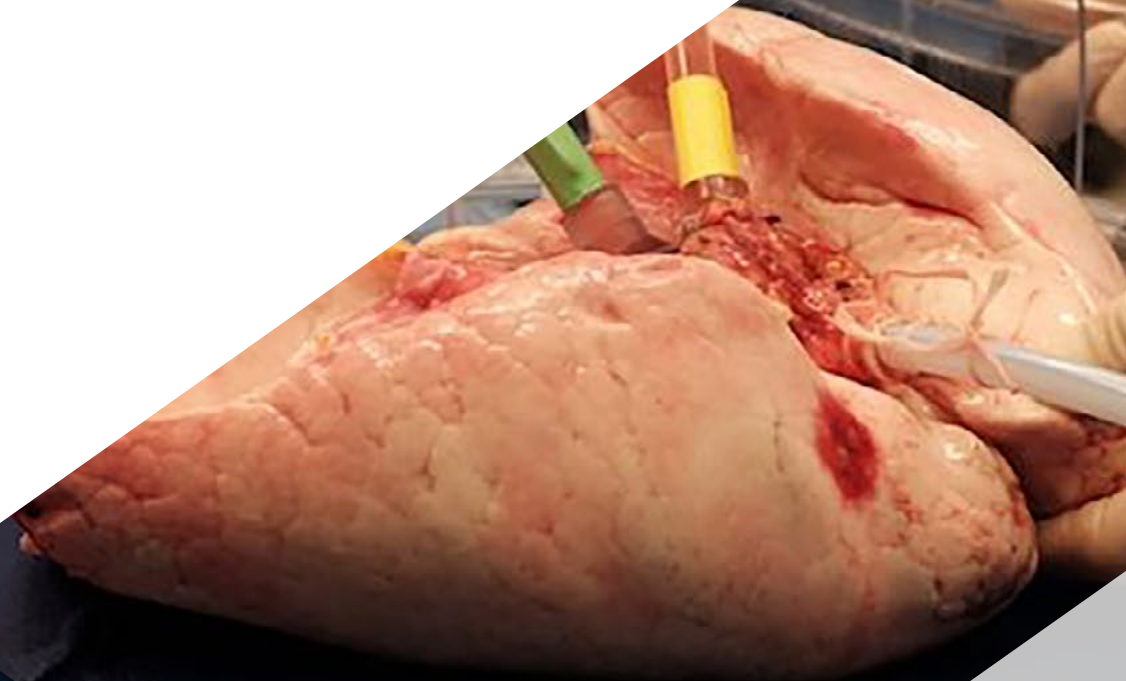


Postgraduate Diploma

Respiratory Insufficiency and Lung Transplantation





Postgraduate Diploma Respiratory Insufficiency and Lung Transplantation

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/pk/medicine/postgraduate-diploma/postgraduate-diploma-respiratory-insufficiency-lung-transplantation

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01

Introduction

The field of lung transplantation has benefited from great advances in recent years. The scarcity of this organ forces specialists to maintain a continuous level of updating by acquiring the most advanced surgical methods to maximize on available lungs. This TECH program also covers the latest developments in pulmonary circulation and respiratory insufficiencies so as to provide a renewed vision of this complex process. Specialists will find didactic material that brings together the latest scientific postulates, cutting-edge research and clinical studies of the highest level.





“

You will update all your knowledge regarding pulmonary circulation pathophysiology, non-invasive mechanical ventilation and transplant recipient selection”

Specialists who work assiduously with patients with respiratory failure pathologies or chronic pulmonary diseases should update their knowledge on a regular basis, since advances in these fields are constant. Particularly notable have been the developments in high-flow oxygen therapy and non-invasive mechanical ventilation following the COVID-19 pandemic.

In this program, specialists will find new ventilation modalities such as AVAPS, IVAPS or autotrack, as well as the most relevant surgical techniques and respiratory assistance in lung transplantation. Likewise, there will be an extensive review of the most recent studies on acute pulmonary thromboembolism, pulmonary hypertension, hemoptysis and pulmonary vasculitis, among other pulmonary circulation complications.

