François Ricard School of Osteopathy, Madrid. François Ricard from Madrid
- Teaching, assistance and management functions. Clinical reasoning adapted to each individual
- Expert in Respiratory and Cardiac Physiotherapy

Ms. Simó Segovia, Rocío

- Physiotherapist, Hospital La Paz, through all areas of specialization (Traumatology 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 at Alfonso X El Sabio University (1998-2001).
- Shoulder dystocia and neonatal brachial palsy course
- Course on Respiratory Physiotherapy with mechanically ventilated patients.

Ms. Peroy Badal, Renata

- Physiotherapist in charge of Respiratory Rehabilitation for COPD patients, Hospital Virgen de la Torre
- Respiratory physiotherapy in critical patients admitted to the ICU and in patients pre and postoperative of abdominal surgery discharged in the hospitalization 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, Universidad Complutense de Madrid with the dissertation "Health Education in Respiratory Rehabilitation in COPD in primary care"
- Official Master's Respiratory and Cardiac Physiotherapy: 2015-2016, ONCE University School of Physiotherapy (Complutense University of Madrid)
- D.U EN KINESITHERAPIE RESPIRATORIE ET CARDIOVASCULAIRE: 2007-2008, Claude Bernard-lyon Univeristy with the thesis "Education before upper abdominal surgery: co-construction of a patient-therapist booklet".

05

Structure and Content

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

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 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. Cough Assist
- 2.7.2. High-Frequency Oscillation Vest (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

Module 5. Obstructive Pathologies

5.1. Introduction in 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 Thoracic-Abdominal 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

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 Stacking

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 (VEST™)
- 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 on Neuromuscular Diseases (NMD) 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. Resuscitation and Post-Anesthesia
- 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 Quarantine

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. Aisilation and Protection
- 10.3.1. EPI Individual Protection Teams
- 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-ICU/Post-ICU
- 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 Acquired Weakness Post-ICU
- 10.7.3. Swallowing Disturbance
- 10.7.4. Basal Hypoxemia

10.8. Separate Guide
- 10.8.1. Research in COVID
- 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

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

06

Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**

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

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

At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

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

According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in the physician's professional practice.

Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method"

The effectiveness of the method is justified by four fundamental achievements:

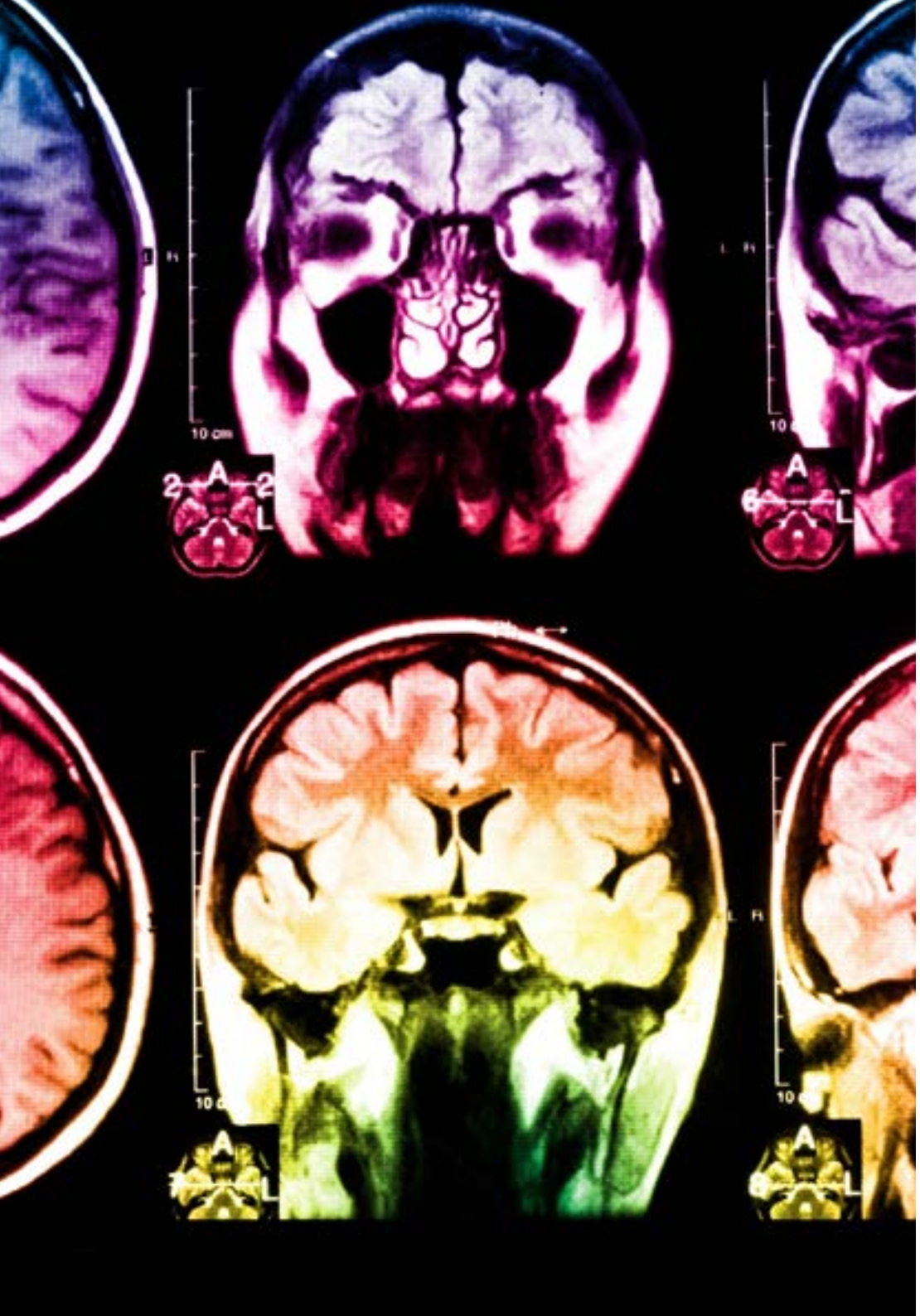
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better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

Relearning Methodology

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

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

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



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

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

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

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

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

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

Study Material

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

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

Surgical Techniques and Procedures on Video

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

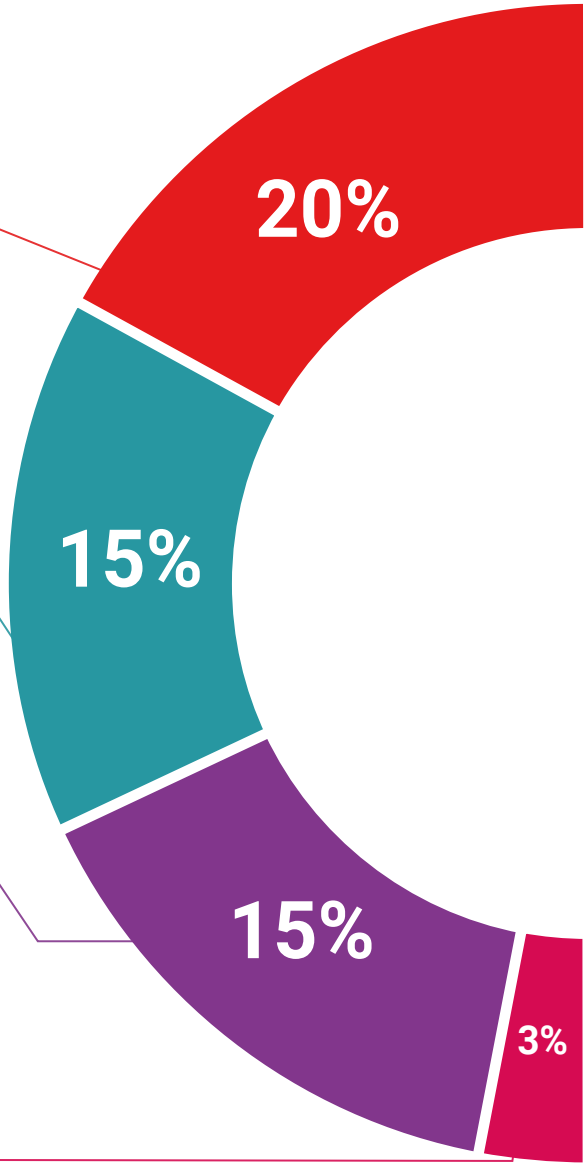
Interactive Summaries

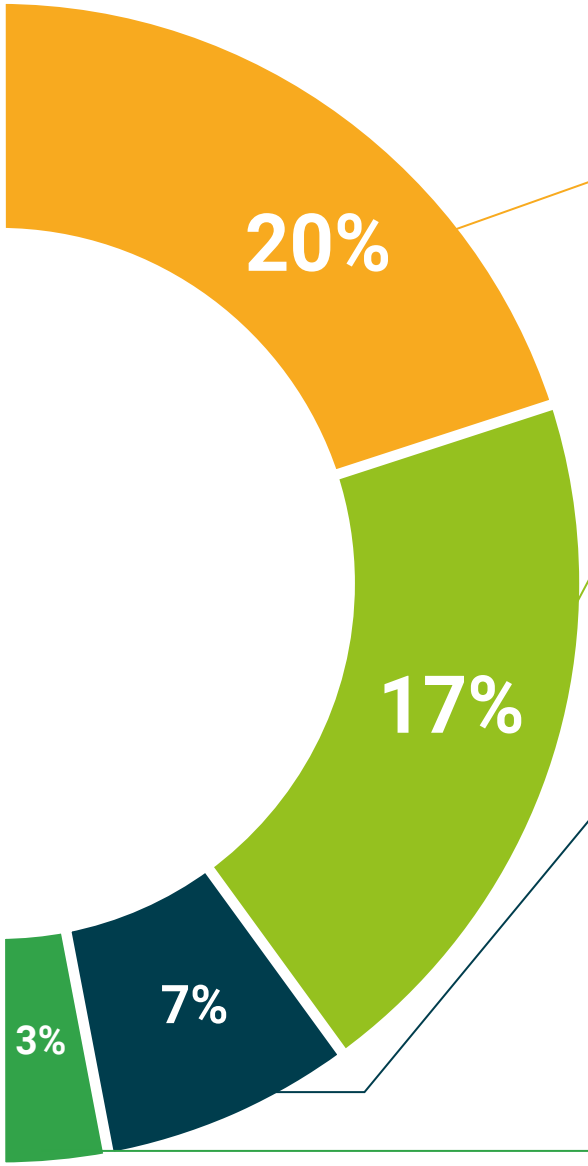
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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