All this in a 100% online format, accessible at any time from any device with an Internet connection. This facilitates balancing the course with other professional or personal activities, without forcing specialists to attend classes or adhere to predetermined schedules. Therefore, this program is the best option to catch up on the most urgent developments in Respiratory Failure and Lung Transplantation without having to invest excessive amounts of time or effort.

A syllabus where students will be informed about respiratory rehabilitation and the most innovative therapeutic criteria to evaluate pathologies such as Pulmonary Hypertension. All this through a series of masterclasses given by a prestigious and renowned international teacher in the global level of Pneumology.

This **Postgraduate Diploma in Respiratory Insufficiency and Lung Transplantation** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ Practical cases presented by experts in Pulmonology
- ♦ 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
- ♦ Practical exercises where the self-assessment process can be carried out to improve learning
- ♦ Special emphasis is placed on innovative methodologies in the approach to respiratory respiratory failure and tumors
- ♦ 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



Incorporate the most important advances in lung transplantation into your daily practice, including postoperative management of complications such as infectious prophylaxis”

“

TECH employs the latest didactic methodology and the latest educational technology available to guarantee you the highest possible academic experience”

You will be able to effectively update with the most recent studies on Respiratory Insufficiencies thanks to the great professionalism and experience of the entire teaching staff.

Take advantage of the benefits offered in this program, adapted to your demanding pace of life, as you can take it at your convenience.

The program's teaching staff includes professionals from the sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

Its 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 immersion education programmed to learn in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the program. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.



02

Objectives

This program aims to provide specialists with an exhaustive update on the most recent developments in Lung Transplantation and Respiratory Failures, also reviewing the latest research in pulmonary circulation. For this purpose, it benefits from the support a group of professors with extensive experience in the field of Pulmonology, including leadership and management expertise.



“

Continue to improve your professional practice thanks to the advanced studies you will have access to on the program”



General Objectives

- ♦ Provide an update on the latest scientific evidence available in published guidelines, scientific articles and systematic reviews
- ♦ Address the fundamental aspects for the care practice of pneumologic pathologies
- ♦ Update knowledge of the most frequent pathologies in Pulmonology

“

TECH assures you the best possible update, designed to meet the needs of the most demanding specialists in Respiratory Failure and Lung Transplantation”





Specific Objectives

Module 1. Respiratory Failure. Non-Invasive Mechanical Ventilation. High-flow Oxygen Therapy

- ♦ Understand the pathophysiology and classification of Respiratory Failure and learn the keys to diagnosis for clinical practice
- ♦ Provide knowledge based on the best available evidence on the various treatment options for respiratory failure, including the application and contraindications of both NIV and HFO in acute and chronic respiratory failure
- ♦ Delve deeper into the main ventilatory modalities and asynchronies during NIMV
- ♦ Delve into the main features and clinical benefits of high-flow oxygen therapy

Module 2. Pulmonary Circulation

- ♦ Deepen understanding of the medical management of the most frequent pathologies affecting the pulmonary vascular tree such as venous thromboembolic disease or pulmonary hypertension
- ♦ Gain up-to-date knowledge of other less frequent pathologies such as pulmonary vasculitis or alveolar hemorrhage

Module 3. Lung Transplant

- ♦ Know the indications and contraindications for potential Lung Transplantation, as well as the referral criteria to a Lung Transplantation Unit
- ♦ Possess the necessary criteria to include patients on the lung transplantation waiting list
- ♦ Understand how donor selection and lung transplant surgical techniques are performed
- ♦ Know how to detect possible complications derived from lung transplants that may be encountered during the review of these patients in their office or during admission to a hospital that does not have a Lung Transplant Unit
- ♦ Gain a deeper understanding of the use of immuno-suppressive treatments and prophylaxis in Lung Transplant patients, as well as in the complications derived from them
- ♦ Delve into the possible long-term complications of lung transplant patients
- ♦ Know how to determine when an urgent/preferential referral to the Lung Transplant Unit is necessary

03

Course Management

TECH only trusts the best professionals to design its programs, so this Postgraduate Diploma enjoys a teaching staff of the highest level, leaders in the area of Pulmonology. The extensive experience and professional expertise our professors bring to the program is reflected in the quality didactic material provided, adapted to the new realities in respiratory failure that have arisen as a result of the COVID-19 pandemic.



“

A prestigious international lecturer with maximum care results will offer you the latest trends in Pneumology through a very complete series of masterclasses"

International Guest Director

Dr. Franck Rahaghi is one of the most prolific international figures in the field of **Pneumology**. Noted for his leadership in quality and medical care, as well as his commitment to clinical research, he has held several important positions at Cleveland Clinic, Florida. Notable among them are his roles as **Chairman of Quality, Medical Director of the Department of Respiratory Care and Director of the Pulmonary Hypertension Clinic**.

Thanks to his studies and continuous preparation in this discipline, he has made several contributions in the **rehabilitation of patients with various respiratory pathologies**. These contributions and permanent academic improvement have allowed him to assume other responsibilities such as the position of **Head of the Department of Pulmonary Education and Rehabilitation**. In addition, he is a member of the Internal Review Committee, responsible for **supervising the correct execution of research and clinical trials** (Activated Protein C and IFN gamma-1b) inside and outside the aforementioned health institution.

In his solid preparation, he has established care links with centers of excellence such as the **Rockefeller University Hospital in New York**, as well as the Internal Medicine programs at the **University of Illinois at Chicago and the University of Minnesota**. He also studied at the **Department of Interventional Pulmonary Pulmonology and Pulmonary Hypertension at the University of California-San Diego**. He has also participated in important academic projects as an instructor in Genetic Medicine.

Dr. Rahaghi has authored and co-authored numerous articles published in renowned scientific journals in the medical field. Among the most recent and significant studies he has unveiled are his researches on the **impact of COVID-19 on the respiratory health** of patients, specifically on its effects in **controlling Pulmonary Hypertension**.

His other fields of interest include **Scleroderma, Sarcoidosis AATD and ILD/IPF**. He is also a consulting member of MedEdCenter Incorporated, a non-profit corporation dedicated to **providing educational materials focused on pulmonary pathologies**. An initiative from where he is committed to promote the education of patients and physicians through new technologies.



Dr. Rahaghi, Franck

- ♦ Medical Director, Department of Respiratory Care, Cleveland Clinic Hospital, Florida, USA
- ♦ Director of the Pulmonary Hypertension Clinic attached to the Cleveland Clinic Hospital, Florida, USA.
- ♦ Bachelor of Science (BS), Bioengineering and Biomedical Engineering from the University of San Diego.
- ♦ Master's Degree in Health Sciences/Administration at UC Berkeley

“

Thanks to TECH you will be able to learn with the best professionals in the world"

Management



Dr. Jara Chinarro, Beatriz

- ◆ Head of the Pneumology Service at University Hospital Puerta de Hierro Majadahonda
- ◆ Responsible for the Basic Sleep Unit at the University Hospital Puerta de Hierro Majadahonda.
- ◆ Specialist in the Pneumology Area at the University Hospital Puerta de Hierro Majadahonda.
- ◆ Clinical Research
- ◆ Author of several scientific publications on Pneumology.



Dr. Ussetti Gil, Piedad

- ◆ Head of the Pneumology Service at University Hospital Puerta de Hierro Majadahonda
- ◆ Director of the Pneumology Research Group at the Institute of Sanitary Research Puerta de Hierro-Segovia de Arana
- ◆ Associate Professor of Pneumology at the Autonomous University of Madrid.
- ◆ Specialist in Pulmonology
- ◆ Degree in Medicine and Surgery from the Central University of Barcelona.
- ◆ Executive Master's Degree in Healthcare Leadership from ESADE.
- ◆ Pneumologist of the Year Award 2021 by the Madrid Society of Pneumology and Thoracic Surgery (Neumomadrid).
- ◆ Member of the Spanish Society of Pneumology and Thoracic Surgery (SEPAR).