Additional Reading

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





Expert-Led Case Studies and Case Analysis

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

Testing & Retesting

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

Classes

There is scientific evidence on the usefulness of learning by observing experts. The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

Quick Action Guides

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

07

Certificate

The Professional Master's Degree in Respiratory Physiotherapy in Rehabilitation Medicine guarantees students, in addition to the most rigorous and up-to-date education, access to a Professional Master's Degree issued by TECH Technological University.

Successfully complete this program and receive your university degree without travel or laborious paperwork"

This **Professional Master's Degree in Respiratory Physiotherapy on Rehabilitation Medicine** 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 **Professional Master's Degree** issued by **TECH Technological University** via tracked delivery*.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Professional Master's Degree, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Professional Master's Degree in Respiratory Physiotherapy in Rehabilitation Medicine**

Official Nº of hours: **1,500 h.**


tech technological university

Awards the following

CERTIFICATE

to

Mr./Ms. _____, with identification number _____.

For having successfully passed and accredited the following program

PROFESSIONAL MASTER'S DEGREE

in

Respiratory Physiotherapy on Rehabilitation Medicine

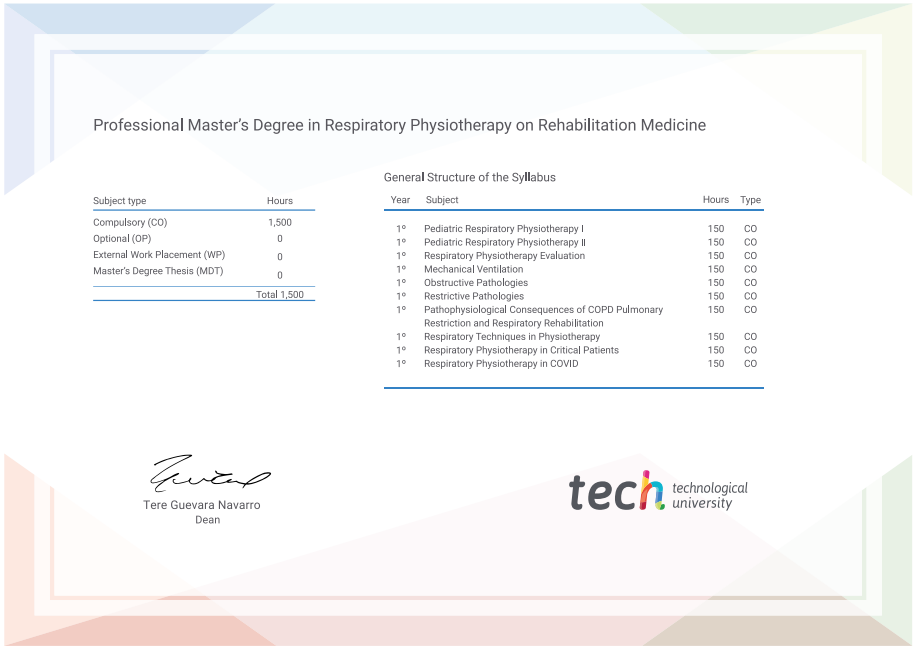
This is a qualification awarded by this University, equivalent to 1,500 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates


Professional Master's Degree in Respiratory Physiotherapy on Rehabilitation Medicine

Subject type	Hours
Compulsory (CO)	1,500
Optional (OP)	0
External Work Placement (WP)	0
Master's Degree Thesis (MDT)	0
	Total 1,500

General Structure of the Syllabus

Year	Subject	Hours	Type
1º	Pediatric Respiratory Physiotherapy I	150	CO
1º	Pediatric Respiratory Physiotherapy II	150	CO
1º	Respiratory Physiotherapy Evaluation	150	CO
1º	Mechanical Ventilation	150	CO
1º	Obstructive Pathologies	150	CO
1º	Restrictive Pathologies	150	CO
1º	Pathophysiological Consequences of COPD Pulmonary Restriction and Respiratory Rehabilitation	150	CO
1º	Respiratory Techniques in Physiotherapy	150	CO
1º	Respiratory Physiotherapy in Critical Patients	150	CO
1º	Respiratory Physiotherapy in COVID	150	CO

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Dean

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*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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Professional Master's Degree
Respiratory Physiotherapy in Rehabilitation Medicine
Course Modality: Online
Duration: 12 months
Certificate: TECH Technological University
Official Nº of hours: 1,500 h.

Professional Master's Degree

Respiratory Physiotherapy in Rehabilitation Medicine

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