Professors

Dr. Izquierdo Pérez, Ainhoa

- ♦ Specialist in Pulmonology at the Puerta De Hierro University Hospital Majadahonda
- ♦ Specialist Physician at the Emergency Hospital Nurse Isabel Zandal
- ♦ Graduate in Medicine from the University of Alcalá
- ♦ Master's Degree in Clinical Medicine from the Camilo José Cela University
- ♦ Master's Degree in ILD from the Catholic University of Murcia

Dr. Mohamed Choukri, Marwan

- ♦ Specialist in Pneumology at the University Hospital Jiménez Díaz Foundation
- ♦ Assistant Specialist Physician at the Puerta de Hierro Majadahonda University Hospital
- ♦ Graduate in Medicine and Surgery from the Complutense University of Madrid

Dr. Aguilar Pérez, Myriam

- ♦ Specialist Physician of the Pneumology Area at the Puerta de Hierro University Hospital. Majadahonda, Spain
- ♦ Lecturer in Cardiorespiratory Support Systems Courses
- ♦ Speaker at Pneumology Conferences

Dr. Zambrano Chacón, María de los Ángeles

- ♦ Assistant Physician of Pneumology at the Jiménez Díaz Foundation University Hospital
- ♦ Medical Surgeon at Salud Chacao
- ♦ Degree in Medicine from the Central University of Venezuela
- ♦ Master's Degree in Infectious Diseases and Antimicrobial Treatment from CEU Cardenal Herrera University
- ♦ Training in Pneumological Emergencies by the Jimenez Diaz Foundation

Dr. Arellano Serrano, Carlos

- ♦ Medical Specialist in Hemodynamics and Interventional Cardiology at the Puerta de Hierro Majadahonda University Hospital
- ♦ Specialist Physician at the Milenium Medical Center Las Rozas
- ♦ Specialist in Cardiology at the Virgen del Mar University Hospital
- ♦ Medical Specialist in Cardiology at the Mapfre Medical Center
- ♦ Researcher at the Puerta de Hierro-Segovia de Arana Institute of Health Research
- ♦ Fellowship in Interventional Cardiology in the Section of Hemodynamics in the Puerta de Hierro Majadahonda University Hospital
- ♦ Specialist in Cardiology at the University Hospital of the Southeast
- ♦ Member of: Member of the Illustrious Official College of Physicians of Madrid, Member of the Spanish Society of Cardiology, Member of the European Society of Cardiology, Member of the Association of Interventional Cardiology



Take the opportunity to learn about the latest advances in this field to apply it to your daily practice"

04

Structure and Content

Relearning is a methodology TECH has pioneered in, as it is the only Spanish university licensed to use it as a study method. Thanks to this innovative technique, specialists can acquire the knowledge of Respiratory Insufficiencies and Lung Transplants in a natural and progressive way, without the need for a substantial investment in study time. Therefore, the program content structure is designed to provide the best educational quality while guaranteeing students will efficiently maximize on the time invested in the course.





“

You will find a wealth of audiovisual material, including practical guides, interactive summaries and supplementary readings that will ease the course load”

**Module 1. Respiratory Failure. Non-Invasive Mechanical Ventilation.
High-flow Oxygen Therapy**

- 1.1. Respiratory Failure
 - 1.1.1. Pathophysiology-Specific (Partial, Global, Postoperative or Hypoperfusion/Shock)
 - 1.1.1.1. According to Time of Onset (Acute, Chronic and Acute Chronic)
 - 1.1.1.2. According to Alveolar-Arterial Gradient (Normal or Elevated)
 - 1.1.1.3. Pathophysiological Mechanisms
 - 1.1.2. Decrease in Oxygen Partial Pressure
 - 1.1.2.1. Presence of a Circuit Breaker or Shunt
 - 1.1.2.2. Ventilation/Perfusion Imbalance (V/Q)
 - 1.1.2.3. Alveolar Hypoventilation
 - 1.1.2.4. Diffusion Alteration
- 1.2. Diagnosis
 - 1.2.1. Clinical Symptoms
 - 1.2.2. Arterial Blood Gas Analysis Interpretation
 - 1.2.3. Pulse Oximetry
 - 1.2.4. Imaging Tests
 - 1.2.5. Others: Respiratory Function Tests, ECG, Blood Analysis, etc
 - 1.2.6. Etiology of Respiratory Failure
 - 1.2.7. Treatment of Respiratory Failure
 - 1.2.7.1. General Measures
 - 1.2.7.2. Oxygen Therapy, NIMV and HFO (See Next Sections)
- 1.3. Conventional Oxygen Therapy
 - 1.3.1. Indications of Acute Oxygen Therapy
 - 1.3.2. Indications for Chronic Home Oxygen Therapy
 - 1.3.3. Systems and Sources of Administration
 - 1.3.4. Oxygen Sources
 - 1.3.5. Special Situations: Flights
- 1.4. Non-Invasive Mechanical Ventilation (NIMV)
 - 1.4.1. Pathophysiological Effects
 - 1.4.1.1. On the Respiratory System
 - 1.4.1.2. On the Cardiovascular System
 - 1.4.2. Components
 - 1.4.2.1. Interfaces
 - 1.4.2.2. Complications of the Interface: Skin Lesions, Leaks
 - 1.4.2.3. Accessories
 - 1.4.3. Monitoring
- 1.5. Indications and Contraindications NIMV
 - 1.5.1. In the Acute Phase
 - 1.5.1.1. In Emergency Situations Prior to Concrete Diagnosis
 - 1.5.1.2. Acute Hypercapnic Respiratory Failure (Acute COPD, OHS Patient Decompensation, Respiratory Center Depression, etc.)
 - 1.5.1.3. De Novo Hypoxemic ARF / ARDS / Immuno-Compromised
 - 1.5.1.4. Neuromuscular Diseases
 - 1.5.1.5. Post-Surgery
 - 1.5.1.6. Weaning and Extubation
 - 1.5.1.7. Patients Ordered Not to Intubate
 - 1.5.2. In the Chronic Phase
 - 1.5.2.1. COPD
 - 1.5.2.2. Restrictive Diseases (Chest Wall, Diaphragm, Neuromuscular, etc.)
 - 1.5.2.3. Palliative Situation
 - 1.5.3. Contraindications
 - 1.5.4. NIMV Failure

- 1.6. Basic Concepts of NIMV
 - 1.6.1. Respiratory Parameters of the Ventilator
 - 1.6.1.1. Trigger
 - 1.6.1.2. Cycling
 - 1.6.1.3. Ramp
 - 1.6.1.4. IPAP
 - 1.6.1.5. EPAP
 - 1.6.1.6. Pressure Support
 - 1.6.1.7. PEEP
 - 1.6.1.8. I/E Relationship
 - 1.6.2. Interpretation of Respiratory Curves
- 1.7. Main Ventilatory Modes
 - 1.7.1. Pressure-Limited
 - 1.7.1.1. Continuous Positive Airway Pressure (CPAP)
 - 1.7.1.2. Bilevel Positive Airway Pressure (BiPAP)
 - 1.7.2. Volume-Limited
 - 1.7.3. New Modes: AVAPS, IVAPS, NAVA, Autotrack
- 1.8. Main Asynchronies
 - 1.8.1. Due to Leakage
 - 1.8.1.1. Autocycled
 - 1.8.1.2. Prolonged Inspiration
 - 1.8.2. Due to Ventilator
 - 1.8.2.1. Short Cycle
 - 1.8.2.2. Double Trigger
 - 1.8.2.3. Ineffective Effort
 - 1.8.3. Due to the Patient
 - 1.8.3.1. AutoPEEP
 - 1.8.3.2. Reverse Trigger
- 1.9. High-Flow Nasal Cannula Therapy (HFNCT)
 - 1.9.1. Components
 - 1.9.2. Clinical Effects and Mechanism of Action
 - 1.9.2.1. Improvement in Oxygenation
 - 1.9.2.2. Dead Space Lavage
 - 1.9.2.3. PEEP Effect
 - 1.9.2.4. Reduction in Respiratory Work
 - 1.9.2.5. Hemodynamic Effects
 - 1.9.2.6. Comfort
- 1.10. Clinical Applications and Contradictions of TAF
 - 1.10.1. Clinical Applications
 - 1.10.1.1. Acute Hypoxemic Respiratory Failure / ARDS / Immunocompromised
 - 1.10.1.2. Hypercapnic Respiratory Failure in COPD
 - 1.10.1.3. Acute Heart Failure and Acute Pulmonary Edema
 - 1.10.1.4. Invasive (Fibrobronchoscopy) and Post-Surgery Procedures
 - 1.10.1.5. Pre-Oxygenation before Intubation and Post-Extubation Respiratory Failure Prevention
 - 1.10.1.6. Patients in a Palliative Situation
 - 1.10.2. Contraindications
 - 1.10.3. Complications

Module 2. Pulmonary Circulation

- 2.1. Pathophysiology of Pulmonary Circulation
 - 2.1.1. Anatomical-Functional Review
 - 2.1.2. Physiological Changes with Age and Exercise
 - 2.1.3. Pathophysiology
- 2.2. Acute Pulmonary Thromboembolism
 - 2.2.1. Epidemiology and Etiopathogenesis of an Acute Pulmonary Thromboembolism
 - 2.2.2. Clinical Presentation and Probability
 - 2.2.3. Diagnosis of a Pulmonary Embolism
 - 2.2.4. Prognostic Stratification
- 2.3. Therapeutic Management of Acute Pulmonary Thromboembolism
 - 2.3.1. Treatment of Acute Pulmonary Thromboembolism
 - 2.3.2. Prophylaxis of Venous Thromboembolic Disease
 - 2.3.3. Pulmonary Embolism in Special Situations
 - 2.3.3.1. Pulmonary Embolism in Oncologic Patients
 - 2.3.3.2. Pulmonary Embolism in Pregnant Women
- 2.4. Pulmonary Arterial Hypertension
 - 2.4.1. Epidemiology
 - 2.4.2. Diagnosis and Clinical Assessment of Pulmonary Hypertension
- 2.5. Classification and Types of Pulmonary Hypertension
 - 2.5.1. ERS/ESC Classification of Pulmonary Hypertension
 - 2.5.2. Group 1 - Pulmonary Arterial Hypertension
 - 2.5.2.1. Pulmonary Veno-Occlusive Disease/Pulmonary Capillary Hemangiomatosis
 - 2.5.2.2. Persistent Pulmonary Hypertension of a Newborn
 - 2.5.3. Group 2 - Pulmonary Hypertension Secondary to Left Ventricle Cardiomyopathy
 - 2.5.4. Group 3 - Pulmonary Hypertension Secondary to Lung Diseases and Hypoxia
 - 2.5.5. Group 4 - Chronic Thromboembolic Pulmonary Hypertension and Other Pulmonary Artery Obstructions
 - 2.5.6. Group 5 - Pulmonary Hypertension of Unestablished and/or Multifactorial Mechanism
- 2.6. Therapeutic Management of Pulmonary Arterial Hypertension
 - 2.6.1. PHT Group 1
 - 2.6.2. PHT Group 2
 - 2.6.3. PHT Group 3
 - 2.6.4. PHT Group 4
 - 2.6.5. PHT Group 5
- 2.7. Hemoptysis
 - 2.7.1. Epidemiology, Etiology
 - 2.7.2. Differential Diagnosis
 - 2.7.3. Diagnostic Management
 - 2.7.4. Treatment
 - 2.7.5. Prognosis
- 2.8. Pulmonary Vasculitis
 - 2.8.1. Epidemiology and Etiopathogenesis
 - 2.8.2. Classification. Specific Vasculitis According to the CHCC 2012 Classification
 - 2.8.3. Diagnosis
 - 2.8.4. Treatment
 - 2.8.5. Prophylaxis
 - 2.8.6. Prognosis
- 2.9. Alveolar Hemorrhage
 - 2.9.1. Diagnosis of an Alveolar Hemorrhage
 - 2.9.1.1. Pathologic Anatomy
 - 2.9.1.2. Differential Diagnosis
 - 2.9.2. Treatment
- 2.10. Intrapulmonary Shunts
 - 2.10.1. Hepatopulmonary Syndrome
 - 2.10.2. Arteriovenous Fistulae

Module 3. Lung Transplant

- 3.1. Lung Transplant
 - 3.1.1. Historical Recollection
 - 3.1.2. Evolution in Recent Years: Demographic Revision, Analysis by Pathologies and Survival
- 3.2. Selection of Receptors
 - 3.2.1. Absolute Contra-indications
 - 3.2.2. Relative Contra-indications
 - 3.2.3. Indications for Referral to a Lung Transplant Unit Due to Pathologies
 - 3.2.3.1. Common Interstitial Pneumonia / Non-Specific Interstitial Pneumonia
 - 3.2.3.2. Chronic Obstructive Pulmonary Disease
 - 3.2.3.3. Cystic fibrosis
 - 3.2.3.4. Pulmonary Hypertension
 - 3.2.4. Indications for Referral to a Lung Transplant Unit Due to Pathologies
 - 3.2.4.1. Common Interstitial Pneumonia / Non-Specific Interstitial Pneumonia
 - 3.2.4.2. Chronic Obstructive Pulmonary Disease
 - 3.2.4.3. Cystic fibrosis
 - 3.2.4.4. Pulmonary Hypertension
- 3.3. Selection of Donor
 - 3.3.1. Brain-Dead Donor
 - 3.3.2. Donor in Asystole
 - 3.3.3. Exvivo Evaluation System
- 3.4. Surgical Technique
 - 3.4.1. Removal of the Affected Lung
 - 3.4.2. Bench Surgery
 - 3.4.3. Graft Implantation
- 3.5. Cardio-Respiratory Care
 - 3.5.1. ECMO as a Bridge to a Transplant
 - 3.5.2. Intra-Operative ECMO
 - 3.5.3. Post-Operative Radiotherapy
- 3.6. Early Complications of Lung Transplants
 - 3.6.1. Hyperacute Rejection
 - 3.6.2. Primary Dysfunction of the Graft
 - 3.6.3. Complications from Surgery
 - 3.6.4. Peri-Operative Infections
- 3.7. Post-Operative Care
 - 3.7.1. Immunosuppressive Treatments
 - 3.7.2. Infectious Prophylaxis
 - 3.7.3. Monitoring
- 3.8. Delayed Complications of Lung Transplants
 - 3.8.1. Acute Cellular Rejection (Early or Delayed)
 - 3.8.2. Chronic Dysfunction of the Graft. Chronic Lung Allograft Dysfunction (CLAD)
 - 3.8.2.1. Types
 - 3.8.2.2. Treatment
 - 3.8.3. Tumours
 - 3.8.3.1. Cutaneous Tumors
 - 3.8.3.2. Post-Transplant Lymphoproliferative Syndrome
 - 3.8.3.3. Solid Tumors
 - 3.8.3.4. Kaposi's Sarcoma
 - 3.8.4. Infections
 - 3.8.5. Other Frequent Complications
 - 3.8.5.1. Diabetes Mellitus
 - 3.8.5.2. Hyperlipidemia
 - 3.8.5.3. Arterial Hypertension
 - 3.8.5.4. Acute and Chronic Kidney Failure
- 3.9. Quality of Life and Suffering
 - 3.9.1. Quality of Life Analysis
 - 3.9.2. Survival Rate; Evaluation of Subgroups
- 3.10. Re-Transplant
 - 3.10.1. Indications and Limitations
 - 3.10.2. Survival and Quality of Life

05

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.



06 Certificate

The Postgraduate Certificate in Respiratory Insufficiency and Lung Transplantation guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.





“

Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork”

This **Postgraduate Diploma in Respiratory Insufficiency and Lung Transplantation** contains the most complete and up-to-date program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Diploma** issued by **TECH Technological University** via tracked delivery.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Diploma, and it meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Diploma in Respiratory Insufficiency and Lung Transplantation**
Official N° of Hours: **450 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.

future
health confidence people
education information tutors
guarantee accreditation teaching
institutions technology learning
community commitment
personalized service innovation
knowledge present
development language
virtual classroom



Postgraduate Diploma
Respiratory Insufficiency
and Lung Transplantation

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Postgraduate Diploma

Respiratory Insufficiency and Lung Transplantation

